Critical thinking, reflection and assessment of personal creative practice – e-portfolios and online learning tools

Critical thinking, reflection and assessment of personal creative practice – e-portfolios and online learning tools focused on the need for textile designers to develop a philosophical approach to their professional practice, and be able to communicate this to others. The challenge was to develop the necessary skills that students need to be able to professionally expound on their practice in order to attain recognition and experience, as well as capitalise on opportunities.

Within the BA Textile Design second and third year program, we developed a specific series of online and analog curriculum materials focused on developing reflective writing, analysis and creativity for Textile Design practice. This included incorporating the use of e-learning tools, including:

- Reflective blog entries, discussion boards and other activity
- Pebble Pad e-portfolio platform
- Media Annotation Tool (MAT)

The use of these tools / activities provided students with opportunities to develop an understanding of the forms of writing for professional practice, and allowed for a scaffolding effect in which the learning was acquired in a cumulative manner. Given the self-reflective and highly personal nature of this form of writing and creative practice, it was important to provide a supportive, flexible and instructive series of materials that allowed the student to develop drafts, refine and polish, and finally complete at least one professional piece of writing for public dissemination.

Outcomes

Key Project outcomes:

- The creation of a specific series of online and analog curriculum materials focused on developing reflective writing, analysis and creativity for Textile Design practice
- Implementation of the Pebble Pad e-portfolio platform in the BP121 program, specifically the use of blogs and webfolios to evidence, develop and communicate creative practice, and demonstrate key graduate attributes as they apply to the Textile Design discipline
- Ongoing development of Blackboard online learning curriculum activities and content for BP121 courses
- Development of the MAT tool to develop creative writing, analysis and communication skills (planned implementation in 2011)

Key Project impacts:

- Engagement with online learning tools as part of a whole of curriculum approach, directly relevant to the professional practices within the discipline specific context. Students were able to engage with the process and see it as a meaningful activity linked to their professional development
- Transition from teacher to learner-directed focus, through creative, imaginative and inventive solutions to curriculum development and achievement
- Increased student engagement and confidence with reflective and creative writing processes, via the use of blogs and webfolios
- Continued improvement in CES results and student feedback
- Successful implementation of the project has encouraged ongoing collaboration between teams within RMIT, via an effective use of existent and emerging resources, in an innovative way. That is, the integration of a range of online learning resources into a coherent curriculum package

College
Design and Social Context

Project Leader
Claire Beale

Team Members
Annalea Beattie
Meaghan Bottenill
Kylie Budge
Jody Fenn

Learning and Teaching Investment Fund 2010
Using Business Simulations to Develop Student Engagement

This project introduced a web-based business simulation into a final year core course of RMIT’s undergraduate accountancy program, offered in Hong Kong, Singapore, Vietnam and Melbourne. The simulation required students to be decision-makers in management teams facing challenging business scenarios. The teams used the latest technologies to assist communication, management and decision-making.

The business simulation was designed as an innovative way to engage students with the practical application of theoretical concepts covered in their studies. Simulations require students to apply the business knowledge, concepts and skills studied to decision-making in a dynamic, integrative, realistic yet low-risk environment.

This project’s implementation was staged across 2010, because it involved making changes to a core accounting program course that would affect several hundred students and numerous staff across four countries.

Stage 1
- evaluating and plotting appropriate types of business simulations to identify the one most likely to engage students and expose them to an e-learning experience that simulates real-world industry situations
- developing a reference library on business simulations
- determining professional associations’, employers’ and industry stakeholders’ perceptions of business simulations
- developing a plan outlining the resources needed to implement the curriculum initiative.

Stage 2
- pilot trial with a small number of staff to evaluate business simulations
- selecting the most appropriate simulation
- training staff to deliver the simulation
- piloting the simulation with students in Hong Kong.

Stage 3
- implementing the simulation in Melbourne, Vietnam and Singapore
- evaluating staff and students’ responses to the simulation.

Outcomes
This project successfully implemented a web-based business simulation into a core final year course, “Strategic Decision-making for Accountants”, run in Melbourne, Vietnam, Singapore and Hong Kong in the RMIT undergraduate accounting program. The course aimed to offer final year accounting students work-integrated learning activities to enhance their work-ready attributes and generate high levels of engagement.

This meant the business simulation had to efficiently and effectively deal with operational and educational issues such as:
- ensuring comparable educational outcomes across widely distributed student cohorts
- developing and integrating appropriate learning materials and assessment activities
- generating staff involvement, participation, capacity and engagement in several locations.

After the evaluation, a business simulation called Capstone was selected as the one that best met the requirements. In Capstone, students are organised into management teams that face challenging and realistic dynamic business scenarios. They are assessed on the development of a strategic business plan, report writing, oral communication and personal reflections on their participation in the team.

To date, the Capstone course has been very well received by most students and staff. Preliminary student survey data indicates that the course has contributed to greater student engagement.

Several key issues and observations arose from the project:
- Selection of a major new learning tool such as Capstone should follow a rational and evidence-based process covering the operational and educational factors likely to have an effect at the student, staff, course, program, location, technology, resource and University levels.
- Significant and early investment should be made to interest enough staff in the new learning tool, and to develop a teaching team with appropriate capacity to fully use the tool; both initially and on an ongoing basis with quality improvements. Developing a viable working relationship with tool providers is another worthwhile investment.
- All business degree students would benefit if the College of Business offered a compulsory final year course that involved experiential e-learning similar to the Capstone experience; one that required students from different business degrees to work together.
Teaching always takes place at the crossroads of the personal and the public, and if I want to teach well, I must learn to stand where these opposites intersect.


Teaching is a paradoxical event; simultaneously public and private. Although we open our classrooms to hundreds of students over the course of our careers, many of us may never have a colleague observe our teaching or benefit from watching someone else teach.

Peer partnerships in teaching (PPIT) are designed to open the doors to our teaching spaces to support reflection on teaching practice, process and pedagogy. Staff who volunteer for PPIT agree to be both the observer and the observed, learning from and reflecting on each other’s teaching.

PPIT is cross-disciplinary—deliberately pairing staff with colleagues outside their content expertise. This encourages a focus on teaching processes and underlying pedagogy, rather than on the merits of what is being taught.

Partnerships can explore anything the pair identify as useful to their professional development. For example, PPIT participants have invited their partners to sit in on a class, listen to their podcasts, view their online teaching material, observe an Elluminate session or examine assessment tasks.

In 2010 an online survey was conducted to examine attitudes towards and experiences of PPIT amongst RMIT staff. Using this data and building on the successful development of the peer model in the School of Health Sciences, the PPIT model was refined and trialled in the schools of Fashion and Textiles, Global Studies, Social Science and Planning, Computer Science and IT and Business TAFE, involving 46 permanent and sessional staff from TAFE and Higher Education.

Outcomes

- Most staff who engaged in PPIT acknowledged the vulnerability associated with having a colleague observe their teaching.
- Despite the risk, participating in PPIT delivered a range of positive outcomes, including the opportunity to reflect on—and value—teaching. As one participant commented, it encouraged me to really think about my teaching style in a more structured manner, and to focus on finding areas for improvement.
- Other benefits included increased confidence in and renewed enthusiasm for teaching, the development of new skills and strategies, and enhanced relationships with colleagues. One participant noted that the experience provided an opportunity to share what is usually a very private space, and get feedback on how this compares with others’ classrooms.
Social media plays a key role in the emerging and fluid professional media environment. New roles and practices are taking shape as social and broadcast media intersect. Our Work Integrated Learning (WIL) research project Future makers. Future markets took a behind-the-scenes look at social media, engaging third-year media students in a real-world social media production.

Working with ABC Radio National’s 360 Documentaries program and the ABC Pool social networking site, staff and students developed and managed a ‘call-out’ titled My Tribe. A call-out is an open recruitment to radio listeners and people in the community to respond to a set theme.

Students worked as social media producers to recruit people to collaborate on the call-out. My Tribe included themes of connectedness, networking, community and tribal formations. The hybrid role of social media producer (identified in earlier research into by the principal investigators) fuses the creative impetus in the social media community into program content. The social media producer in this case is a radio producer who works with the participants to develop material that may be broadcast on radio or showcased on the site.

Storytelling plays a large part in these interactions, and is used to develop the conversations on the site. The social media producers built a suite of social media channels to support the project. Groups were formed to manage Facebook, Twitter, 360 Online features, 360 Broadcast and Federation Square large screen display channels.

Students reflected on the professional role; their experience of it; ideas to enhance participation; and social media as a production space.

Our intention was to answer the question: how can a media education program generate the skills and attributes that graduates will need to build their reputation as social media practitioners, and identify roles and practices that have not yet emerged?

Outcomes
- analysis of social media as a professional media space to develop a WIL experience of future media
- strategies for graduates to build a professional profile and observe and identify emerging roles and practices to work in the hybrid space between social and conventional media
- pedagogical scaffolds and resources to help students build skills and attributes as future makers in future markets
- effective ways to read a social media space: the nature of an online community; how knowledge communities are developed and sustained; the site’s modus operandi; qualities and values of a participatory culture; and tone of voice
- two academic journal articles in progress; a workshop reflecting on the learning experience; and proposals for future curriculum for the media program
- two successful ethics applications to review student feedback on the experience and interview the external practitioners who were involved
- preparatory curriculum for a second year class (Integrated Media 2) to introduce students to the fundamentals of social media within the conventional media paradigm
- an online Social Media Educator’s space on ABC Pool
- My Tribe taken into a second phase as part of the ABC Pool launch program
- a model of WIL projects that explore emerging industrial practices by engaging students in research and reflection within a professional context.
The project set out to develop a best practice model for graded assessment based on the RMIT grading policy in a competency-based framework, aligned with ATQF framework and principles for assessment, across all programs in the School of Fashion and Textiles:

- Diploma of Applied Fashion Design and Technology
- Advanced Diploma of Textiles Design and Development
- Advanced Diploma of Fashion Textiles and Merchandising

The project also set out to undertake appropriate validation and consensus moderation, adhering to the competence of learning and teaching practices to achieve better teacher performance and feedback to students. The project addressed key feedback mechanisms for students linked to assessment practices, consistent with RMIT assessment policy.

The project aimed to improve pathways between vocational education and training and higher education programs. It provided for positive student experiences through constructive engagement and improved learning experiences, outcomes and employment opportunities; with timely feedback on student learning. Assessment and feedback on student work is essential to improve learning and teaching through sustained quality standards in innovative assessment while developing cross-program moderation and validation processes.

**Outcomes**

- Development of three case studies related to all three programs in the School of Fashion and Textiles. Each case study outlined relevant background information regarding courses, assessment practices, issues and problems, suggested courses of action, teacher and student feedback responses and findings from quantitative research conducted in their programs.
- Development of the Graded Assessment Mixed Model for implementation in the three program disciplines in 2011.
- Development of the Mixed Model examples of rubrics to enhance student feedback under the competency-based training framework.
- Professional development of staff members/teachers directly involved in the graded assessment project through group collaboration and participatory approaches to learning. These included staff development sessions and a workshop for program managers, co-ordinators and staff members/teachers from three programs.
A framework of professional development activity to meet the needs of academic and teaching staff engaged in transnational teaching was developed for the AVCC Offshore Quality Project Report (Leask, 2005). This project adapted the AVCC framework as the basis for designing a series of Quick Guides for academic and teaching staff employed by RMIT or its partner organisations.

While the AVCC project focused on offshore teaching, the materials developed for this project recognise that many onshore RMIT classrooms may be equally or more culturally diverse ('transnational') as offshore classrooms.

Three fundamental premises underpinned the project:

1. All academic and teaching staff require a basic understanding of RMIT policies and procedures and the logistics of offshore teaching, as they engage with RMIT's offerings across different locations.
2. All academic and teaching staff developing and/or delivering onshore and offshore course content need contextual information to ensure that a) the content of their teaching is relevant to student cohorts; and b) they are giving students feedback appropriately.
3. Some staff will be interested in enhancing their teaching practice through research and further professional development.

Outcomes

Twenty-two Quick Guides to transnational teaching developed by the College of Business Academic Development Group provide a consistent basis for delivering professional development for academic and teaching staff who design, deliver and evaluate RMIT courses and programs onshore and offshore.

The Quick Guides provide introductory-level information across four themes:

- finding direction
- teaching practice
- assessment and feedback
- scholarship of teaching.
The Germinate Project: an RMIT 'Sustainable Music Industry' Learning and Teaching / Research Project

In an ongoing project that began in 2010, BA (Music Industry) students from RMIT’s School of Media and Communication have collaborated with undergraduate students from the School of Aerospace, Mechanical and Manufacturing Engineering, along with Melbourne industry partner Creative Environment Enterprises, to design and build a mobile solar powered audio-visual production system and set up a Work Integrated Learning (WIL) project called The Germinate Project.

The project aimed to develop a ‘think green’ ethos in the Australian music industry, and to promote best practice in solar power generation and audio technology.

The Germinate Project is showcasing best practice in audio technology, music marketing and music performance — incorporating sustainable design as its core guiding principle. The project has developed innovative approaches to music, corporate and community event management and production.

The project is taking advantage of the BA (Music Industry) program’s focus on achieving greater exposure and integration within the Australian music industry, and maximising student employment outcomes. The project gave students the opportunity to work with guidance from industry professionals, enhancing the student experience, industry links, and employment outcomes.

Outcomes

- The Germinate Project has produced an RMIT-owned mobile renewable energy generator that is coupled with efficient audio/visual production technology. This system can power a small to medium-sized music festival stage using standard 240v music amplification equipment. The LED lighting array uses less than a quarter of the energy of a single standard stage spotlight.
- The project has launched www.thegerminateproject.com and has showcased the solar sound system at music festivals and events throughout Victoria.
- The Germinate Project has facilitated research partnership agreements between RMIT’s School of Media and Communication and industry partners Mushroom Marketing, Music Outback Foundation and Creative Environment Industries.
- The project is now an integral part of the courseware for RMIT’s BA (Music Industry) program WIL componentry.
- So far in 2011, BA (Music Industry) graduates have worked with Mushroom Marketing to produce and launch the TAC After-Gig Guide to Road Safety youtube channel www.youtube.com/user/aftergigguide, a TAC-funded alcohol and drug awareness campaign.
- The Germinate Project has launched three ongoing research projects within the BA (Music Industry) discipline that focus on:
  - internet marketing and the music industry
  - applying sustainable audio visual technology in the music industry
  - incorporating community engagement and innovative design practice into WIL project production and design.
- These ongoing projects have received development funding from:
  - RMIT Learning and Teaching Initiative Fund
  - Mushroom Marketing
  - Music Outback Foundation
  - TAC
  - Factory Sound Audio Visual Production Supplies
  - Creative Environment Industries
  - Moreland Energy Foundation
  - The Environment Shop Melbourne
  - Melbourne City Council.
The project designed, evaluated and piloted an innovative model for dual-hub Work Integrated Learning (WIL) projects. Tailored to overcome logistical difficulties in collaborations between RMIT’s Melbourne and Vietnam campuses, the project proposed a hybrid variation on current WIL models.

During the first semester, Melbourne-based students from the School of Business IT and Logistics undertook a WIL simulation model at the Royal Children’s Hospital, while RMIT Vietnam students travelled to the Franco-Vietnam Hospital in Ho Chi Minh City. After completing the simulations, Melbourne students travelled to Vietnam for two weeks. They met their counterparts, and completed information management and information systems projects for Da Nang General Hospital.

The project improved students’ learning outcomes, as it allowed them to work in an authentic international context, in keeping with RMIT’s Global Passport goals. In addition to the simulations and real-life work, the project allowed students from both cohorts to use web-based technologies such as video-conferencing and social media applications to sustain communication and build longer-term relationships.

### Outcomes

- Identification and completion of projects that benefitted the DaNang General Hospital including:
  - a network diagram for the hospital’s IT systems
  - a morbidity and mortality statistical database for the paediatrics department
  - a database implementation report for mortality and morbidity statistics
  - the hospital’s intranet project
  - a workflow analysis report
  - the database used for hospital facilities audits
  - a fact sheet to help communicate information about the hospital to project groups
  - policy documents covering information security, information management and issue-specific security
  - the scoping of follow-up projects.

- Strengthening of relationships between RMIT and:
  - Da Nang General Hospital; particularly the paediatrics department
  - Franco Vietnam Hospital
  - Royal Children’s Hospital International

- Evaluation of the utility of information and communication technologies to increase student collaboration and communication internationally
- Collection and analysis of students’ reflections on working across cultures and in multi-disciplinary teams
- Collection of evidence of the effect of internationalising the curriculum
- Creation of a WIL model incorporating simulation and real work projects within a dual-hub approach.
This project evaluated the Interteaching model—an innovative new approach to learning and teaching. To support student engagement and enhance learning outcomes, the Interteaching model uses guided independent learning and student-paced small group tutorial discussion followed by lectures that are developed in response to student feedback (Boyce and Hineline 2002).

The Interteaching model was trialled in a second-year Psychology course in the School of Health Sciences. This class, Developmental Psychology, has approximately 120 (City campus) and 50 (Bundoora campus) students each year. Trialling and evaluating an innovative teaching method for this student group addresses RMIT’s aim of focusing on quality teaching in large classes.

A single group pre-post (non-experimental) design was used to evaluate the effect of the Interteaching model on students’ learning engagement, academic self-efficacy and learning style preferences. Of the 169 students enrolled in Developmental Psychology, 142 volunteered to participate in the evaluation.

The evaluation showed that using the Interteaching model in Psychology was a success. It improved students’ engagement, satisfaction and learning outcomes—providing a strong case for further development and dissemination.

Outcomes
- Development of an integrated package of learning and assessment tools that can be applied to other courses and disciplines
- A report on the development and evaluation of a teaching model that can be used to improve teaching in large classes

Results from the evaluation indicate that Interteaching enhanced students’ learning experiences and outcomes. Specifically, these were:
- GTS improvements of 18 points and OSI improvements of five
- Improved grades compared with 2008 and 2009
- Students’ preference for the model compared with standard lecture – tutorial delivery
- Greater learning engagement
- More confidence in verbal communication
- Students’ perceptions of enhanced learning.

Consultation is ongoing with EduTAG regarding development of an online resource to form a framework for online content that can be added to over time. It is expected that the online learning framework will facilitate greater depth of analysis, retention and ownership of learning material.
This project delivered an exciting and effective professional development program to bring a closer alignment of library services with teaching and learning needs. The primary focus was on library service delivery to students and academic staff at RMIT Vietnam. It also involved over 40 Melbourne-based RMIT University Library staff.

The project used a blended learning approach, including face-to-face workshops in Vietnam, visits by four Vietnam librarians to Melbourne, an online site featuring resources and space for discussion, and some informal coaching.

The project ran in three phases in 2010, each with workshops in Vietnam and online forums. Customer service and marketing, reference work, and information literacy/research skills training were covered; along with the role of the Liaison Librarian, book selection techniques and management issues. Evaluation included:

- participant feedback on workshops
- tracking changes in library services
- a customer survey by the RMIT Vietnam Research Department in November–December 2010
- an end-of-project survey of participants’ behavioural changes against learning topics
- discussion with participants.

The project affirmed blended learning as a valuable approach for continuing professional development in a cross-cultural and geographically dispersed context. Face-to-face contact was found to be a) essential for establishing trust relationships; and b) the most productive context for delivering new content. Online forums were found to be effective in reinforcing workshop content, swapping practical ideas, and establishing and developing professional relationships.

**Outcomes**

- closer alignment between library service provision in Melbourne and Vietnam
- more student satisfaction with RMIT Vietnam Library services
- enhanced support for students in locating information resources
- greater provision of information literacy classes tailored for specific course needs
- more interaction between library and academic staff in RMIT Vietnam
- growth in library staff capabilities and confidence
- professional ‘buddy’ relationships between Melbourne and Vietnam-based staff.

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**An Innovative Cross-Cultural Approach to Equipping Librarians to provide Effective Learning Support**

**Portfolio**

Academic

**Project Leader**

Julia Leong

**Team Members**

Anh Hoang

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Learning and Teaching Investment Fund 2010
The project created and evaluated e-portfolios using PebblePad to provide an integrative framework for mapping student understanding and attainment of generic skills. It addressed attributes or generic skills identified as critical by RMIT, within disciplines and associated with accrediting professional bodies. A second portion focused on personal development processes by employing a “Brand You” concept popularised by Peters. Its inclusion linked attribute accomplishments with job prospects.

**Outcomes**

- Student engagement at a program level that incorporated the use of e-portfolios using PebblePad across three degrees in the College of Business
- Creation of a program-level framework that situated students’ portfolio learning in the context of adapting to the challenges of change
- An in-depth investigation of students’ perceptions regarding RMIT’s graduate attributes
- Identifying that a substantial minority of participants had fixed mindsets about their ability to alter learning associated with RMIT’s graduate attributes. Future efforts to facilitate graduate attributes need to take greater account of these mindsets and how to affect them positively.
- Mapping in detail the extent to which lecturers believed that existing courseware addressed various manifestations of RMIT’s graduate attributes
- Documentation on how to create e-portfolios that record learning accomplishments related to RMIT’s graduate attributes and students’ professional development
- Creation of a core body of knowledge (CBOK) for use by lecturers and students to map progress in vocationally relevant learning associated with these degrees
- Materials to support the “Brand You” concept as a way to facilitate regular personal development associated with positive employment outcomes
- An extensive resource guide to support lecturers and students seeking to explore RMIT’s graduate attributes
- Finally, the project identified important constraints in RMIT’s current credit point system that seriously militate against successfully implementing portfolios designed to operate for the whole duration of students’ enrolment in a degree. If this matter is not addressed, it is difficult to see how portfolios can be deployed meaningfully at a program level.

**My Professional Development Portfolio**

I explore mental models to consider how these impact on my learning

I sense changes in the World

I use these tools to foster effective responses to change

I incorporate these responses into sustaining my personal brand

I drive my learning through the profile map of my degree

To strengthen my learning I use the tools to acquire RMIT’s graduate attributes

I record this journey in my e-portfolio

**Implicit theories about self and learning**

**Mindset**

**Shift Happens**

**Accelerating Change**

**Reflective Practice**

**Learning Theory**

**Evidence-Based Practice**

**I regularly update my “Brand You” statement to strengthen my capacity to deal with change**

**I regularly manage my learning using the creation of a Core Body Of Knowledge (CBOK) profile for my degree and tools to demonstrate my capacity to foster an effective response**

**Innovative**

**Active and Life-Long Learner**

**Culturally & Socially Aware**

**Work-ready**

**Global in Outlook and Competence**

**Environmentally Aware and Responsive**

**I assemble evidence of my accomplishment with reflective practice, Brand You and CBOK degree profile in PebblePad software at RMIT**

**The project created and evaluated e-portfolios using PebblePad to provide an integrative framework for mapping student understanding and attainment of generic skills. It addressed attributes or generic skills identified as critical by RMIT, within disciplines and associated with accrediting professional bodies. A second portion focused on personal development processes by employing a “Brand You” concept popularised by Peters. Its inclusion linked attribute accomplishments with job prospects.**

**Demonstrating and Incubating Graduate Attributes through e-Portfolios and Engaging Students to Reflect on their Personal and Professional Development in Programs**

**College**

**Business**

**Project Leader**

Associate Professor Barry McIntyre

**Team Members**

Bernadette Welch

Dr Vanessa Cooper

Dr Martin Dick

Vass Karpathiou

Raghav Tandon

Afsana Khan

Carrie Thomas

Krista Lapointe
RMIT is a leading dual sector university with a strong commitment to articulated pathways. Developing effective tertiary pathways and models that advance diversity of under-represented groups in higher education is a key priority of the Federal Government. Future funding of tertiary education in Australia will reflect these priorities.

In recent years RMIT has enhanced pathways by using program architecture that allows for streamlined movement between sectors. This project examined dual sector models in detail to establish evidence that pathways between the sectors fostered diversity in the student cohort.

Using several dual sector initiatives such as skill electives and established articulation/credit transfer pathways, this project identified the effects of dual sector models at local levels that achieved sustainable, long-term and effective change.

Specifically, this project:
- analysed existing and new dual sector and pathway models across RMIT’s Higher Education/Vocational Education and Training (HE/VET) sectors to identify critical success factors
- collected data that mapped the effectiveness of these models in improving student cohort diversity
- used a participatory action research model to measure responses in attitudes/interventions amongst key role-holders towards implementing dual sector models
- published and disseminated information about these models within RMIT and the wider academic community
- used these studies as a baseline for a successful Australian Learning and Teaching Council (ALTC) project in 2010–2012.

Outcomes
The project delivered:
- a clearer understanding of the processes, problems and challenges involved in developing dual sector models at the school level
- better capability of key role-holders to deliver these models at the local school level to improve student diversity and transition pathways
- more awareness of the issues regarding participation by under-represented groups in higher education
- closer co-operation between the HE and VET sectors on lifelong learning models in a number of disciplines
- embedding lifelong learning models into discipline performance and profile within the schools of Health Sciences; Business; Education; and Property Construction and Project Management
- information dissemination about these models within RMIT and the wider academic community
- a successful ALTC-funded project in 2010–2012
- a competitive advantage for RMIT through its analysis and dissemination of pathways models. This will be of strategic importance in a demand-funded tertiary sector.

The project was used as the basis for an ALTC grant application entitled “Lifelong Learning Models – Pathways to Diversity”. The application was successful with an ALTC grant of $AUS200,000 in April 2010.
This project trialled and evaluated a model for achieving equivalence and comparability in courses offered transnationally through the College of Business. The project defined the terms equivalence and comparability, along with two subsets of comparability: contextualisation and customisation. The project also identified:

- The elements required to measure the degree of equivalence
- The appropriateness of contextualisation and customisation in courses.

The project also developed a process to review course offerings accordingly. The team leaders worked with the Business Computing course team to develop the model and trial the review process with Business Computing offerings in Melbourne, Singapore and Vietnam. A 2011 LTIF project builds on this work by implementing the model in five courses across the three colleges.
Following a recommendation from Engineers Australia, all Associate degree programs now include the ‘Engineering Project’. This course gives final year students the opportunity to demonstrate and apply their learning, while developing communication and project management skills relevant to industry and future employment. The course also prepares students for the challenges and experiences of RMIT’s Higher Education (HE) sector.

This project was run by the Head of School and the Divisional Manager—Higher Level Programs at the School of Engineering (TAFE) in the College of Science, Engineering and Health. The project explored and documented articulation issues arising from discussions held while developing ‘Engineering Project’ for embedding in the School’s Associate degree programs in Semester 2, 2010.

Bachelor students articulating from Associate Degree programs were interviewed and articulation issues were identified. The project outlined the challenges and potential solutions identified from all perspectives to encourage a smoother transition for engineering students and improve articulation to HE. To meet HE articulation requirements and the requirements of Engineers Australia, skill sets for each discipline were also identified in consultation with HE colleagues and the Industry Advisory Committee.

**Outcomes**

The project delivered a range of initiatives expected to improve student satisfaction and smoother transition from Associate Degree to Bachelor Degree programs:

- Discussions with mechanical engineering students in the Bachelor program indicated that CATIA design software should be taught to Associate Degree students, because completing the Bachelor of Engineering (Mechanical Engineering) requires a understanding of CATIA. The School has begun teaching CATIA in the AD002 program.
- Students of the Associate Degree in Engineering Technology (Civil Engineering) (AD009) need AutoCAD knowledge for second semester courses. Consequently, the ‘Computer Application’ course will include AutoCAD to give students knowledge relevant to further study and employment. The project identified a similar need amongst students of the Associate Degree in Engineering Technology (Electrical/Electronics) (AD005). Students of this program have been receiving AutoCAD instruction since Semester 1, 2011.
- While implementing ‘Engineering Project’ for Associate Degree in Engineering Technology (Electrical/Electronics) students, the project identified their need for knowledge of Automation Concepts (EEET 2285). As a result, Automation Concepts has been shifted to first semester for second-year students.
- Bachelor Degree students who articulated from the Associate Degree strongly expressed the need to learn MATLAB. MATLAB is now taught to all Associate Degree in Engineering Technology programs.
- Engineers Australia required that, as a vocational outcome, all Associate Degree in Engineering Technology programs should include the ‘Engineering Project’ course. The course provides an integrative engineering experience in the form of a capstone student project. To facilitate articulation, ‘Engineering Project’ was designed and developed in collaboration with HE Schools. Guest speakers from relevant industries were invited to speak and provide insight to the current industry environment. Academics from HE Schools have been invited to present lectures to the various streams.
The Ping Project was an industry-linked, virtual mobility studio in the RMIT School of Architecture and Design focused on designing and fabricating flat-packable architectural assemblies for urban sites. The students combined the use of laminate sheet material with advanced digital fabrication techniques to produce a series of full-scale flat-packable structures named for sites in London and Melbourne. The structures were named One-TWO-One (i.e. full-scale on twin sites).

The studio comprised 24 Master of Architecture students working in seven groups, led by Gretchen Wilkins, Leanne Zilka and John Cherrey, in collaboration with The Laminex Group in Melbourne and several London-based organisations (see below).

The project’s key pedagogical aims were to:

› provide experience with advanced digital fabrication techniques and programs
› encourage collaborative work and project-based research; particularly across international networks in a virtual mobility studio format
› consider alternative design opportunities and environmentally sustainable building construction practices through industry partnerships.

The studio’s activities were structured in three phases: site and materials research; a schematic design ‘competition’; and design development and fabrication. These phases roughly followed the conventions of architectural professional practice.

The project was coordinated in conjunction with the London Metropolitan University’s ‘Make Do and Mend’ brief for the London Festival of Architecture International Student Exhibition, which proposed full-scale architectural installations for a series of sites in London using recycled or reclaimed material. Using discarded laminate sheet optimised through digital fabrication processes, RMIT students produced four full-scale architectural installations which were shipped to London for the festival and subsequently exhibited in Melbourne (State of Design Festival), Shanghai (Cumulus Conference for the Shanghai Expo) and Beijing (Beijing Architecture Biennial). In London, the installations were assembled by architecture students from London Metropolitan University and the University College London at the Bartlett.

Outcomes

The studio’s collaborative, international and industry-linked structure facilitated the following teaching and learning challenges and outcomes:

› The requirement for full-scale assembly by others on remote sites using reclaimed material created an imperative for optimisation and efficiency in terms of how the work was designed, how pieces were composed on flat sheet material, how the work was physically assembled and compacted for cost-effective shipping, and how it could be installed quickly by third-parties.
› This challenge gave students the opportunity to experiment with materials and fabrication, testing a variety of methods for bridging the gap between thinking and making.
› The relationship between controlled and uncontrolled aspects of design work—such as the combination of precise digital tolerances and inconsistent material supply, or localised conditions and unpredictable remote sites—defined the design and learning process.
› This challenge required students to develop skills for negotiating and communicating with other team members who had different levels of experience and cultural backgrounds.

The combination of these factors revealed boundaries between design and execution; particularly given the collective expertise and experiences of architectural students.

The skill and craftsmanship typically required for full-scale construction in a ‘field’ or job site was shifted to tasks further ‘upstream,’ such as digital design, documentation, and scripting. Students quickly developed considerable skill in these processes.

Consequently, the studio work did not focus on making full-scale constructions or learning to script form, but on developing a material intelligence to provide a bridge between input and output; between digital and material systems—to be used in future experiments or different scales of work.

In this context, the studio operated somewhere between a research lab, a professional office and an artist’s apprenticeship. Students not only guided the work, but followed where it led.

Ping Projects: Distributed Networks of Design

College
Design and Social Context
Project Leader
Gretchen Wilkins

Outcomes

The studio’s collaborative, international and industry-linked structure facilitated the following teaching and learning challenges and outcomes:

› The requirement for full-scale assembly by others on remote sites using reclaimed material created an imperative for optimisation and efficiency in terms of how the work was designed, how pieces were composed on flat sheet material, how the work was physically assembled and compacted for cost-effective shipping, and how it could be installed quickly by third-parties.
› This challenge gave students the opportunity to experiment with materials and fabrication, testing a variety of methods for bridging the gap between thinking and making.
› The relationship between controlled and uncontrolled aspects of design work—such as the combination of precise digital tolerances and inconsistent material supply, or localised conditions and unpredictable remote sites—defined the design and learning process.
› This challenge required students to develop skills for negotiating and communicating with other team members who had different levels of experience and cultural backgrounds.

The combination of these factors revealed boundaries between design and execution; particularly given the collective expertise and experiences of architectural students.

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In this context, the studio operated somewhere between a research lab, a professional office and an artist’s apprenticeship. Students not only guided the work, but followed where it led.
This project aimed to enhance the quality of teaching and learning in the offshore delivery of the Bachelor of Applied Science (Construction Management). This involved implementing a transnational teaching and learning partnership in the final year course Research Project (BUIL 1222). The degree is delivered in Singapore by the School of Property, Construction and Project Management in partnership with the Singapore Institute of Management.

The project developed and implemented a transnational educational partnership comprising onshore and offshore teachers, students and local industry stakeholders. This partnership implemented a change to the Research Project course and delivered three interactive workshops which integrated international and local contexts and students’ learning and work through exploring the theme ‘Living in Singapore 2020’.

These workshops were designed to:
- engage students in critical debates
- encourage them to refine and modify their understandings of the construction industry
- situate the construction industry in Singapore in relation to wider local and international social, environmental and regulatory contexts
- ensure stronger integration of local industry knowledge through direct engagement with local industry representatives.
- The transnational learning and teaching partnership sought to foster a) teachers’ critical reflection on their teaching practice; and b) continual improvement in the quality of learning and teaching.

Specifically, the project aimed to:
- support continual improvement in the teaching skills and practice of onshore and offshore teachers
- foster a professional dialogue and professional development for onshore and offshore teachers
- improve students’ learning and engagement, and graduate outcomes
- better understand students’ learning needs
- support teachers to achieve teaching and learning goals in the transnational classroom
- support teachers to work collaboratively, and to reflect on and modify their practice in response to students’ needs and pedagogic identities.

Outcomes
The project used a pre- and post-test design to examine the effect on students’ perceptions and learning, along with teachers’ perceptions and professional development.

The project gave teachers the opportunity to reflect on the process and content of teaching, while student data indicated that the changes implemented by the partnership supported engagement and deep learning.

- From the students’ perspective, the teacher partnership model improved learning by supporting capability development, including professional communication, critical thinking and independent research capability.
- There was also evidence that students were more strongly engaged in learning, and that their expectations of benefitting from the teaching partnership were fulfilled.
- Most students strongly agreed that the changes to the Research Project course would benefit their career, and that they would recommend the course to their peers.
- From the teachers’ perspective, the partnership also delivered benefits. They believed it enhanced professional development by increasing content knowledge; acquiring practical experience and teaching strategies; understanding what works from a student perspective; and fostering a team teaching approach.

Results showed differences between the onshore and offshore teaching teams. These included respondents’ identified professional development learning needs, which for local Singapore teachers were grounded in developing content knowledge and becoming more familiar with how to teach.

The professional learning goals most frequently identified by RMIT teachers more closely reflected a student-centred approach to learning and teaching. Perceived levels of professional learning were higher amongst offshore teaching staff.
This project aimed to advance the development of RMIT students as lifelong learners who use and manage information effectively for their academic study—and, by extension, in their workplace and the community.

The project delivered iSearch, an online tutorial that provides students with opportunities for self-paced interactive learning and reinforcement of research skills. iSearch was developed collaboratively with RMIT University Vietnam as a global resource for all RMIT students, wherever they are and whatever their level of study.

Outcomes

› development of iSearch, a web-based research skills tutorial that delivers instructional content, videos and interactive learning activities to help students to build knowledge and skills in using information in the web-based environment. iSearch focuses on:
  › identifying and using appropriate information resources for academic study
  › developing effective search strategies for the online information environment
  › evaluating information sources for their reliability and relevance to the topic
  › referencing and managing information sources appropriately.
› delivery of iSearch as an online teaching tool with individual content areas, videos and interactive activities that can be separately linked to or embedded in online teaching tools such as Blackboard.
› adoption of a Research Skill Development Framework by RMIT University Library, which informs the development and delivery of Library training and the engagement of Liaison Librarians in course design and assessment.