

## AGENDA ITEM 11

## Report of the Learning and Teaching Committee

**11.2 Report of the Learning and Teaching Committee meeting held on 6 August 2008**

The Learning and Teaching Committee met on 6 August 2008 when there were present: The Chair (Associate Professor G Ryan) presiding, Professors B Sutton, D Armstrong, Associate Professors D Airey, S Barrie, M Freeman, Drs S Cattle, D Collins, S Cumming, E Fonacier, C Groenlund, J Jones, A Rubino, R Saunders, F Waugh, Ms J Gavan, Ms S Hanfling, Ms K Laing, Mr B Meikle and Ms E Stewart. Professor K Trigwell and Ms A Griffiths were in attendance.

The full agenda for the meeting may be accessed on the web:

[http://sydney.edu.au/ab/committees/oldcom/learn\\_teach/2008\\_agendas.shtml](http://sydney.edu.au/ab/committees/oldcom/learn_teach/2008_agendas.shtml)

**11.2.1 Focus Topic: Research-Enhanced Learning and Teaching**

pages G3-G6

Professor Trigwell from the Institute for Teaching and Learning gave a presentation on the topic Research-Enhanced Learning and Teaching. The Academic Board policy, Research-Enhanced Learning and Teaching was also circulated.

**Recommendation**

*That the Academic Board note the report from the Learning and Teaching Committee on Research-Enhanced Learning and Teaching.*

**11.2.2 Report of the Deputy Provost and Pro Vice-Chancellor (Learning and Teaching)**

The Committee noted a report from the Deputy Provost and Pro Vice-Chancellor (Learning and Teaching). Professor Armstrong spoke to the written report and announced that the University of Sydney had received six **Australian Learning and Teaching Council Citations for Outstanding Contributions to Student Learning 2008**. In a ceremony held on 5 August the following recipients were awarded citations and \$10,000 prize money:

- **Ms Kellie Morrison, Faculty of Economics and Business**  
For excellence in leadership, design and implementation of a faculty-wide peer learning program that enhances students' learning, engagement and quality of their overall experience
- **Dr John O'Byrne, Dr Joe Khachan and Dr Manjula Sharma, Faculty of Science**  
For ongoing development and implementation of collaborative and interactive modes of learning in large first year physics classes
- **Mr Giuseppe Carabetta, Faculty of Economics and Business**  
For excellence in inspiring teaching that promotes experiential learning in first year commercial law courses
- **Dr Smita Shah, Faculty of Medicine**  
For creating an evidence-based educational program which involves medical students in community outreach, education and action and for integrating this within an inter-professional learning context
- **Associate Professor Rick Benitez, Faculty of Arts**  
For modelling philosophical processes and teaching practices in and beyond the classroom, leading to positive transformations in learners' experience of their subject and themselves
- **Associate Professor Paul McGreevy, Faculty of Veterinary Science**  
For the development of resources that support authentic, relevant and enquiry – led learning activities that ignite passion, foster high standards and nurture critical skills in veterinary undergraduates.

**Recommendation**

*That the Academic Board note and congratulate the recipients of the Australian Learning and Teaching Council Citations for Outstanding Contributions to Student Learning 2008.*

**11.2.3 Proceedings of the Committee**

**(1) Report of the Chair of the Learning and Teaching Committee**

The Chair informed members that he represents the Committee on the Learning and Teaching Strategy Group, chaired by Professor Armstrong, as well as the eLearning Governance Group. He will continue to keep the Committee up to date on the work of these groups and report back on issues as they arise. At the recent Academic Board retreat, the Committee was represented by the deputy chair, Associate Professor Barrie. The retreat provided a valuable opportunity to talk through the role of Academic Board standing committees with the new Vice Chancellor, Dr Spence.

**(2) Other matters considered by the Committee**

The Committee:

- noted the report of the Academic Board meeting of the 2 July 2008; and
- welcomed new members: Dr Stephen Cattle from the Faculty of Agriculture, Food and Natural Resources, Dr Elvira from the Centre for Continuing Education and Ms Emily Stewart, new co-president of SUPRA.

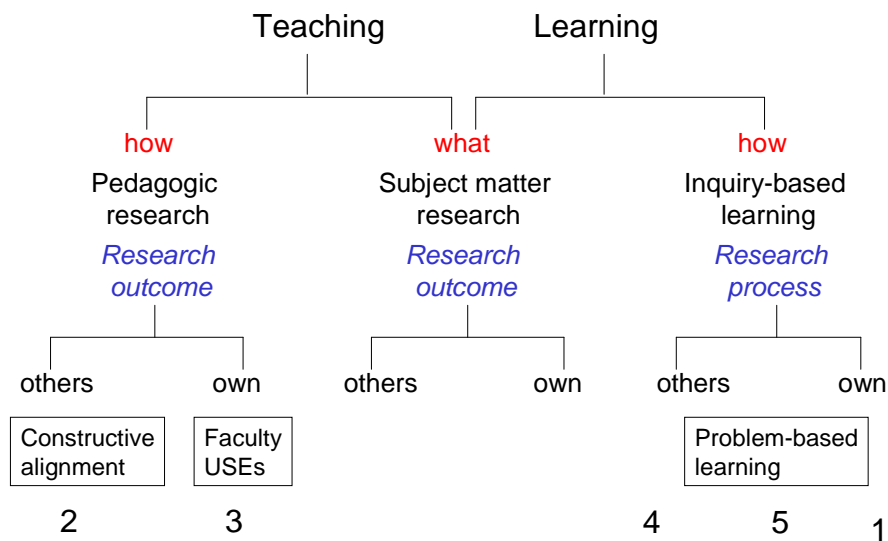
## Research-enhanced learning and teaching

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ITL

### 1. Policy: Research-Enhanced Learning and Teaching (Approved by: Academic Board, 13 December 2006 Date of Effect: 1 January 2007)

### 2. Overview

## Research-enhanced teaching/learning



### 3. Case Studies

### **Case Study 1: Inquiry-based learning**

#### **Inquiry-based learning introductory course for social sciences had a significant impact on students' subsequent performance at McMaster University, Canada.**

McMaster University has been running a first-year course for social sciences based on inquiry since the late 1990's. Detailed research has been undertaken on the first five years' experience. It was typically taught in groups of no more than 25 students which met for 12 three-hour sessions. Much of the time involved groups of four or five students assisting each other. All students investigated aspects of a broad social science theme, such as 'self-identity', and addressed a common inquiry question, such as "Why do images of ethnicity, race, gender, sexuality, age, class, or abilities help to create aspects of personal and community identity?" The groups would test hypotheses using secondary data. The course emphasises the development of skills, including critical reading and thinking, independent and collaborative learning, information searching and evaluation, analysis and synthesis, oral and written communication, and self and peer evaluation.

Analysis of five years of data comparing students who took the Inquiry course with comparable students who did not shows that it has had a significant impact on how well students perform during their academic careers. The findings allow for initial differences between the two samples. Taking the Inquiry course is associated with statistically significant positive differences in obtaining passing grades, achieving Honours, staying on the Dean's honour list, and remaining in university.

### **Case Study 2: Using pedagogic research (others)**

#### **Implementing constructive alignment ideas into course design at the University of Sydney.**

John Biggs' (Teaching for Quality Learning at university) constructive alignment ideas of not only aligning the teaching activities with intended outcomes and assessment strategies, but also doing it in a way that is experienced by the students as well as the curriculum designers, has made a significant impact on course design. Academic staff throughout the University of Sydney are modifying some or all of their Unit of Study teaching, aims and assessment strategies in line with these research ideas, as a way of improving the quality of student learning.

### **Case Study 3: Using pedagogic research (own)**

#### **Inquiry into the student learning experience using USEs**

Unit of Study Evaluation (USE) provides feedback to course co-ordinators on how students in their course experience the learning environment. Co-ordinators at the University of Sydney conduct analyses of the quantitative results and the comments provided by students on each item and, in conjunction with the student learning literature, develop conclusions on ways that the learning of students in that context might be improved. In some cases these investigations are extended through interviews or focus groups with students to seek more a detailed understanding of the results, and through discussions with colleagues to compare experience in how to address issues raised in the feedback. It is the use of the results of these local inquiries to change teaching with the aim of improving student learning at the local level that constitutes research-enhanced teaching. In a few situations the results of such an analysis have wider implications and are published as pedagogic research.

#### **Case Studies 4: Inquiry learning in own research area Arts/Social Sciences**

##### **Students participate in a research project on Criminal Justice linked to staff interests at Australian National University.**

Students at ANU have the opportunity to participate in a research project based on current research being conducted by members of the Faculty of Law, the Australian Institute of Criminology and Research School of Social Science. 'Criminal Justice' is an advanced law elective which critically examines the principal institutions, processes and legal rules relating to the administration of criminal justice. The iLearning project is an assessable option that allows students to devise research projects which have both academic value and practical outcomes.

##### **Students taking a historical methodology course engage in original oral history research at Indiana State University, US.**

The 30 or so students taking the introductory historical methodology course are engaged in original research. Anne L. Foster, an assistant Professor of History, who teaches the course, was eager to find topics in which her students could "become experts" and make a real contribution to local knowledge. In 2004, the class produced a history of the black community of the Wabash Valley, including Lost Creek, a neighbourhood of Terre Haute, Indiana, the city that is home to the university. Lost Creek was established in the 1820's by freed and runaway slaves with the help of local Quakers. The course stresses oral histories, and that year's project included a video interview with a 104-year-old woman whose grandparents were slaves. Another group of students, in the fall of 2005, interviewed three elderly local men with connections to the Holocaust: a concentration-camp survivor from Latvia, a Jew whose family managed to flee Germany, and a former US soldier who helped liberate a concentration camp in Germany. One student did an independent project that turned the class material into a permanent exhibit at Terre Haute's Holocaust Museum.

#### **Case Studies 5: Inquiry learning in own research area Sciences**

##### **Asking questions in Plant Biology at Australian National University.**

A practical exercise designed for a Level 2 course inducts students in the process of inquiry characteristics of the discipline. Students make observations in a botanical garden; each formulates 10 questions (e.g. "why do eucalypt leaves dangle?"); shares one of these questions with a group of other students; as a group develop hypotheses based on the question (e.g. "Eucalypt trees in arid environments have leaves that dangle at steeper angles than those in wet environments"); think of ways of testing the hypotheses; and write up individually their 10 questions and one hypothesis as a 750 word mini-proposal for a research project.

##### **Intergenerational student teams support first-year inquiry courses in Chemistry at the University of Michigan, US.**

Each year the Chemistry Department at Michigan has c. 100 students in term-time or over the summer involved in undergraduate research with the c. 40 Department research groups. In addition, standard undergraduate laboratory courses have been modified in order to create a more deliberate link to more authentic research practices.

*An inquiry-based curriculum for first-year students.* The large (c.1,400 students) introductory Organic Chemistry courses have been significantly revised to focus more on students inquiry, narrowing the gap between how faculty understand Chemistry and how students experience it in their coursework.

*Authentic laboratory research.* A subset of c. 160 students in this first-year course self-select into a supplemental instruction program where they spend two additional hours per week engaged in tasks that involve working with the primary literature. In the laboratory, after spending about half their time developing manipulative skills, they take on the design and implementation of limited but authentic primary laboratory research.

*Upper-level student support and development.* This supplemental instruction program is a collaborative activity between the primary faculty member and a team of eight upper-level undergraduate students (themselves graduates from the first-year course) who have co-designed the instructional materials and who are solely responsible, with guidance from the faculty member, for implementing these 2-hour sessions. These students are seen as potentially the next generation of teacher-researchers.