MINUTES OF THE MEETING OF THE
FACULTY TEACHING AND LEARNING COMMITTEE
held in Room 1.58, First Floor, Physics Building
on Tuesday 09 June 2009

Present:
Professor Geoff Hammond (Chair)
Ms Jenny Gamble (Faculty Manager)
Associate Professor Nancy Longnecker (Teaching and Learning Co-ordinator)

Representatives from Schools:
Dr Jan Meyer (Anatomy and Human Biology)
Professor Don Robertson (Biomedical, Biomolecular and Chemical Sciences)
Dr Peter Whipp (Sport Science, Exercise and Health)
Professor Ian McArthur (Physics)
Dr Vance Locke (Psychology)

Other Representatives:
Dr Thomas Martin (Director, Faculty Offshore Programs)
Dr Jane Emberson (Academic Student Advisor)
Mr David Enright (Senior Administrative Officer/Offshore Programs)
Mrs Vickie Falcetta (Representative from FNAS)
Miss Lauren Hollier (Undergraduate Student Representative)

Apologies
Dr Des Hill (Mathematics and Statistics)
Ms Felicity Renner (Biological Sciences Library)
Ms Rachel Owens (Postgraduate Student Representative)

Mrs Kath Williams (Executive Officer)

1. MINUTES

RESOLVED – 6

that the minutes of the meeting of Teaching and Learning Committee held on Tuesday 12 May 2009
be confirmed.

2. DECLARATIONS OF POTENTIAL FOR CONFLICT OR PERCEIVED CONFLICTS OF INTEREST

No conflicts were declared.
3. ITEMS/BUSINESS IN PROGRESS FOR NOTING SINCE PREVIOUS MEETING

<table>
<thead>
<tr>
<th>Item/Business in Progress</th>
<th>Progress Update</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching and Learning Guide for Faculty Staff.</td>
<td>Draft to be checked by Faculty Student Advisor and Faculty Manager prepared by Ms. Heather Morton</td>
<td>On hold</td>
</tr>
<tr>
<td>The specification of learning outcomes for courses and majors offered in the Faculty.</td>
<td>Audit to be undertaken by Teaching and Learning Co-ordinator. School to recommend major/s sequence</td>
<td>Completed</td>
</tr>
<tr>
<td>Audit of each major sequence to determine whether English Language Competency Skills are shown in at least one unit in each year level.</td>
<td>Audit to be undertaken by Teaching and Learning Co-ordinator. School to recommend major/s sequence</td>
<td>In progress</td>
</tr>
<tr>
<td>Faculty Operational Priorities Plan (OPP) implementation strategies and targets.</td>
<td>Faculty Manager has updated implementation strategies and targets and distributed them to members for consideration</td>
<td>In progress</td>
</tr>
<tr>
<td>New grade for failed component (FC); was it appropriate to have a supplementary assessment in all components of a unit.</td>
<td>School representatives to report</td>
<td>Completed</td>
</tr>
<tr>
<td>Master of Science Thesis – Faculty positional statement on completion by papers.</td>
<td>Proposed process supplied by the Sport Science, Exercise and Health representative was supported by the Committee</td>
<td>Completed</td>
</tr>
</tbody>
</table>

4. CHAIR’S REPORT

Members were informed that a subcommittee had met to consider applications from Schools for funding from the Faculty’s LTPF allocation of $533,000. Applications totalling more than $1m had been received. LTPF has been discontinued and other funding in the future was likely to focus on equity and broader access to University.

Members were informed that the last UWA Teaching and Learning Committee had considered its budget which supported teaching and learning initiatives which Schools and individuals could apply for. The details of these initiatives are in the June Agenda which is available on the Web at:


Members were informed that the Senior Deputy Vice Chancellor, Professor Bill Louden had attended the Teaching and Learning Committee meeting for a brief discussion on the Future Framework. He stated that a decision would be made shortly on whether the Future Framework would be introduced in 2012 or 2013. Some changes, including a reduction in the number of majors and units offered, could be made earlier. Interim Boards of Studies were to be established for each of the new undergraduate degrees and Deans of Faculties would be invited to join appropriate boards. Faculties were required to submit their proposed majors to their Interim Board of Studies by November 2009. Professor Louden noted that broadening units may be defined as those belonging to another undergraduate degree. Members agreed that this definition would disadvantage Science students who would not be able to choose broadening units from the wide range of disciplines taught within the BSc.
Professor Geoff Meyer from Anatomy and Human Biology was congratulated on receiving an ALTC Teaching Fellowship.

5. **NEW GRADE FOR FAILED COMPONENT**

Members had discussed this item in September 2008 and March 2009. At the September 2008 meeting a member requested clarification of the introduction of a new grade ‘FC’ which indicated that although the student had achieved a score greater than or equal to 50%, a compulsory component of the unit had been failed and therefore the unit had been failed overall. The ‘FC’ grade could be used in a unit only if its application was specified clearly in the ‘assessment mechanism’ statement in the unit outline. A mark of 48% was awarded for an ‘FC’ grade, and members agreed that in such instances students would be eligible for supplementary assessment if the other conditions for supplementary assessment were met. The nature of the supplementary assessment would be at the discretion of the unit coordinator.

6. **CALIBRATED PEER REVIEW (CPR)**

Members were informed that the National Science Foundation in the United States had developed CPR as a process for peer assessment of written student assignments. CPR was a free Web-based program that could be used across the Faculty to increase student engagement in assessment and their appreciation of the important features of written assignments, and to reduce staff time spent in assignment marking. It was used in over 650 universities around the world. Student peer assessors were trained in assessing exemplars of the assignment to be marked and their assessments weighted by their performance in training. The Teaching and Learning Coordinator proposed to trial the process in Introductory Chemistry and in Science Communication units. More information for this item was tabled at the meeting (Attachments A and B). The URL for the CPR website is:

http://cpr.molsci.ucla.edu/

The Teaching and Learning Coordinator agreed to update the Committee on the future developments.

7. **SCHOOL REPORTS**

**Sport Science, Exercise and Health** – Dr Peter Whipp reported that the School had been focusing on the Future Framework. This was a difficult process and there were unanswered questions. Members were reminded that Professor Louden had indicated at the UWA Teaching and Learning Committee that only broad principles of implementation should be developed at this stage.

**Biomedical, Biomolecular and Chemical Sciences** – Professor Don Robertson reported that the School had been looking into what majors would be offered in the Future Framework and stated that the School might argue for retention of 12-point units.

**Physics** – Professor Ian McArthur reported that Physics was considering offering a 2-year Masters program by coursework and research rather than a separate Honours year. The University of Melbourne offered both courses and had found that most students preferred the Masters course. The School was also collaborating with ANU in a venture to share advanced coursework units through a video link.

**Anatomy and Human Biology** – Dr Jan Meyer reported that the School had been having discussions about majors under the Future Framework. They had also been working on time-saving measures and to tracking the development of literacy and quantitative skills across the degree.

**Psychology** – Dr Vance Locke reported that the School had been working on streamlining the Honours units and evaluating a trial of peer assessment of Honours research proposals.
8. **TEACHING AND LEARNING CO-ORDINATOR REPORT**
The Teaching and Learning Co-ordinator reported on an ALTC-supported teaching resource on the use of ‘new media’ in teaching and learning (such as pod casting and blogging).

9. **PSB REPORT**
Dr Thomas Martin reported that PSB was concerned about the impact of a potential outbreak of swine flu. A list of local medical practitioners and hospitals would be given to lecturers teaching in Singapore. Members noted that the University had been looking into the implications of a high proportion of staff being on sick leave and this was to be fed into a risk management plan.

Unit coordinators had adopted a standard report form for reporting unit results to the PSB Board of Examiners.

Members were informed that an Honours program was being developed for PSB and the Director had been trying to attract potential Honours supervisors. An Honours booklet was almost complete.

Members were presented with an updated timetable for PSB (Attachment C). There had been difficulties in the past with follow-on units which began before marks for the pre-requisite unit were available. The new timetable minimized the number of these instances. Members were informed that if there was no negative feedback the timetable would be made public. One member remarked STAT1510 came toward the end whereas the skills taught would be useful throughout.

10. **STUDENT REPRESENTATIVE REPORT**
The undergraduate student representative reported that there was to be a Careers Expo in the BBCS foyer in Week 4. Concern was expressed over the concentration of examinations for some students in the exam timetable especially for Engineering Students. Members noted that it was unfortunate, but unavoidable.

11. **OTHER ITEMS OF BUSINESS**
Members were asked to let unit coordinators know that only approved calculators (identified by an authorized sticker, which is available from the Faculty Office) can be used in formal examinations.
Calibrated Peer Review

- **Step One:** The instructor crafts a writing assignment. She can use CPR's built-in authoring tools or choose a ready-made assignment from among those created and published on the CPR Web site by other faculty in her discipline.

- **Step Two:** Each student composes a written response based on the instructor's guidelines and submits his or her work electronically.

- **Step Three:** The CPR program guides each student through a tutorial on peer review for that particular assignment. This tutorial consists of calibration exercises and detailed feedback designed to help students become competent reviewers. Students must pass the calibration exercises before they can move to Step Four.

- **Step Four:** Students evaluate the work of their peers in a double-blind process to ensure privacy. However, none of the work is anonymous to the instructor.

- **Step Five:** Students turn a critical eye on their own work, applying the same standards they previously employed to evaluate their peers' work.

- **Step Six:** Finally, the CPR system provides each student with a personal performance report and generates an instructor's report as well.

What does it take?
To participate in a CPR-enabled course, a student needs only an Internet connection and a Web browser. Interested faculty can gain free access to the software by visiting the CPR Web site and registering. Once there, they are given the option of administering their own courses only or becoming the administrator for their entire institution, responsible for managing all of the institution’s users and courses and the assignment library. Institutions considering broad adoption of the CPR system might want to provide their own data-backup services. In addition, institutions should consider the possibilities and costs of integrating the stand-alone CPR assignment library and performance-evaluation tools with their own enterprise systems for course management, digital resource preservation, and authorized resource sharing.

Why is it noteworthy?
- **Applies across disciplines and institution types.** CPR students in multiple disciplines demonstrate learning gains throughout the term, regardless of whether CPR assignments are implemented at a high school, community college, comprehensive college, or research university.

- **Improves student learning.** Quantitative studies of CPR’s impact on student learning at three different universities indicate that CPR learners perform approximately 10 percent better on traditional course examinations than students taught through traditional lecture methods, regardless of whether the exams are essay-based, problem-based, or multiple-choice. Moreover, students improve their reasoning abilities over the course of the term. After passing the calibration exercises in the CPR tutorial, more than one-third of the students who submitted poor essays were able to recognize their mistakes and accurately evaluate their own work during the self-assessment stage.

- **Reduces faculty workload.** CPR decreases the instructional workload for faculty in terms of both developing and evaluating assignments. The assignment library, now holding 1,275 shareable assignments, provides faculty with field-tested instructional materials they can adopt for use in their own classrooms and easily align with their curricula.

- **Replicates successfully.** To date, the CPR classroom experience has been replicated successfully at more than 300 institutions, which have deployed CPR in over 1,000 courses (primarily chemistry, biochemistry, the life sciences, and composition), with a combined enrollment of over 72,000 students.

To learn more
Visit the CPR Web site at http://cpr.mostsci.ucla.edu/.

To share your innovation
If your institution has a practice that you believe would be of interest to the EDUCAUSE Learning Initiative, please share it with us.
To submit your innovation for review, please use the ELI Innovations Contribution Form on our Community Exchange page http://www.educause.edu/ELICommunityExchange/670729.
A panel will review your submission and make a recommendation to the ELI staff.

About the EDUCAUSE Learning Initiative
The EDUCAUSE Learning Initiative (ELI) is a community of higher education institutions and organizations committed to advancing learning through IT innovation. To achieve this mission, ELI focuses on learners, learning principles and practices, and learning technologies. We believe that using IT to improve learning requires a solid understanding of learners and how they learn. It also requires effective practices enabled by learning technologies. We encourage institutions to use this report to broaden awareness and improve effective teaching and learning practice.

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1 Calibrated Peer Review is a trademark of the Regents of the University of California.
Calibrated Peer Review: A Writing and Critical-Thinking Instructional Tool
University of California, Los Angeles  University of Southern California

What is it?
Calibrated Peer Review (CPR) is a free Web-based program that allows instructors to incorporate frequent writing assignments into their courses, regardless of class size, without increasing their grading workload. Students are trained to be competent reviewers and are then given the responsibility of providing their classmates with personalized feedback on expository writing assignments. Meanwhile, with access to all student work, instructors can monitor the class as a whole and assess the progress of each student. The CPR system manages the entire peer-review process, including assignment creation, electronic paper submission, student training in reviewing, student input analysis, and final performance report preparation.

Although the CPR system! was developed under a National Science Foundation grant awarded to Orlilla Chapman at UCLA for curricular reform in chemistry, the CPR instructional tool suite has been designed to be discipline-independent. CPR's integrated set of network tools supports a "writing-across-the-curriculum" approach. The central tenet is that students in any discipline can learn from writing: students understand more deeply when they write about what they are learning.

The cross-disciplinary nature of the instructional tool is underscored by one of its key features—the Web-based assignment library, which stores instructor-created assignments categorized by discipline. True to the philosophy of "peers helping peers," this online repository establishes an instructor support network, giving faculty ready access to assignments created and published by their colleagues. The CPR Web tool, including the program's growing library of assignments, is hosted by UCLA and delivered without cost to participating institutions. The growing user base receives technical assistance from the CPR development team through e-mail and a listserve. Currently, more than 500 institutions are taking advantage of this free service, deploying CPR in over 1,900 courses with a combined enrollment of more than 72,000 students.

What problem does it solve?
By introducing undergraduates to a managed, anonymous peer-review process modeled on the professional practices of scientists, the CPR program reforms the undergraduate curriculum in institutions where undergraduates have limited opportunities to gain access to:

- Personalized learning support
- Frequent writing and critical-thinking exercises
- Multiple perspectives
- Opportunities for autonomy
- Insight into professional practices

Chapman and the CPR development team recognized that lower-division undergraduates rarely confront writing assignments outside their English composition courses, nor are they expected to use expository writing as a means of clarifying their conceptual understanding of discipline-specific issues. As a result, students have little exposure in their early college years to the professional practices of working scientists, engineers, and scholars, for whom peer review is the standard mode of demonstrating the merit of research proposals and results. By adopting guided peer review as its instructional design model, the CPR development team intended to promote a classroom environment where students must make decisions and offer sound advice while continuing to work out their own interpretations of complex discipline-specific content.

How did they do it?
The CPR approach to peer review is based on the way scientists and engineers assess the accuracy of observations and approach the evaluation of one another's work. First, CPR allocates the pressure on sensitive students by adopting the scientific community's "double-blind" review process, during which both the author and the evaluator remain anonymous. Second, CPR ensures that student feedback is consistent and reliable by taking its cue from the "publication" techniques that laboratory scientists use to obtain accurate measurements. The CPR program initially guides students through a series of calibration exercises intended to hone their critical-thinking skills and establish standard criteria for reviewing before they are allowed to read and assess the work of their peers.

In terms of online instructional design, CPR can be seen as a direct response to the perceived shortcomings of the online tutorial, with its scripted presentations, programmed responses, and limited student input. By contrast, the CPR system encourages student autonomy while offering continual feedback through guided exercises, peer evaluations, and final performance reports. CPR's guided peer review process is relatively straightforward:

EDUCAUSE Learning Initiative
advancing learning through IT innovation
Formerly NCEI
www.educause.edu/eli
Introducing Calibrated Peer Review to UWA

http://cpr.molsci.ucla.edu/

proposed by Nancy Longnecker

Summary

This project will introduce a tool that could be used across the faculty to increase writing assignments and decrease marking time. The tool – Calibrated Peer Review – is used in over 650 universities around the world but has not yet been introduced at UWA. It has successfully been used in large science classes. This project will trial the tool in a large, introductory Chemistry unit and in small units that specialise in science writing at both undergraduate and postgraduate levels. If the tool is successfully used in these units, it is argued that it could be considered for most units across the faculty.

Writing skills of UWA BSc graduates are indisputably important

From UWA’s Review of Courses Report (Education for Tomorrow’s World, Course of Action; p. 10):

The failure of research universities seems most serious in conferring degrees upon inarticulate students. (The Boyer Report, 1998)

• “Several other fundamental generic skills (e.g. thinking critically, analysing and interpreting information accurately, and solving problems collaboratively) depend on a confident command of the resources of language. While different disciplines may legitimately favour different kinds of communication, it is axiomatic that graduates of a reputable university should have learnt how to express themselves in a fluent manner, convey clear information, articulate a cogent argument, give a precise exposition of a problem in their field, and choose appropriate forms of written as well as oral language for various professional purposes” (CTW p24).

• Graduates generally recognise that this set of skills is vital in the workplace. For instance a recent UWA-based research project asked 300 established engineers to rate the professional importance of 63 different competencies, and the one rated as critical by the highest percentage of participants was “communicating clearly and concisely in writing” (Male, Chapman and Bush 2007). This echoes the results of comparable research elsewhere across various fields: for instance a survey of mid-career Harvard alumni (cited by Light 2001) found that more than 90% judged the “need to write effectively” as being “of great importance” for their careers.

In a study of 365 Harvard undergraduates, Light (2001) found that the amount of writing a student did in a unit had a strong relationship with the student’s engagement (measured by either time spent on the unit, the intellectual challenge it presented or the student’s level of interest). This relationship was far stronger than any other characteristic of the unit and the amount of time writing was a stronger determinant of engagement than the students’ impression of the professor or the reason the student took the unit (eg elective vs core).
Increased writing in units is difficult when resources for teaching are stretched

Most academics recognise the importance of writing but do not have the time to mark writing assignments or the resources to hire others to do so. Writing assignments (e.g., laboratory reports) are being decreased to save marking time.

Calibrated Peer Review is a tool to increase student writing and decrease instructor marking (http://cpr.molsci.ucla.edu/)

Calibrated Peer Review (CPR) is a web-based program that allows writing assignments to be set and marked, even in large classes with limited teaching resources. CPR can decrease the amount of time spent marking written assignments.

CPR was created at UCLA, funded by the USA's National Science Foundation and the Howard Hughes Medical Institute. It is used in 694 universities around the world but has not yet been introduced at UWA.