

Feedback and Flexible Learning

4th ERGA Conference

24-25 September 2009

EDUCATION RESEARCH GROUP OF ADELAIDE

The University wishes to acknowledge the Kurna people, the original custodians of the Adelaide Plains and the land on which the University of Adelaide's campuses at North Terrace, Waite, Thebarton and Roseworthy are built.

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ERGA Conference 2009: Timetable of Program

Venue: Lower Napier Building, University of Adelaide

DAY 1: Thursday 24 September

| | | |
|------------|--|--|
| 8:00–8:45 | Registration | |
| 8:45–8:50 | Welcome Professor Geoffrey Crisp, Director, Centre for Learning & Professional Development, The University of Adelaide (LG 29) | |
| 8:50–10:00 | Keynote Address Day 1: Professor Marcia Devlin, Inaugural Chair in Higher Education Research, Deakin University (p.1) <i>Student feedback in the Australian higher education policy context.</i> (LG 29) | |

Concurrent Sessions

| Innovative Curriculum (LG 28) | | | Online Development (LG 23) | | | Writing (LG 24) | | |
|-------------------------------|--|---|--|--|--|-----------------|--|--|
| 10:00–10:30 | Trialling TBL in large classes: Successes and costs. <i>Jerram</i> (p.28) | Feedback forms employed in online courses at Tabor Adelaide. <i>Tuovinen, Ngu & Tucker</i> (p.52) | Feedback forms employed in online courses at Tabor Adelaide. <i>Tuovinen, Ngu & Tucker</i> (p.52) | Writing tutorials used as an aid for students in preparing literature reviews. <i>Wiederman, Yool & Irving</i> (p.64) | | | | |
| 10:30–11:00 | Integrating communication skills with discipline content. <i>Falkner</i> (p.18) | Pedagogical approaches to online learning in geography: New learning landscapes? <i>Wanner & Bonham</i> (p.58) | | The Writing Centre: The affective advantage of constructive feedback. <i>Velliaris & Warner</i> (p.54) | | | | |

11:00–11:30

Morning tea

Concurrent Sessions

| Innovative Curriculum (LG 28) | | | Online Development (LG 23) | | | Reflection (LG 24) | | |
|-------------------------------|---|---|----------------------------|---|--|--------------------|--|--|
| 11:30–12:00 | Using crash courses to promote active engagement and develop problem solving skills. <i>Willis</i> (p.68) | If fishes were wishes we'd all have online materials for our students. <i>Chur-Hansen, Crabb, Devitt, De Young & Palmer</i> (p.14) | | The use of reflecting journaling to assess the quality of a large accounting course. <i>Powell</i> (p.38) | | | | |
| 12:00–12:30 | A stranger in a strange land: Knowledge diasporas and cross discipline supervision. <i>Westphalen</i> (p.62) | Online resources for flexible delivery: How do students use them in their study? <i>Hiscock & List</i> (p.22) | | Peer feedback using reflective journaling: A case study of reflection-on-action. <i>Cheung & Naidoo</i> (p.12) | | | | |

12:30–1:30

Lunch

Concurrent Sessions

Innovative Curriculum (LG 28)

Enhancing assessment feedback practices in accounting education: Issues, obstacles and reforms. *O'Connell, Howieson, Jacobsen, de Lange, Milton & Watty* (p.34)

Online Development (LG 29)

History never repeats...or does it? *Palmer* (p.36)

Online Development (LG 24)

Clinical Handover: An interactive learning tool to promote student engagement: Developing the tool. *Jenkins, Warland, Horrocks, Sarles & Holm* (p.26)

2:00–3:00

Panel: Teaching approaches for the 21st century: Where do we go from here? (p.3)
Professor Marcia Devlin, Professor Susan Jones, Simon Pyke, Robyn Muldoon (LG 29)

3:00–3:30

Afternoon tea

Innovative Curriculum (LG 28)

Using feedback and cognitive research with CBL materials to respond to students' individual differences. *Tuovinen, Halabi & Farley* (p.50)

Online Development (LG 23)

Development of a Chicken & Egg eSim using *Moodle* and Research Skill Development (RSD) framework based rubrics. *Hazel, Chew, Carrington, Lawson & Baron* (p.20)

Feedback Loop (LG 24)

Using self assessment tools to improve feedback to staff and maximise learning. *Anthony, Baijle, Emmerson & Frauenfelder* (p.6)

4:00–4:30

Expressive phenomenology and critical approaches in the distance education classroom: Process and risks. *Willis* (p. 70)

Much ado about the flu: Developing an online roleplay for a large class, challenges faced and lessons learnt. *Warland, Smith & Smith* (p.60)

An online peer review instrument designed to facilitate reflective thinking through formative feedback and assessment. *Wood* (p.74)

4:30–

Drinks

DAY 2: Friday 25 September

| | |
|------------|--|
| 8:00–8:45 | Registration |
| 8:45–8:50 | Prize Presentation and Welcome |
| 8:45–10:00 | Keynote Address Day 2: Professor Susan Jones, Head, School of Zoology, University of Tasmania (p.2) <i>Feedback and flexible learning: growing as a reflective practitioner.</i> (LG 29) |

Concurrent Sessions

| | Informing Curriculum (LG 28) | Online Technology (LG 23) | Understanding & Using Feedback (LG 24) |
|-------------|--|---|--|
| 10:00–10:30 | Withdrawn | Making the connection: Building student engagement through integrated online learning modules (IOLMs). <i>Karanicolas, Snelling, Green & Carrington</i> (p.30) | "If I write feedback, will you read it?" Encouraging students to take responsibility for reading and acting on feedback. <i>McEntee & Ward</i> (p.32) |
| 10:30–11:00 | Lecture attendance and assessment outcome in Human Physiology students. <i>Horton, Wiederman & Saint</i> (p.24) | Using video worked examples to enhance learning in a first year mathematics course. <i>Butler</i> (p.10) | Peer marking to increase engagement with assessment tasks. <i>Coulson</i> (p.16) |

11:00–11:30

Morning tea

Concurrent Sessions

| | Curriculum (LG 28) | Informing Curriculum (LG 23) | Understanding & Using Feedback (LG 24) |
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| 11:30–12:00 | Enhancing the teaching-research nexus: Managing undergraduate research experiences in the chemical sciences. <i>Pukala</i> (p.40) | Sustainable, authentic, corrective formative assessment. <i>Rainsford</i> (p.42) | 'Now I know what you mean': Improving the feedback mechanism and students' capacities for self-critique. <i>Sendziuk</i> (p.48) |
| 12:00–12:30 | Perceptions and expectations of authorship: Towards development of an e-learning tool facilitating discussion and reflection between post-graduate supervisors and candidates. <i>Wilkinson, Picard & Wirthensohn</i> (p.66) | How to handle the pros and cons of courses run by distance education only. <i>Buisman-Pijlman & White</i> (p.8) | Improving clinical assessment: Evaluating students' perceptions, knowledge and ability to identify and apply clinical criteria. <i>Winning, Lekkas, Redwood & Townsend</i> (p.72) |

12:30–1:30

Lunch

Concurrent Sessions

Curriculum (LG 28)

Developing a scaffolding framework to embed the graduate qualities using student, peer and topic coordinator feedback for the Bachelor of Health Science program.
Reynolds & Parry (p.44)

Online Technology (LG 23)

Flexible learning in a large undergraduate science course.
Rogers (p.46)

Understanding & Using Feedback (LG 24)

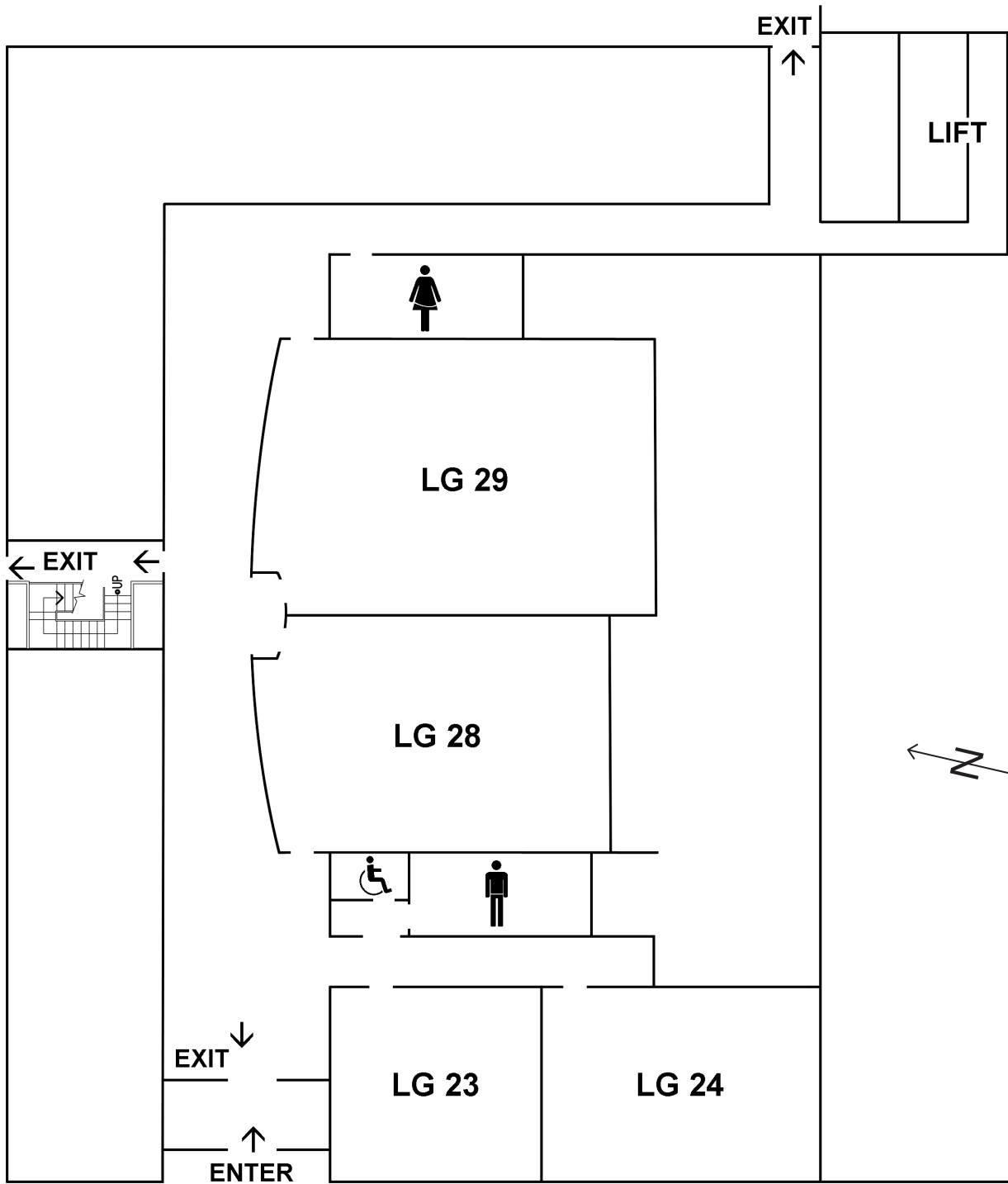
Student satisfaction, understanding and the role of feedback.
Walker & Palmer (p.56)

2:00–3:00

Panel: What will ERGA do next? Getting involved in the decision making process. (p.3)
Professor Susan Jones, ERGA Executive members (LG 29)

3:00–

Prize Presentation, Afternoon Tea & Close



Lower Napier Building

The University of Adelaide

J11 on the North Terrace Campus map

Keynote Address Day 1

Student feedback in the Australian higher education policy context

Professor Marcia Devlin

Inaugural Chair in Higher Education Research, Deakin University

This address will provide an overview of the recent federal government response to the Bradley Review of higher education and will question how student feedback features within future national directions and targets. The address will discuss some of the perennial issues associated with student feedback and draw on recently developed resources to provide some suggestions for how these might be best managed currently and in the future. Practical suggestions, applicable to a cross-disciplinary audience, will be offered, including research-based findings on how best to provide feedback to facilitate maximum impact. Some of the challenges and opportunities around giving student feedback will be highlighted.

About the Speaker

Professor Marcia Devlin holds the inaugural Chair in Higher Education Research at Deakin University, Victoria. Marcia's research interests and expertise span higher education policy, equity, Indigenous higher education, university teaching improvement and student engagement and learning. Current and recent national work includes contributing to federal policy development in Indigenous higher education and equity, the *Universities Australia*-funded national study of student finances, sitting on the National Advisory Group of the Australian Survey of Student Engagement managed by the Australian Council for Educational Research and serving as an Assessor for the Australian Learning and Teaching Council. Marcia is frequently invited to deliver national and international keynote addresses, lectures, workshops and seminars to provide advice on a range of topics related to higher education policy, practice and quality. The author and co-author of a large number of reports, studies, and articles in international peer-reviewed journals, Marcia co-authored the Australian Universities Teaching Committee *Assessing Student Learning* website and resources. She writes regularly on higher education matters for newspapers including *The Australian* and *Campus Review* and has regular higher education columns in *The Age* and *The Warrnambool Standard*.

Plenary Day 2

Feedback and flexible learning: growing as a reflective practitioner

Professor Susan Jones

Head, School of Zoology, University of Tasmania

This talk will focus on the academic as the learner. We all begin as novices in some sense. How do we grow and develop as practitioners during our careers, and how might our own personal learning and development translate into better learning outcomes for our students? During this talk, I will reflect on my own career journey from casual demonstrator to professor. I will use Biggs' three levels of teaching as a framework for identifying key stages of that journey. I will share some examples of how feedback from students or peers can be used to support teaching development or teacher development, and how a reflective practitioner learns to scaffold innovation through rigorous evaluation. I hope that this story may stimulate some of the audience to reflect on their own career aspirations as teaching academics.

Reference

Biggs, J. (1999) *Teaching for Quality Learning at University*. (1st ed) Buckingham, UK, SRHE and Open University Press.

About the Speaker

Professor Susan Jones is Head of the School of Zoology at the University of Tasmania. She has taught at the University since 1986, beginning as a casual senior demonstrator in first year practical classes. She has a special interest in the first year transition, embedding generic skills into the science curriculum, and in providing authentic research experiences for undergraduate students. Her teaching is strongly evidence-based: her portfolio includes several major faculty-wide or national teaching development projects, and she is a Fellow of the Higher Education Research and Development Society of Australasia (FHERDSA). The quality of Sue's teaching has been recognised with three University of Tasmania Teaching Excellence Awards (individual awards in 1997 and 2007, and a team award in 2004). At the national level, she won a Carrick Citation for Outstanding Contributions to Student Learning in 2007, and an ALTC Award for Outstanding Contributions to Student Learning (Biological and Biomedical Sciences) in 2008. Her disciplinary research area is vertebrate reproductive biology and endocrinology, focussing on viviparous reptiles and marsupials.

Panel Sessions

Panel Session Day 1

Teaching approaches for the 21st century: Where do we go from here?

Professor Marcia Devlin, Professor Susan Jones, Simon Pyke, Robyn Muldoon

The student approach to learning in higher education has changed significantly in the last 10 years. Students work more, which affects their attendance at lectures and their ability to study out of hours. Staff are concerned by the effect this has on student outcomes and also by some of the solutions presented to address the issue. The audio and video recording of lectures leads some staff to believe students will no longer attend lectures, while others believe that the traditional lecture is an outdated mode of learning that should be replaced with more interactive approaches. This panel will discuss this and other important issues on how we approach our teaching in the 21st century.

Panel Session Day 2

What will ERGA do next? Getting involved in the decision making process

Professor Susan Jones, ERGA Executive members

ERGA has been running for 4 years and has been successful in many of its endeavors. The next step for ERGA is to improve the community of practice for its members. This is your chance to have an input into the future direction of ERGA, encouraging new and active members and the overall structure of ERGA.

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Using self assessment tools to improve feedback to staff and maximise learning during medical internships

Adrian Anthony, Department of Surgery, The Queen Elizabeth Hospital

Mark Bailye, Clinical Education – Medical, The Queen Elizabeth Hospital

Branden Emmerson, The Queen Elizabeth Hospital

Claire Frauenfelder, The Queen Elizabeth Hospital

The introduction of the Australian Curriculum Framework for Junior Doctors (ACFJD) provides medical educators and junior doctors with a document that identifies the core competencies and capabilities required to provide quality health care (Graham et al, 2007). Engaging junior doctors in self assessment enables them to reflect on their progress, assess performance, identify strengths and weaknesses and determine the learning needs and actions required for improvement (Andrade & Valtcheva, 2009). When educators are involved in this process and provide feedback the self assessment is more successful (Colthart et al, 2008 & Dornan, 2008). Self assessments can not only increase achievement and promote learning but can also be a valuable source of feedback for educators (Andrade & Valtcheva, 2009).

This presentation describes a project incorporating the ACFJD and the use of self assessment to document progression of junior doctors. The ACFJD provides an ideal basis on which to structure intern training as it sets out clearly what junior doctors should know and be able to do. Term descriptions and the structured teaching program (ie tutorial and procedural training sessions) were mapped to the ACFJD and at the completion of each term or teaching session, junior doctors used the self-assessment tool to reflect on whether the competencies and capabilities covered had progressed their learning. At the completion of the term self-reflective progress portfolio summaries, documenting progression were produced and used during the mid-term interview to initiate discussion and feedback. In all cases progression in exposure and performance had occurred with both unit-based and structured teaching and areas for improvement were identified. Furthermore, the input educators received from interns identified how productive the learning opportunities had or had not been. The feedback exchanged enabled interns and educators to work together to formulate a course of action that would improve the educational experience and cater for their learning needs.

The self-assessment tool, aligned to the ACFJD, provides a useful, real-time measure of what competencies and capabilities are being met throughout internship, whilst encouraging reflection and ownership of learning. The overall response to the self-assessment and feedback process was that it was very helpful in guiding the learning development because it highlighted the junior doctor's perceived strengths and areas they could improve, as well as identifying whether the educational experience required improvement. Junior doctors found that the tool accurately and objectively quantified deficiencies and progress, and felt that this information would enable them to become more proactive in seeking relevant learning opportunities.

Although further work is required in streamlining the tool, its use in conjunction with feedback allows interns to monitor their progress and maximise learning opportunities and educators to tailor the structured teaching to meet specific learning needs. Finally, future work needs to be done regarding the comparison of junior doctor's perceptions versus their performance in the competencies and capabilities being addressed.

References

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Notes

How to handle the pros and cons of courses run by distance education only

Femke Buisman-Pijlman, School of Medical Sciences, The University of Adelaide

Jason White, School of Medical Sciences, The University of Adelaide

Since 2005, the discipline of Pharmacology has been teaching postgraduate courses that are available by distance learning only. Currently, we are teaching a graduate certificate, two graduate diplomas and a Master of Science in Addiction Studies. Blackboard is used as a teaching interface, to provide reading and lecture materials, quizzes, discussion boards and assignments. It is our main portal for communication with the students. In this paper, I will describe the pros and cons of distance education and the use of online tools to improve the learning experience.

Advantages of distance learning are ample, such as access to students in remote areas and abroad and flexibility in student learning (Del Valle & Duffy, 2009). The programs offer an opportunity for mature age students to go back to university and get additional training while working. The students in our courses often have ample experience in the field of drug and addiction. They can share their experience in discussions and challenge their practises.

Our Master of Science program for example is a multi-disciplinary triple-badge degree that is taught with Virginia Commonwealth University and King's College London. Each university teaches the courses in which they excel while using additional external experts. This set-up would not be possible in a standard structure of face-to-face teaching (Kalman & Leng, 2007). Due to the seniority of most students, they also add their own professional and cultural perspective. The discussions are especially interesting in the area of policy and treatment, where approaches are often very different. Their perspective on for example "practice as usual" adds an important component to our teaching.

Challenges faced in our programs can be attributed to e.g. limitations of tools, limitations of standard resources and services for online teaching, lack of face-to-face contact, asynchronous study (Shea, Li & Pickett, 2006), technical problems and being fully dependent on the internet and ITS services (Hailey, Grant-Davie & Hult, 2001). Managing a course that is run by distance education only provides additional challenges that are often overlooked. It is often assumed that they require less work and students have no time constraints or deadlines (Reeves, 2003; Kalman & Leng, 2007). These misconceptions are significant obstacles to running a program effectively and can affect student performance.

Investing in good student-teacher and student-students contact is a very important part of coordinating and teaching these courses (Shea, Li & Pickett, 2006; Zhu, 2006; Rovai, 2007). However, different skills and tools are needed to improve student learning compared to standard face-to-face teaching. Students still need to feel part of a class and different learning styles should be accommodated as much as possible. The asynchronous discussion is used to share knowledge and professional experiences, increase understanding, stimulate cohesion and monitor problems in the course (Shea, Li & Pickett, 2006; Zhu, 2006; Rovai, 2007; Del Valle & Duffy, 2009). One must make sure that not too many different and complicated tools are used, since this can also have a negative effect on learning in mature students. A strong teacher presence on Blackboard and good communication and (personal) feedback are very important to ensure that students don't feel that they have to pay without receiving "any actual teaching" (Vonderwell, Liang & Alderman, 2007; Shea, Li & Pickett, 2006). Quick and accurate feedback is important, whether it is standardised or personal (Vonderwell, Liang & Alderman, 2007; Gallien & Oomen-Early, 2008). This can be a challenge for the teachers when large(r) numbers of students are involved. Good communication and feedback are therefore special points of interest that we are still trying to improve. Joining forces with other universities in the addiction field has opened up higher degree learning for professionals all over the world and student interest in this program is high. We will try to address the elements of successful online teaching and illustrate possible successes and risks based on our experience as teachers and on student evaluation and feedback.

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Notes

Using video worked examples to enhance learning in a first year mathematics course

David Butler, Centre for Learning & Professional Development, The University of Adelaide

In the teaching of mathematics, worked examples play an important role. A well-chosen and presented example can make an abstract definition more real, and can also show students the thinking processes needed in order to attack a new problem on their own. It can also bring together concepts and highlight how they are connected^[1].

In first year mathematics courses at the University of Adelaide, the traditional place for the detailed examples has been the tutorials. In these tutorials, the tutor has mainly presented the solutions to a number of example problems at the board. While this can be done well if the tutor encourages class involvement, it still means that students have little chance to try problems for themselves, or to discuss their issues with the tutor.

And so a dilemma presents itself: the students need a number of well-presented examples, but they also need more time for interaction. In order to address this problem, a set of video worked examples was created in Semester 1 2009 for the first year mathematics course Mathematics 1MA. This presentation will give an overview of this project. Principles used to design the videos, issues faced in their development and the overall success of the project will be discussed.

In the past^[2, 3, 4] videos have been used successfully as learning packages for classroom use, but the intent in this project was to have a resource students could access in their own time at their own will. Several students already search for similar videos on the internet at sites such as *YouTube*, where the quality is variable and the notation may not match that used in the local course.

In this project, video worked examples were created for the first-year mathematics course Mathematics 1MA using a *Mimio* whiteboard and screen-recording software. Screen-shots of the final worked solution were embedded in a PDF file along with links to the video files. This PDF file was available in *MyUni* and students were encouraged to look at the videos to help them learn concepts and do their assignments.

On the whole, despite some technical difficulties, the video worked examples were a success. Approximately 80% of the 280 enrolled students viewed the videos at least once—many of the students many more times. When the students were surveyed on the usefulness of the videos, there was high agreement that the videos were a valuable learning resource and that they would like to have more in the future. A set of video worked examples is being created this semester for Mathematics 1A.

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Notes

Peer feedback using reflective journaling: A case study of reflection-on-action

John C K Cheung, School of Mechanical Engineering, The University of Adelaide

Kogi Naidoo, Centre for Learning & Professional Development, The University of Adelaide

Learning how to teach is only a first step to enable application of pedagogy theories to the classroom. Academics' teaching experience may be able to improve their instructional techniques, but is often insufficient to play a productive role in the development of their teaching careers. It is necessary for academics to reflect on their teaching experiences for their professional development and life-long learning. In reflecting on the 'what' and 'why' questions we begin to exercise control and open up the possibility of transforming our everyday classroom life (Nunan & Lamb 1996, p. 120). The present study was conducted as part of a consultancy strategy, using reflective journaling and peer feedback as tools to uncover teaching challenges and issues, to provide a sounding board, and to test out innovative teaching techniques to engage students and enhance general teaching practice. Journaling occurred as weekly exchanges between the teacher and academic developer for sixteen weeks over the semester. Although the process appears long and drawn out, it provides opportunities for deep learning enhancements and insights to inform further teaching development, change or actions, and future programmes or initiatives. Reflective journaling provides opportunities for professional development for both, the academic and the academic developer.

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Notes

If fishes were wishes we'd all have online material for our students

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It is well established that on-line learning in its various guises promotes flexible learning and also allows for students to receive feedback on their performance⁽¹⁾. For any on-line learning initiative to occur, content must be identified and produced: indeed, such materials are integral to any educational endeavour. However, the specifics around the development of content for e-learning have not been addressed to any great extent in the literature. Development of on-line materials poses challenges that differ from educational materials developed for other fora such as didactic lectures and textbooks, given the different nature of the medium^(2,3). For example, on-line resources allow for students' interactive engagement with educational materials and instant feedback on their learning; the design and development of such resources therefore requires consideration of such features.

A group of academics in the discipline of Surgery at the University of Adelaide has been developing online material for students for over a decade. Engaging staff and faculty in the development of the material has proven to be challenging and despite student pleas for additional online material the group has been unable to provide it. This is partly due to the substantial amount of time required to develop online content, but also because the group lacked the expertise to develop reliable and valid content in all areas required by the students.

The development of online content has recently progressed from a small team activity, where significant formative assessment material was produced for students, but with no quality control or peer review to a more elaborate workshop arrangement. In this new setting, content experts, educators and students collaborate to develop, review and refine content for the online learning tool. This approach has been successful, and a number of lessons have been learned which can be utilised to improve our own and others' endeavours in this area.

In this presentation, the group will discuss the issues relating to developing online content for students on a large scale and provide the template being used to develop sustainable online formative assessment material. We draw upon previous researchers' work and theoretical positions to report on the outcomes of this process, its origins and discuss feedback provided by all of the contributors, including students, on the process. Suggestions will be made on how this method could be used throughout the University to ensure that online content provided to students is of the highest standard possible.

This paper will be of interest to anyone who is planning to develop content for on-line learning and teaching activities.

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Notes

Peer marking to increase engagement with assessment tasks

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Peer assessment is a potential tool to increase students' engagement with the curriculum. Learning outcomes of a particular task can be maximised by facilitating "learning by teaching"; students learn not just from their own effort, but also from the work they are assessing¹. This study describes the implementation of peer marking talks in a small class of second year bioscience students. Evaluation of student perception and of marks was performed. The total sample size was 36 students, combined over two years (2007 and 2008). Peer marking helped to validate this assessment for two reasons. Firstly, the stated target audience for the talks is "your colleagues in this class", and having their peers mark their talk clearly makes this objective real. Second, one aim of the assessment was to develop strong scientific oral communications skills, and it was expected that being a marker of other talks would help students to improve their own skills by furthering their understanding of what makes a successful talk, beyond what they would achieve by presenting a single talk alone. Each student presented a different topic, researched independently from the literature, but the scientific objectives were identical. Each talk was marked by the instructor and the other students, using a rubric specific to the objectives of the assessment. To maintain fairness, the instructor mark and the average peer mark each made up 50% of the final mark. The rubric was provided with the initial assignment information, and no marks were released until all talks were completed.

Students' experience of peer marking was recorded by a short survey administered to the 2007 class after the talk marks were returned (n=15). There was 87% broad agreement for "Marking other talks meant I learnt more from this assignment than I would have otherwise", and 93% broad agreement for "Marking other talks for this assignment will help me understand the requirements of future assignments". It is unclear whether the peer marking exercise increased student engagement; some reported that marking forced them to pay more attention to the talks, while others stated that having to mark distracted them from learning anything from the content of the talk.

Concern about reliability and fairness of peer marks has been reported amongst students² and also staff³. Thus, analysis of marks was a major component of evaluation. There was a high correlation ($R^2=0.72$) between staff and peer marks (combined data), indicating that the assessment was reliable. However, the instructor's range of marks was approximately double the range of average peer mark. Avoiding giving peers very high or very low marks has been previously reported^{4,5}. Overall, the instructor was satisfied with the final talk marks, given that this assessment comprises just 4% of the final mark for the course. Importantly, students perceived the marks as fair (73-93% broad agreement). Talks within this course will continue to be marked by peers plus a single staff member.

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Notes

Integrating communication skills with discipline content

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The 2009 ALTC report, *Managing educational change in the ICT discipline at the tertiary education level*, identifies the teaching of personal skills, including communication of all kinds, as the area most in need of curriculum reform in the Information and Communications Technology tertiary sector (Koppi and Naghdy, 2009).

The teaching of communication skills is often undertaken outside of the discipline context, however these skills are best learned within the context of the discipline content currently faced by the students (Drury and Taylor, 1999) (Pollock, 2001). Several studies have reported on Communication Skills courses designed for the Computer Science context, both as independent courses (e.g. Kay, 1998) and by integrating communication skills content within an existing course (e.g. Michael, 2000). Here, we describe a model for integrating the teaching of communication and study skills across a curriculum, enabling students to study communication skills both in depth (as an independent course) and with breadth (through integration with existing curriculum).

Our model is based on “writing across the curriculum”, where writing is considered as a means for effective student centred learning, rather than as solely a professional skill (Hoffman, Dansdill and Herscovici, 2006). The basis behind “writing across the curriculum” is that students learn both communication and discipline skills through continuous practice of communication skills across all curriculum components. Writing is used as an active learning tool to encourage students to reflect upon their learning, both of communication and discipline skills, and to provide multiple means by which they can develop their discipline skills.

In this presentation, we discuss our curriculum structure for teaching writing within the ICT area using an intensive communications skills course that is tightly integrated with concurrent discipline courses. The main contribution of this presentation is a discussion of the kinds of communications skills activities that are used to encourage active learning and reflection, and commentary on student reactions to this approach to learning.

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Notes

Development of a Chicken & Egg eSim using Moodle and Research Skill Development (RSD) framework based rubrics

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Online roleplays are useful in enabling active participation by students in the processes of decision-making and conflict resolution. A new online roleplay is being run for the first time in first year BSc(An Sci) and BSc(AnSc: Pre-vet) students learning about animal welfare (n=120). This presentation will include the development of the Chicken & Egg e-Sim and a description of the assessment rubrics used with preliminary results on student participation in the activity. Further evaluation will take place later in the year.

The roleplay is based on the Mekong e-Sim (McLaughlan et al. 2001; Maier et al. 2007). Learning objectives include teaching students:

- 1) to understand that there are many valid points of view about the way animals are treated in society, and that these will be influenced by social, cultural, economic, political and ethical factors, and
- 2) that the decision-making process relating to the way animals are treated is influenced by many factors (eg. personality, economics) including science.

The scenario is based on a proposed new development of battery caged layer hen sheds in South Australia, with a Public Inquiry to determine whether or not the development will go ahead. Students in groups of four represent stakeholder groups (e.g. Australian Egg Corporation Ltd, South Australian Farmers Federation, RSPCA), media groups writing articles during the eSim, or a decision-making group. The students selected their preferred group and two simultaneous e-Sims have run allowing for group sizes of 3-4 students. The software being used to support the e-Sim is Moodle and Gmail, used for the first time for an online roleplay at the University of Adelaide.

Students will go through a series of stages including:

Familiarisation and Interaction - students become familiar with their role, and interact with other groups to try to influence the Public Inquiry

Public Inquiry and Decision-Making - stakeholder groups prepare and make submissions to a Public Inquiry, followed by a decision released from the Decision-Maker group

Debriefing - students exit from their roles and write an individual report on what they have learnt during the e-Sim.

Assessment includes group components (participation, Public Inquiry, Media or Decision-Maker submissions) and individual components (quizzes, debriefing report). The Research Skill Development (RSD) framework has been used to design assessment rubrics. The RSD makes explicit the skills relating to research used by the students, with increasing levels of student autonomy across the framework. Assessment is criterion based. The facet of inquiry 'Students communicate knowledge and the process used to generate it with an awareness of ethical, social and cultural issues' is particularly relevant to the e-Sim. Students do not always feel that their degree gives them awareness of the social implication of developments in their discipline, understanding of others point of view, an ability to use information technology effectively, an ability to work with others in a group, and to deal with complexity (McInnis et al. 2001). It is these skills that the Chicken & Egg e-Sim is particularly suited to developing.

Up to Week 8 when the final decision was made there were 2,966 views of the Public Inquiry Discussion Board in e-SimA and 1,714 views in e-SimB. An email from a student included the statement "I am enjoying the e-sim very much, it's really interesting to see how heated some of the arguments are getting!" It is planned to formally evaluate student perceptions of the e-Sim using student debriefing assessments, a SELT-based survey and focus group discussions. These evaluations will be completed by the end of the year.

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Notes

Online resources for flexible delivery: How do students use them in their study?

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Educational practices in the Higher Education sector that contribute to effective student learning have moved from a Teacher-centred focus to views that student outcomes are linked to a variety of interactions between teacher and student⁽¹⁾, including the view that what the student does matters for learning outcomes⁽²⁾. This view is supported by the self-determination theory of learning; autonomous learners are better able to undertake deep learning associated with their discipline^(Williams cited in 3). With increasing student numbers and diversity of students undertaking University Programs, the use of Web-based technologies has allowed the display and accessibility of teaching materials that has the potential to facilitate student-centred learning by providing students with choice of appropriate learning tools, and flexibility in timing of access, particularly when students are enrolled in off-campus mode.

As part of the redeveloped curriculum of the Bachelor of Nursing and Midwifery Programme at the University of South Australia in 2007⁽⁴⁾ the new Course materials were provided in an on-line web based format in line with facilitating student-centred learning. Provision of course materials in web based formats have been shown to support a variety of student learning approaches and are well accepted and utilised by students⁽⁵⁾. Questions remain about how students use the materials already available, and how to provide these on-line materials in ways that result in actual gains in improved learning outcomes in addition to enhanced student perceptions. The aim of this study was to compare the usage pattern of On-line Course materials between an On-campus and Off-campus enrolled student group. The student group of interest are 2nd year Bachelor of Nursing and Midwifery students undertaking a Pathophysiology subject at the University of South Australia, Adelaide.

Student responses were sought on how they utilised the online resources made available to them in their Science based 2nd year course. Likert scale questions were added to the On-line Course Evaluation Instrument that is emailed electronically to all students enrolled in the Course. Students were asked to indicate how useful in their own study they found each of the available On-line Resources. Course materials available online include Lecture Powerpoint notes and accompanying podcast, self-assessment quizzes and accompanying podcast of correct answer feedback, capture cams of important diagrams and concepts, and comprehensive Topic outlines, including Tutorial material.

Data from this study demonstrated that students customised their use of the resources available. The patterns of usage were different between the on-campus and off-campus student groups and some resources were utilised more than others. Student usage of online resources was consistent with social constructivist theory where students access resources consistent with their own contextual experiences⁽⁶⁾.

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Notes

Lecture attendance does not predict assessment outcome in Human Physiology II students

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The delivery of material in a didactic lecture format is a feature in many courses. In many cases, lectures are an inherited form of content delivery, or are used for pragmatic reasons (resource constraints) rather than being actively chosen on the basis of information on their effectiveness. However, it is well established that students have varied learning styles or combination of styles assessed by *VARK* (visual, auditory, reading/writing and kinaesthetic). Therefore the use of didactic lecture formats may only be effective at presenting information to those with strong V and/or A components in learning style. However past research in physiology programs have found that only a small percentage of students have strong unimodality in visual (4%) or auditory (5%) styles, or bimodality (1%) in the combined (Breckler J. et al 2009). In Human Physiology II 2009 first semester, lectures are a major component of content delivery, but attendance is not compulsory. Anecdotal evidence suggests that lecture attendance is around 50% in 2nd year Human Physiology. However it is not clear if students who do not attend lectures perform poorly as a consequence, or whether they are able to compensate for this mismatch in student-teacher interaction. Therefore this current study examines the associations between lecture attendance and student assessment outcome to determine if students who do not attend are at significant disadvantage compared to their peers.

Students ($n=125$) for the combined Biomedical, Health and Science 2009 cohort completed a questionnaire in which they self-reported their lecture attendance and the time they spend using alternate resources to supplement their learning. Their lecture attendance and other methods of resourcing information were correlated with their final practical, tutorial and exam outcomes.

Self-reported lecture attendance, in the first semester of 2009 was higher than expected at $73 \pm 2\%$. The percentage time spent using lecture recordings correlated negatively with percentage of lectures attended ($r = -0.42$, $p < 0.0005$). Interestingly students utilising recordings tended not to use other resources like textbooks, printed notes, internet or from communication with their peers ($p < 0.02$ for all).

Practical, tutorial and exam marks were not predicted by lecture attendance. However exam outcome was positively correlated with use of online lecture notes ($r = 0.18$, $p < 0.05$). Tutorial marks correlated negatively ($r = -0.26$, $p < 0.004$) while exam mark tended to correlate negatively ($r = -0.18$, $p < 0.06$) with the use of the textbook as an information source. This suggests that that lectures and tutorials often cover additional material which extends that of the provided text. No other associations were found between other methods of content delivery and practical, tutorial or exam outcome. This suggests that non-attending students (27%) are not disadvantaged in assessment outcome. However, further research is required to determine if not attending communal lectures has detrimental effects on the ability of students to develop other essential skills like peer interaction and collaboration.

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Notes

Clinical Handover: An interactive learning tool to promote student engagement: Developing the tool

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Clinical Handover can be defined as "the transfer of professional responsibility and accountability for some or all aspects of care for a patient, or group of patients, to another person or professional group on a temporary or permanent basis" (Australian Medical Association 2006 p.8).

The capacity of nurses to provide an effective clinical handover is integral to safe nursing practice and is an expected competency of all registered nurses (ANMC 2005). For any student, but in particular for students with English as a second language, there is an increased need to provide appropriate learning resources for students to gain this important competency. A review of undergraduate Nursing & Midwifery curricula and the Australian Registered Nurse Training Program [ARNTP] identified a need to enhance opportunities for students to learn how to conduct an effective clinical handover.

The purpose of this project is to promote student engagement, professional communication and disciplinary knowledge by producing an interactive learning resource to facilitate skill acquisition in the area of clinical handover.

The project "Clinical Handover: An interactive learning tool to promote student engagement" was funded by a teaching and learning grant awarded by UniSA Division of Health Sciences in 2008. This multimedia resource was developed using 'Flexsim' a UniSA software platform. It utilises four modules each with a focus on a different but commonly used method of clinical handover such as telephone, nurse-to-nurse, nurse to group and audio-tape.

Each module commences with a training module which provides students with evidence based information for the method demonstrated. Students are then provided with a situated learning experience enabling them to build upon existing knowledge and the transference of this theory into practice based learning. This is facilitated through the use of scenarios consisting of real world examples of clinical handovers. Following this, students undertake an interactive activity such as a 'drop and drag' exercise, to ensure understanding. Then a short summative assessment, for example, a multiple choice quiz is completed. Once students have successfully completed all four modules a certificate can be printed for inclusion in their professional portfolio.

This presentation will commence with a background and the rationale for the development of this multimedia tool. Subsequently, an outline of the stages taken to develop it will be given. Finally a demonstration of a module will be presented to the audience.

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Notes

Trialling TBL in large classes: Successes and costs

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The University of Adelaide Business School is trialling Team-Based Learning (TBL) to address such critical undergraduate and postgraduate learning and teaching issues as: larger classes; more content to cover in less time; disproportionate percentage of Non-English-Speaking Background (NESB) students; local and international students coming to university grounded in a content-focused, cram-for-exam, “memorise & regurgitate” and “silo thinking” mentality; students working 20-40 hours a week outside university to survive financially; many disinterested in learning and only here to “get qualified”; government drive (and/or determined parents) pushing inappropriate students toward unwanted academic qualifications; lower academic and language entry levels; more students not grounded in pre-academic foundation skills... this list is not exhaustive, but gives some picture of the cumulative challenges that must be surmounted by any academic invested in attaining quality learning outcomes with and for their students.

TBL has proven to be an approach that does effectively address many of these issues, and assists learning-focused teachers in motivating, involving and educating students in new and refreshing ways, achieving somewhat startling results academically in measures both quantitative (fewer failed students, bell-curve weighted significantly more toward distinctions and credits than previously) and qualitative (students engaging with learning dynamically, interacting positively with the Immediate Feedback Assessment Process¹; coming to class prepared, achieving higher cognitive order engagement, working effectively in teams). The success, however, came at a high cost initially—requiring heavy commitment of time, energy, money, refocusing, rewriting, a severe learning curve, and surprising new pedagogical and epistemological challenges.

The majority of the international TBL Collaborative community do not face many of the problems unique to Australia; so much of the trial this year has been ‘adaptive’—and originally not always successful in terms of cost-benefit ratio, even when successful in student outcomes. The mechanical, epistemological, and pedagogical pains and trials faced included: overcoming the compulsion to focus on content or coverage; analysing the core 2-3 “must-learn” values, concepts and skills that students should take from each session and structuring course, questions and activities to them; learning to write MCQs that require higher order cognitive functioning to answer; planning and pacing the 4S process of Significant, Same, and Specific Problems with Simultaneous reporting; mechanics of distribution & collection of team folders & miscellany with 300-400 students at once; poor disability access (needing to wheel a heavy suitcase with 50 team folders to and from each seminar with stairs); logistics of preparing team folders pre-seminar and marking them post-seminar; working teams of 6-8 in a fixed seating tiered lecture theatre; dealing with student non-attendance or arrivals in week 3 or 4; the burden of marking, engagement and interaction shifting from tutor to LiC; fitting vast quantities of preparation into a workload model that does not allow for or support innovative teaching; getting funding then purchasing equipment from the US and getting it through customs; being the ONLY person who can teach your class... New revisions, however, applying lessons learned and overcoming many of the problems, appear to be reaping an even more successful and much less painfully acquired positive outcome.

1. IFAP/Immediate Feedback Assessment Process is part of the IRAP or Individual Readiness Assurance Process.

Notes

Making the Connection: Building student engagement through Integrated Online Learning Modules (IOLMs)

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In our first-year human biology course we have implemented a blended learning and teaching strategy pivoting around what we refer to as Integrated Online Learning Modules (IOLMs). IOLMs are enhanced podcasts (ie audio narrations with slides, viewable on desktop computers and mobile devices) that are sent out to students in advance of the associated face-to-face session. The students work through the material in the podcast and are required to undertake some formative assessment activities, the responses to which are submitted electronically and analysed prior to that session. These responses enable us to understand how well students are developing their grasp of the topic, and to make adjustments to the planned face-to-face session accordingly. Articulated by Novak et al (1999), this approach is known in the literature, perhaps a little misleadingly¹, as 'Just in Time Teaching' (JiTT), and its iteration with 21st century Web 2.0 technologies has been referred to as 'JiTT v2.0' (Carrington & Green 2007).

The IOLM approach provides educators with the opportunity to stimulate student engagement in a topic prior to entering the face to face learning environment. It enables the students to work through core content more flexibly and at their own pace, and to replay/review the module as they choose. The assessment activities, described as 'warm-up exercises' by Novak et al (1999), require them to engage actively in application of the concepts under discussion, and bring them into a face-to-face session that has been specifically tailored to their demonstrated learning needs. With the IOLM largely replacing the role of the traditional lecture, the face-to-face sessions then become more tutorial-like and interactive.

This methodology has been benchmarked against the *Principles of Good Practice in Undergraduate Education* developed by Chickering and Ehrmann (1987) as well as against the principles for motivating deep learning in students developed by Felder & Brent (2005). This methodology enables first year human biology students to "make the connection" for a deeper and more meaningful learning experience as the online content is integrated into, and contextualised through, active learning strategies in the face-to-face session. Teaching methods that employ active learning methodologies to reinforce key concepts contribute to the fostering of a "motivating deep approach to learning" (Felder & Brent 2005 p. 64). The online formative assessment also provides for the early identification of at risk students, enabling intervention strategies to be introduced (Carrington & Green 2007).

This paper will look at the design and implementation the IOLMs, and will also survey the evaluation data. Results from both formal and informal evaluations, including the Student Experience of Learning and Teaching (SELT) surveys, student focus groups and course surveys, have reported a high level of student satisfaction. Improvement in progression rates is also evident.

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1. That is, given the potential for confusion with the use of the term 'just-in-time' in the sense of 'on-demand' learning.

Notes

“If I write feedback, will you read it?” Encouraging students to take responsibility for reading and acting on feedback.

Joy McEntee, School of Humanities, The University of Adelaide

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In recent CEQ surveys, students have identified inadequate feedback as a major source of dissatisfaction. However, anecdotal evidence from markers indicates that students often don't read feedback, and research literature indicates that students don't know what to do with feedback when they get it. In these circumstances, markers can become justifiably cynical about putting effort into feedback, especially in an environment of contracting resources. A vicious cycle forms, in which markers give less feedback, students have less to go on, and communication between students and markers breaks down, with feedback coming to be perceived as a generally bootless enterprise.

This paper considers various recent efforts to break this vicious cycle at University of Adelaide by improving student-marker communication surrounding feedback, and reports on one particular intervention. In Semester 1, 2009 a novel feedback strategy was implemented in *Adaptation*, an upper level undergraduate English class of 100+ students. Students were given written feedback on a mid-semester assessment (a literature review due in week 6). When they came to submit their end-of-semester assignment (an essay due in week 13), students were required to write a “rejoinder” to their literature review feedback, explaining how they had used that to improve the quality of their essay. This was designed to ensure that students read and attempted to engage with feedback, and clarified any interpretational difficulties with the marker in a timely fashion (i.e. before embarking on the final piece of work).

Additionally, student feedback preferences were tested through pre- and post-course questionnaires. In the pre-course survey, students were asked about memorable and effective feedback they had had, and the format in which it was delivered. In the post-course survey, students were asked about the relative effectiveness of the 3 formats in which feedback had been delivered in *Adaptation* (rubric, paragraph/point form summary of key issues, and marginalia).

The paper discusses the results of the intervention, and the survey data. The aim of the session is to promote the discussion and development of practical strategies that improve dialogue between the students and markers via feedback, and that help students learn to use feedback constructively, without unduly expanding the marker's workload.

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Notes

Enhancing assessment feedback practices in accounting education: Issues, obstacles and reforms*

Brendan O'Connell, RMIT University

Bryan Howieson, Business School, University of Adelaide

Ben Jacobsen, James Cook University

Paul de Lange, RMIT University

Audrey Milton, James Cook University

Kim Watty, University of Melbourne

This presentation reports on the findings made to date of a nationwide ALTC funded grant into the level and quality of assessment feedback practices in accounting courses at Australian universities. Accounting courses traditionally suffer from poor scores on students' responses to the Course Evaluation Questionnaire with high levels of dissatisfaction expressed about the quality of feedback received.

This presentation reviews relevant pedagogical literature on what constitutes 'good' feedback practices and uses data obtained from student and staff focus groups and a survey of 2,600 accounting students to explore what are the perceived issues and problems that have led to these levels of dissatisfaction with assessment feedback in accounting. The focus groups and surveys covered a wide cross-section of universities (e.g., metropolitan and regional, G08 and non-G08) and students (first year to third year undergraduates). The qualitative data from the focus groups reflects student and staff perceptions of what constitutes feedback, what are preferred types of feedback, and what examples of good feedback students have experienced. The surveys explore these dimensions on a more generalisable basis.

Overall, the results to date confirm that accounting students' satisfaction with feedback is very low. Although they prefer timely, personalised, and constructive feedback, they are currently not receiving this. Interestingly, the typical large class sizes of undergraduate accounting courses are not perceived to be an impediment to feedback quality, nor does diversity across the student group (e.g., local and international students) appear to be an issue of concern to the students. However, it is clear that there is a wide divide between students and staff as to what constitutes 'feedback'.

* 'Enhancing Assessment Feedback Practices in Accounting Education: Issues, Obstacles and Reforms' is an ALTC Funded Research Project

Notes

History never repeats...or does it?

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If educators are to make practical and worthwhile use of new and often expensive teaching tools, it is worth their while to understand the potential impact of the technology and to anticipate the benefits, if any, of its use. If a technology is new, an educator can rely on educational theory, but as Harry Truman wrote "There is nothing new in the world except the history you do not know" (Miller, 1974) p 26. Intriguingly there is a wealth of historical work that has been carried out by previous generations of scholars, and this provides a perspective on new technologies that is worthwhile to examine.

Before podcasts and video streaming were used by staff and students there were phonographs, audio tape, radio, and CDs, film, TV, videodiscs, videotape and DVDs. Online formative quizzes were pre-empted 80 years ago by a mechanical device, and computers have been used in various ways in education for over 50 years. Many things have been learnt using these devices and many are relevant today.

The perspective gained from history provides an insight into the methodologies and technologies that are likely to be useful in the present day and in the near future. Some of the trends and innovations in education from the past that have relevance today are

- The use of technology to provide formative quizzes for students out of normal hours to promote self directed learning (Pressey, 1927);
- The ability to provide students with audio or video based versions of learning material to help support the student who cannot attend all lectures, or would benefit from having more control over their learning environment (Cipriani, 1912, Bollinger 1934, Ackers & Oosthoek, 1972, Asher, 1962, Sommer 1962, Unknown 1890, Shettel 1956);
- Interactive devices which allow student to participate more in class and provide more dynamic lectures. (Page & Kitching, 1981, Fox, 1983, Kellum, Carr & Dozier, 2001, Buono & Kolkhorst, 2001);
- The provision of feedback on assessment in audio format (Donsky 1971) to benefit the student and save time for the lecturer; and
- Role-playing to provide a real world context to learning and thus provide an authentic learning environment for students (Coleman 1948).

This presentation examines the use of technology in education from a historical perspective and draws two major conclusions. First, many of the 'new' approaches to education using technology have been attempted and evaluated in the past, and second that the conditions for the use of online technologies to support learning are now optimal in terms of cost, social conditions and technological development. Outcomes from uses of technology are reported and potential outcomes of modern equivalents are discussed.

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Notes

The use of reflective journaling to assess the quality of teaching and learning in a large accounting course

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It is not always easy or possible to determine the effectiveness of teaching and learning in university courses. There exist numerous goals and constraints that impact on course delivery that must be acknowledged when undertaking any review or implementing any change as means of improvement. Despite this, striving for improvement is a desirable goal. In this study, the practice of reflection has been applied as a tool for gathering and synthesising information to facilitate the holistic review of a large undergraduate course. Subsequent actions aimed at enhancing the satisfaction of both the lecturer and student involved in the course were then identified. The purpose of this paper is thus to demonstrate the effectiveness of reflective journaling in improving the quality of teaching and learning in a large undergraduate accounting course.

The practice of reflection has been well documented in the literature as an effective tool in teacher education (Boyd and Boyd, 2005; Danielowich, 2007; Harland, 2005; Hubbs and Brand, 2005; Jay and Johnson, 2002; Mansvelder-Longayroux et al., 2007; Van Manen, 1995). It involves the documentation and subsequent analysis of 'reflections' on a particular issue to facilitate a meaningful understanding as a result of consideration from multiple and wide perspectives. Different constructs have been applied to the reflective process to link the practice and theory, as three interconnected and non-linear stages: technical/descriptive; comparative/interpretive and critical (Jay and Johnson, 2002; Danielowich, 2007; Van Manen, 1977). Such constructs were used to inform the practice of reflective journaling and subsequent analysis that was adopted in this study.

The interpretation of events and issues that had been systematically documented throughout the semester generated various possible actions for implementation in subsequent course delivery. On the technical level, efficiencies in the administration and organisation of the course were identified, such as rearrangement of lecture topic or timing of lecture delivery. On the comparative level enhancement of the student centred experience were identified such as, increasing student engagement in tutorials and prioritising context rather than content driven lecture materials. On the critical level, satisfaction of the university's educational goals were considered by contemplating the wide variety of background and experience of students within the cohort and devising strategies to address barriers to their success.

The exploration of creative ways to both maintain and improve the quality of course delivery is an important part of the teaching process. This task is particularly challenging in courses with large class sizes. The results of the reflection process identified those aspects of the course that worked well and allowed solutions to problems detected in the delivery of the course to be devised. Demonstration of the use of reflective journal to capture and enable the analysis of course delivery detail thus has proven to be a valuable tool for improvement in the teacher and learner experience.

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Notes

Enhancing the teaching-research nexus: Managing undergraduate research experiences in the chemical sciences

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The benefits of a strong connection between university teaching and research have long been realised, and the advantages of undergraduate research experiences are well documented (Landrum & Nelsen, 2002, Wenzel, 2000). Further, undergraduate student involvement in collaborative research with faculty has gained attention in recent times due to the many educational benefits afforded to students, professional reward for faculty staff, and enhanced scientific contributions to the broader research community (Boyer 1998). Consequently, there is an increasing move towards implementing undergraduate research as an effective pedagogical tool.

The discipline of Chemistry at The University of Adelaide has sought to implement curricula that incorporate discovery-based and active learning by the introduction of an explicit 'Research Methods' course at the third year level. The new research methods course aims to provide students with first hand experience in the processes of scientific research and development of research-related attributes, primarily achieved by completion of original laboratory based research projects performed in collaboration with academic research staff. This presentation will describe a recent trial of undergraduate chemistry research as a foundation for development of the research methods course, and implementation of research-based learning.

The research methods trial was evaluated by an anonymous survey of the student participants designed to investigate student enthusiasm for the project, and monitor how well they felt it helped to address the chemistry course learning objectives. Results of this survey were reinforced by focus group discussion with students and suggest the collaborative research program was successful in engaging students, and motivating them to continue to higher degree research programs in chemistry. Further, students reported a perceived enhancement across the entire range of graduate attributes. Practical and overall assessment marks were quantitatively compared for those students completing the trial and those completing only the Chemistry 3 course. This information was used to identify a positive effect on assessed learning objectives.

Academic and postgraduate supervisor feedback received as part of the trial evaluation suggested the implementation of collaborative research raised a range of challenges relating to the monitoring, supervision and assessment of student activities. Strategies to overcome these challenges are largely based on effective planning, and a clear definition of expectations for both supervisors and students.

Further results of this evaluation will be trial program will be presented, along with recommendations for successful implementation of an undergraduate research program in the chemical sciences.

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Notes

Sustainable, authentic, corrective formative assessment

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Formative assessment plays a decisive role in the learning of university students, offering teachers the flexibility to adapt to different learning styles and types of intelligence. It allows intervention opportunities through feedback encouraging students to reflect on and adjust their learning. However, not all formative assessments are equal, and success is contingent on the quality of these assessments. What are the key components of good formative assessment?

This presentation does not set out to invent new models but rather explores criteria for the design of a wide range of good formative assessments. It will describe a formative assessment framework that is based on three principles: Bloom's *corrective activities*, Wiggins's concept of *authenticity* and Boud's *sustainable assessment*. While models such as problem-based learning incorporate these ideals, there are many other simple things that can be done in more traditional settings. This will be illustrated by way of real-world examples from two Level-II courses in Electrical and Electronic Engineering that I teach.

Bloom suggested an approach to feedback which he termed "learning for mastery" and later "mastery learning" (Bloom, 1971). In this approach the course is broken down into smaller units, each with a formative assessment followed by feedback. Corrective activities then follow that are qualitatively different from the initial teaching. This second chance gives students more time to learn and it provides alternative approaches to their learning. One-way to achieve this is to use a traditionally summative assessment—the test—in a formative way: my regular tests only count towards a student's final grade if they improve it. This relieves stress and gives students choice; for some the tests is a learning aid or a benchmark to help pace the course whereas for others, it is about securing as many marks as possible before the final exam.

Wiggins (1993) describes an authentic assessment task as being one that tests the ability to understand and uses knowledge in the same way that it would be in the real world. Three principles on which intellectual achievement can be judged as being authentic are: (1) Analysis involving organising, synthesising, interpreting, evaluating and hypothesising to compare and contrast; (2) Understanding ideas, concepts, theories and principles that constitute the relevant disciplinary concepts; and, (3) Elaborated written communication. I have introduced in my assessments short response-essay type questions. Though uncommon in quantitative engineering courses, they give students an opportunity to demonstrate what they do know, explain concepts in their own words and hence bring together theory and practice.

In sustainable assessment, "assessment is aligned to immediate learning outcomes as well as with what is expected for long-term formal, non-formal or informal learning", (Boud, 2000). I have recently introduced a Learning Portfolio in one of my courses that requires students to journal their learning difficulties, develop strategies for overcoming them and to reflect with their peers on their learning. Hopefully, through this more active approach to learning students will gain skill in judging their own learning needs and how they can be met. Through continuous reflection and by sharing learning experiences with others, they will learn to plan and conduct learning independently of the teacher.

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Notes

Incorporating feedback for the development of a scaffolding framework to embed the graduate qualities in Bachelor of Health Science program

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Yvonne Parry, School of Medicine, Flinders University

Louise Reynolds and Yvonne Parry outline a research-based approach to a program-wide process of implementing graduate qualities

Conceptualisation

This project incorporated feedback from students and tutors for the construction and implementation for the embedding of graduate qualities in student curriculum for the Bachelor of Health Sciences (BHS): across 6 awards in all. In order to facilitate this embedding process, we choose to draw on the collective expertise of the teaching academics of the core topics in the BHS to map their topic content to the graduate qualities and work from core to electives over time. Our research confirmed that the mapping of the topics to the graduate qualities—rather than mapping qualities onto existing topic and course structures—allows for re-conceptualisation and analysis of the relationships between knowledge and attitude development and assessment of incremental skill within and between topics in the BHS. This research has used student feedback to inform the topic changes. Our approach scaffolds the introduction and development of graduate qualities through integrated program design.

Method

After a literature review, the project entailed reviewing student thematic feedback and gaining the support of the academic and general staff from the Schools of Medicine, and Nursing and Midwifery in this process. Feedback was received from an academic reference group where we presented an abridged version a matrix for mapping the curriculum alignment. This allowed assessment practices and the intended learning outcomes to be aligned within the BHS and with the Flinders University graduate qualities. In light of the proposed change to 4.5 units, topic coordinators were able to consider possible changes to current curriculum and assessment practices and discuss how new or different outcomes would address the benefits of identifying graduate qualities for staff and students. A gap analysis was undertaken in relation to incremental development of skills, knowledge and attitudes across the core topics in the BHS program, with recommendations to topic coordinators for proposed changes.

An individual interview with each topic coordinator allowed for the incorporation of personal insights to inform the research process. This also provides a platform for the expression of curriculum changes given the review and adjustment of all undergraduate topics to a 4.5 unit format. This enabled the constructive alignment to be a consultative process.

Review

Our approach to the embedding of graduate attributes provides the Health Sciences with a template for evaluating and reviewing further developments in curriculum change and innovation and their effects on the conceptualisation, contextualisation and use of graduate attributes. It offers a theorised and adaptable template for academics to use when they consider and visualise the implementation of changes to curriculum and enables a collaborative, multi-disciplinary process of comparative alignment to occur across course and professional boundaries in the Health Sciences. The monitoring of the project will include the inclusion of a standing agenda item on the BHS Curriculum Committee which meets March, August, November each year.

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Notes

Flexible learning in a large undergraduate science course

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It is now acknowledged that traditional teaching methods such as didactic lectures and tutorials do not keep students engaged nor do they enhance the learning environment. Embedding a variety of methods to promote interactive engagement has not solved the problems of lack of attendance and low quality of learning. In our institution the typical undergraduate science student is enrolled in four courses: so he or she needs to attend 8-10 lectures, 2-4 tutorials, 2-4 practicals each week, and there are assignments. Student lifestyles have also changed dramatically in the last few years. Many are in paid employment either because they need to meet the cost of their university education or to subsidise their lifestyle, so their time on campus has decreased.

It is widely accepted that “Out-of-classroom learning” is mainly responsible for the deep approach that improves learning outcomes. Consequently we implemented student-focused teaching and learning strategies to cater for the variety of learning styles including the large numbers of international students not proficient in English:

- 1) Formative Pre-tests - online MCQ's that are attempted at the completion of each concept.
- 2) SWOT activities - not sophisticated technology programs, but extensively detailed powerpoint presentations with explanations and references that address difficult concepts and that are based on questions students have asked during lectures, by email, or via the discussion board. They are student-directed diagnostic learning activities, not mandatory, and the students decide whether they or not they understand the particular concepts well-enough or whether they need to do the activities. SWOT activities also try to ensure that misconceptions carried in the transition from first to second year are addressed. They remain online until the final semester examinations.
- 3) Post-tests that give students the opportunity to improve their mark.

Since assessment is one of the key determinants in any higher education program, the effectiveness of these activities is now being evaluated by the Pre- and Post- MCQ tests, final examination results, and student satisfaction with the learning environment.

The final examination results in semester 1 this year showed significant improvement and in fact semester 2 numbers increased to 172 (from 122 in semester 1) although the semester 2 course is not a core for any program. It may also be interesting to note two students who did not attend **any** lectures or tutorials attested that they could not have passed without the help of these online activities.

The Post MCQ tests are showing good improvement, but at this stage it is too early for statistical analyses as they were only introduced this semester.

Notes

'Now I know what you mean': Improving the feedback mechanism and students' capacities for self-critique

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The provision of insightful and constructive feedback on student work is a key characteristic of quality teaching and vital for student learning (Black & Wiliam, 1998; Housell, 2003; Ramsden, 2003; Carless, 2007). Yet it is apparent that some teachers feel insufficiently motivated to provide written feedback, and that students are often more interested in discovering their grade than appreciating, or even reading, written comments on their assignments (Mutch, 2003; Winter & Dye, 2004; Salter, 2008; Bailey, 2009). This paper offers evidence that supports these observations and then reports the findings of a unique self-assessment activity that was designed to address these entwined problems with the feedback mechanism. The activity involved tutors providing written feedback, but withholding final grades, on assignments submitted by a cohort of 2nd and 3rd Year History students. Giving consideration to supplied marking criteria and grade descriptors, and the feedback they received, the students were then required to award themselves a grade and write a 100-word justification, which was submitted to the tutor. Analysis of the grades awarded by the students and tutors, and an evaluation of the exercise administered by an anonymous and non-compulsory questionnaire, revealed a reasonably high degree of grade agreement, and that students reported becoming more motivated to read and heed the feedback they received. Moreover, they reported gaining greater understanding of the assessment criteria, the effort required to attain a particular grade, and the means for improving their written work. The paper concludes with reflections about why students and their tutors sometimes disagreed on the grade to be awarded, and what teachers might learn from the ways in which students justify their grades.

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Notes

Using feedback and cognitive research with CBL materials to respond to students' individual differences

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Feedback is an important part of the learning process, however prior research is inconclusive regarding the appropriate amount and type of feedback for effective schema development. This paper expands the extant instructional feedback literature by applying Cognitive Load Theory to determine the most efficient feedback to cater for individual learning differences in students. CBL was chosen as the delivery medium to evaluate feedback because computer-based delivery is an effective means of instruction, and the most frequently cited benefit of using CBL is the immediate feedback after a response. In university accounting education the use of CBL material has a long history and the role and contribution of CBL remains an issue of interest. Prior research has found that the performances of students using CBL compare favourably when analysed against other teaching methods in post-test experiments. Finally, student individual differences have also been recognised as an important variable in education throughout the ages. Student differences affect the effectiveness of learning from a given set of materials provided to students under particular learning circumstances. Thus this research targeted the interaction of student individual differences and various forms of feedback employed. The lessons learned appear to be applicable to many disciplines beyond university accounting education.

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Notes

Feedback forms employed in online courses at Tabor Adelaide

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The forms of feedback employed in online education are a significant aspect of the instructional design of online subject offerings. At Tabor Adelaide, a private multi-denominational Higher Education and VET education provider, the feedback aspects of this year's online subject offerings were investigated. In this research project the feedback embedded in online subjects was examined on the basis of principled, empirically-based research findings. Based on the best principles of educational feedback derived in a major recent review of formative educational feedback research (Shute, 2008) a set of feedback questions pertinent to online education were generated and used as a basis for examining the feedback embedded in all the semester one online subject offerings at Tabor Adelaide.

The principles used as the basis for the questions in this examination were classified into three categories: Category 1, *Things to do to enhance learning*; Category 2, *Things to avoid to enhance learning* and Category 3, *Timing issues*. The first category, covered principles such as *Focus feedback on the task, not the learner*. The second category canvassed principles, such as *Do not give normative comparisons*. The third category principles included: *Design timing of feedback to align with desired outcome*. Each of these and the other principles identified in the Shute (2008) review were expressed as questions, e.g. the principle mentioned above in Category 1 formed the basis for the question: *Is feedback focused on task or learner?* The principle from Category 2 led to the question: *Are normative comparisons given?* The principle from Category 3 led to the question: *Does the timing of the feedback align with the desired outcome?*

A rubric of 22 questions was developed to examine all the 34 subjects offered fully online in semester 1, 2009. Each of the questions generated a binary response for each assessable or non-assessable task in a subject. These responses were then examined for patterns and based on the patterns identified conclusions were drawn about the nature of feedback embedded in the structuring of the online subjects at Tabor Adelaide.

These considerations will form the basis for improving the instructional design of online offerings at Tabor Adelaide. We anticipate they will also highlight some useful understandings with respect to feedback in online education for the tertiary education community generally. It is expected that the feedback principles identified for online learning and expressing them in question format will provide other educational developers of online learning materials or evaluators a useful tool and process steps for assessing and evaluating online educational offerings.

This research project forms the first stage in investigating the nature of the online feedback and instructional design in Tabor Adelaide subjects. Later the feedback in our subjects will be researched more closely where student responses to various forms of feedback will be examined in relation to the structuring of possible feedback by the online subject authors. We will also be interested in the effects of the embedded feedback on the students' performance.

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Notes

The Writing Centre: The affective advantage of constructive feedback

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In the University of Adelaide's Writing Centre, consultations between Academic Learning and Language (ALL) staff and undergraduate students, involves more talking than writing. The essence of the Writing Centre method then, is oral feedback. One-to-one discussion draws students' attention to the roles that re-thinking, re-organising, re-writing and verbally expressing their ideas can play in improving the quality of their work. Dialogue centred around the content seeks to find common understandings of meaning, so as to be able to jointly examine how the writing can be improved. This paper explores personal insights from lecturers working in the Writing Centre in 2009, who have endeavoured to sustain an atmosphere characterised by the positive delivery of constructive feedback.

Relocated to the Barr Smith Library in late 2008, the new Writing Centre is open to currently enrolled undergraduate students. The role of the Centre is not to compensate for poor teaching, overcrowded theatres, or lack of time of overburdened academic staff. Rather, ALL lecturers act as accessible guides to the conventions of academic writing, as opposed to discipline-specific content matters. For the most part, students attend the Centre of their own volition and prior to the submission of written work. On the other hand, a minority of students are referred from faculty following previously submitted assignments. Feedback to this latter type of student often begins from a largely summative perspective, prior to moving into a formative mode.

Formative feedback to students relates to a variety of issues germane to academic writing. At the macro-level, feedback focuses on task words such as 'critically analyse' which may have understandings that are specific to an academic discourse and need to be grasped with their much loaded expectations. Often, assignment tasks are framed by lecturers in academic language; unfamiliar terminology especially to students transitioning to university. The Centre inhabits the middle ground, acting as a translator or interpreter, converting lecturer language into student language. At the micro-level, feedback focuses on issues such as cohesion, function and form. Again, the Centre inhabits the middle ground, providing exemplars to short sections of students' work and great encouragement for them to act on that advice to inform the development of the remainder of their writing.

Importantly, ALL lecturers have uncovered that there is a fine line to be trodden when providing student feedback during consultations. Indeed, all students benefit from follow-on sessions that may monitor their progress and provide further guidance, yet ALL lecturers are extremely mindful of the potential for students to develop a 'cycle of dependence'. Thus, a prime objective of consultations involves the positive delivery of constructive feedback coupled with pedagogical practices to help increase their academic self-confidence and self-efficacy.

Notes

Student satisfaction, understanding, and the role of feedback

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Academic staff have responsibility for many facets of student learning including providing sufficient feedback and appropriate assessment of learning. In many cases staff performance is measured by student satisfaction surveys, such as the Student Experience of Learning and Teaching (SELT) from the University of Adelaide. Despite the common inclusion of questions such as "I understand the concepts included in this course", "I receive an appropriate level of feedback to assist my learning in this course" and "the assessment in this course allows me to demonstrate my understanding of key concepts", the argument can be made that these types of surveys do little to determine if students achieve appropriate learning outcomes from a course (Feldman, 1976; Eiszler, 2002; Nasser and Fresko, 2006). In fact, previous research has failed to find any correlation between teacher ratings and student performance (Abrami et al., 1982).

The survey of learning and teaching process has been in use since its introduction in 1920 (Bernold, 2007) and is founded on anonymous returns provided by students. The anonymity is important as it is believed to lead to more honest ratings of the aspects under investigation, protects students (James and Fleming, 2004-5) and gives them the opportunity to be free to make comments of a critical nature. There is, however, much that could be learned from identifiable survey returns where it would be possible to link student responses with their final course grades.

The primary aim of this study was to report on the components of student satisfaction surveys that influence student learning outcomes with the benefit of having an identifiable population of students.

The study was run in the School of Civil, Environmental & Mining Engineering at the University of Adelaide and involved six courses spread over 4 years of the undergraduate course.

Overall, the authors have found no large correlations between any aspect of the student satisfaction survey and the students individual learning outcomes as measured by the final exam. Even questions relating directly to feedback and student understanding and thus presumably directly linked to their performance in examinations showed very little influence. This latter finding is of great concern, as it shows that students in these courses appeared to have little understanding of their own abilities. Furthermore, perceived level of understanding had a significant influence on the overall rating of the course.

This has implications for those who not only want students to have realistic views of their own level of understanding but also wish to obtain good student ratings. To address these issues, feedback must have a central role. The authors will discuss the outcomes of this study, their interpretations of the results and how improved feedback techniques linked to formative assessment are required.

Improved feedback would allow students to have the opportunity to gauge their work in terms of their colleagues and gain a better understanding of their own level of comprehension. Students must also be encouraged to engage with the feedback and to reflect on it. Strategies that the authors have employed, or that they are aware of, are discussed to assist in this.

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Pedagogical approaches to online learning in geography: New learning landscapes?

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Online teaching and learning is about education that occurs on the web without any face-to-face contact which is closely linked to e-learning and can also be web-based or web-distributed (Nichols 2003: 2). The use of various technological tools in e-learning, however, can also be in a 'blended mode' which includes campus attendance (Lynch et al. 2008: 136). We use both online and e-learning interchangeably in this paper. The use of online teaching and the creation of 'virtual learning environments' in higher education is widely promoted as a vital tool for enhancing flexible student-directed learning (See for example, Anderson and Garrison 2003; Lemke and Ritter 2000). Yet, online or e-learning, like all learning, must be underpinned by a clear understanding of the relationship between the 'learning of the individual' and the 'activities of the teacher' (Hallem and Ireson in Balderstone 2000: 114). In addition, there is widespread agreement that technology should not drive e-learning (Nichols 2003; Mayes & de Frietas 2004; Rees et al 2009), rather, as Nichols argues a teacher's own understanding of the teaching and learning process should inform how s/he uses the technology. Therefore, the design and delivery of e-learning and teaching needs to be informed by sound pedagogical approaches (Rees et al. 2009).

However, as the literature on teaching geography suggests, there is an overall neglect of pedagogy in this field (Balderstone 2000; Castree 2003) both in secondary schools and in higher education. Balderstone (2000: 116) argues that geography teachers in secondary schools need to "understand more about the principles underpinning effective use of different teaching strategies" while France and Fletcher (2007) claim that limited pedagogic knowledge is a major barrier to effective online teaching and learning in the higher education sector. Govindasamy (2002: 297) points out that the careful identification of the underlying pedagogy is 'one of the most crucial prerequisites for successful implementation of e-Learning'. Prompted, in part, by these issues, and by our current efforts to create an on-line module in social theory aimed at students in Geography and Environmental Studies, the paper examines the pedagogy of online teaching and learning in Geography (and Environmental Studies) in higher education.

The major aims of the paper are (i) to provide a critical overview of different pedagogical approaches to online learning and teaching; (ii) to challenge current understandings of constructivist pedagogical approaches; (iii) and to identify the most appropriate pedagogical approach for achieving the learning outcomes of our online module. The paper thus contributes to current thinking and debates about online learning and the need for new pedagogical approaches often referred to as virtual or e-pedagogy. Using the context of online teaching in geography, we argue that there must be a clear identification of the most appropriate pedagogical approaches given desired e-learning outcomes. This understanding is critical in an on-line environment because it is more difficult for the teacher and student to establish a 'social presence' and to maintain continuous social interaction and communication.

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Notes

Much ado about the flu: Developing an online role-play for a large class, challenges faced and lessons learnt

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Face-to-face role-play is a well recognised technique for situated learning about complex problems and social interactions (Van Ments, 1999). Online role-play combines the learning experience of role-play with the advantages of the online environment (Bell 2002) and is recognised as an innovative pedagogy in higher education (Alexander & Boud 2001). This paper will give delegates insight into the planning and preparation required to get an online role-play up and running in the context of a large class (n=500).

The 'online role-play: learning the pedagogy' project was funded by a teaching and learning grant awarded by UniSA Division of Health Sciences in 2008. The role play project aims to provide an online experiential learning activity for first year undergraduate nursing students.

Set in Cockatoo Rest, a fictional town in rural Australia, the role-play commences with a news story concerning the death of a local businessman. When it is later discovered that this death is Cockatoo Rest's first swine flu victim, a meeting of local nurses is called by a Senior Influenza Advisor from the city's Communicable Disease Control Branch, in order to develop a nursing action plan to respond to local community concern.

Students assume a nursing role and met online for the period of 10 days to interact and develop the action plan together. The role-play occurs by way of an online asynchronous discussion. This allows students time to formulate ideas and interact with each other both behind the scenes as well as in the online environment. There are six nursing roles representing typical hospital and community nurse stakeholder positions. In order to accommodate more than 500 students, each tutorial group of approximately 25 students has its own role-play. Each of the six roles is shared by 3 or 4 students who work together to contribute to their role-play. The tutor plays the role of the Senior Influenza Advisor and chairs the meeting.

The role-play is not directly assessed however two weeks after its completion students are required to produce a portfolio item. In this written assessment item they are asked to explain how their participation in the role-play assisted them to understand the role of the RN/RM in infectious disease prevention, disease containment and addressing community concern, using examples from their own posts and those of others to support their argument.

The role play will run for the first time two weeks after the conference. This paper will therefore focus on outlining the rationale for the use of this pedagogy, the process we used to develop, and pilot it, as well as how we tackled the unique challenge of constructing a role-play for a large number of students. The presentation will include a visit to the role play site to show the audience how we will run the role play using EdNA groups (*Moodle*).

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Notes

A stranger in a strange land: Knowledge diasporas and cross discipline supervision

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This paper proceeds from my experience as an academic staff member of the School of Education with two RHD students in the School of Engineering. While the advantages to the students' research are an increased breadth in supervisory knowledge and skill, the real challenge for me has come from understanding the epistemological underpinnings of the Discipline in which the students and their Engineering supervisors work. Research in an Engineering context extends from different premises, is constructed with different outcomes in mind, includes different processes and uses different terminology. As a qualitative researcher in Engineering, such a context is like entering a foreign country as a migrant and having to negotiate common frames of reference, so as to provide worthwhile supervisory experiences for the RHD students we share.

The paper records some of the processes of this negotiation. It takes as its theoretical base the idea of cultural diaspora, which includes the knowledges (comprising, among other things, the language) of those people from one cultural context who live and work in another. A diaspora (from Greek, meaning 'a scattering of seeds') is a displaced or relocated population, which then generally takes on aspects of the 'dominant' culture, so that it becomes culturally different from its overseas 'parent'. Migrant experience has extensively documented the shock of geographical and epistemological dislocation, as well as the segue into diaspora and, perhaps, cultural hybridity. Flexibility is essential for both migrant and majority: there is pressure imposed on both sides, for one an assimilationist imperative or exclusionary agenda, for the other divided loyalties, ghettoising and/or loss of self-identity.

In this paper I suggest that a similar dislocation is happening with me and the Education-trained student I supervise within Engineering. A key example of this is the issue of verbal and written feedback which needs to extend not only to the student, but to their Engineer-supervisors, who often regard education discussion as incomprehensible. Education lecturers speak a 'lingo' they don't share (eg. paradigm, reflective practice, qualitative, positivist, reproductive, transformative, constructivist, pedagogy). Providing feedback is thus a complex task, often pitched for at least two different audiences, the students and their Engineering supervisors. Equally, I often have to seek clarification of Engineering jargon and research processes. Supervisory feedback is thus partly transformed into collaborative learning, where common understandings and agreed meanings are established.

In the process of dialogue, we are learning the language of each other's territory, and the importance of feedback, verbal and written, that encompasses the needs of all learners (staff and student) in the relationship is absolutely key. As this migration experience extends over time, we can expect a hybrid discourse to grow in/from our common cultures, in the form of a new discipline, Engineering Education.

Notes

Writing tutorials used as an aid for students in preparing literature reviews

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We established 'Writing Tutorials' to help students prepare their literature review task (an assignment for Human Physiology 2A). Although directed towards students with English as a second language, we opened these tutorials to all within the course. The participating students enrolled in two individual 30 minute sessions, each separated by approximately a week. During these sessions they were provided with access to a 'mentor' to provide structured input based on their individual needs.

The mentors were paid postgraduate students from the School of Psychology who had been trained in both the methodology of mentoring and additional linguistic skills. These mentors had already been working with Psychology students and prior to these consultations they received additional training relevant to the literature review genre. Using Psychology students as mentors minimised the risk of influencing the content of the reviews and maximised the intended focus on the purpose, structure and use of language in the reviews. The students were asked to bring a draft version of their literature review so the mentors could use this as a framework for their tutelage. The mentors assisted students with guidance on the task requirements and general instruction on how best to organise this writing task in stages and sections. For students who had difficulty with understanding the written instructions (e.g. assignment requirements), these sessions provided a conversational opportunity to address the issues.

The availability of this service was announced via lectures and on *MyUni*, resulting in 18 students participating in the program. Although we could not perform a quantitative analysis of the effect of the tutorials on their literature review marks, we were able to examine student evaluation responses (SELTs). The volunteered SELT completions (11 in total) indicated the resounding success of the program, with high praise attributed to both the mentors and the service overall. With respect to the mentors, the evaluations revealed that they successfully encouraged discussion, expression of ideas and opportunities for the students to ask questions (average score 6.8/7). From the service perspective, the survey indicated that the students perceived their literature review writing skills had increased (6.4/7) and that they would recommend this service to other students (6.9/7). The few negative qualitative responses were from students expressing their desire for an increased number of writing tutorials and for them each to have a longer duration.

These preliminary results reveal the merit of this program and further analyses of the benefit versus costs will indicate the longer term incorporation of the targeted writing tutorial program matched with specific tasks and aligned with undergraduate courses. These tutorials have wider applicability, well suited for integration into many courses.

Notes

Perceptions and expectations of authorship: Towards development of an e-learning tool facilitating discussion and reflection between post-graduate supervisors and candidates

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This paper describes an online flexible learning project aimed at Higher Education by Research (HDR) Candidates and their supervisors to encourage discussion around issues of authorship. The project was developed in response to the new Australian Code for the Responsible Conduct of Research (Australian Government, 2007) which requires discussion between all participants in a project followed by a "written acknowledgment of authorship". However, despite providing guidelines on the definitions of authorship and the responsibilities of authors and institutions, this document does not address the inherent unequal power relations when one of the authors is an HDR candidate and another his/her supervisor (Knowles, 2007). In addition, more ambivalent issues such as order of authors which could potentially be a source of considerable conflict between supervisors and HDR candidates are not addressed (Morris, 2008). In order to engage fully in authorship discussions, HDR candidates require both knowledge of authorship protocols and the ability to negotiate within the supervision relationship. Since supervision is a particular type of pedagogy where the aim is the development of 'competent autonomy', the supervisor's role is to model and foster negotiation skills along with ethical behaviour. In order to develop HDR candidate's reflective practice and negotiation skills towards the attainment of this autonomy, an online questionnaire which ascertains the opinions of HDR candidates and their supervisors around various authorship issues and their reasons for their answers is proposed. Interactive worksheets to educate both supervisors and students on authorship protocols are also proposed. This paper describes the background to the project along with an initial evaluation of the questionnaire content and technical issues surrounding the creation of the online tool.

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Notes

Using crash courses to promote active engagement and develop problem solving skills

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Teaching of large class sizes is often presented with the difficulties of engaging student interest and facilitating interaction (e.g. AUTC, 2002; 2003; Iaria and Hubball, 2008). To address these issues, crash courses were developed by the author as a teaching strategy for the Level I engineering course 'Engineering Mechanics: Statics'. Crash courses promote active engagement, develop problem solving skills and facilitate student understanding.

Crash courses summarise the key concepts of each lecture in a simplified manner. They are concise and are delivered before using the lecture slides. For example, a 50 minute lecture commences with a 5-10 minute discussion by sketching examples using the document camera. Then, for the remainder of the lecture, while discussing the lecture slides, the presentation screen is used to alternate between the slides and the crash course. This reinforces the complex concepts in the slides with their simpler representations from the crash course to develop student understanding. This lets students know what they are working towards and why, thus reiterating key ideas when shown in conjunction with the lecture slides. The mix of media used varies the presentation style, which helps to stimulate student interest. Crash courses have four main steps:

1. Highlight the goal of the topic and the main steps in the analysis, i.e. show the objective of a typical question using simple figures;
2. Indicate the links to previous topics and how they build on theory across the curriculum (i.e. the building blocks of knowledge);
3. Summarise the new concepts used to solve problems; and,
4. Engage students in discussion through multiple choice questions and queries to encourage student interaction and gauge understanding.

The benefits include:

1. Promotion of active engagement. Increased student interaction and active participation are promoted through multiple choice questions that allow monitoring of student understanding. This is essential for large class sizes where it is crucial to develop a strong engagement with students to ensure successful learning.
2. Development of problem solving skills. This promotes critical thinking and discourages rote learning. Each crash course highlights the goal of the topic and the tools available to solve the problem. More importantly, it demonstrates how to develop a plan for an effective solution, as the order in which equations are used can affect its efficiency. This is done with the objective of performing a self-check where possible.
3. Inclusive of all student backgrounds. Crash courses focus on general engineering concepts rather than technical details. By avoiding technical 'jargon', the material becomes less dependent of the students' level of competence in physics or mathematics. This can be crucial for students with English as their second language, to understand the background knowledge before applying it to numerical examples. This can also alleviate transition concerns for some students.

Teaching evaluation was done via Student Experience of Learning and Teaching (SELT) surveys. The 2008 and 2009 SELT results commented that the 'best aspect of the teaching' was the use of crash courses. The effectiveness of this teaching strategy was further supported by student testimonials.

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Notes

Expressive Phenomenology and critical approaches in the distance education classroom: Process and risks

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This article explores the use of expressive phenomenological and critical approaches to the teaching of health policy to a large class of first year health professional students studying both internally and through distance education. The phenomenological approach to classroom teaching attempts to provide students with opportunities to immerse themselves in the lived experiences of populations and individuals who are ill and in need of care. The critical approach brings the political, social and cultural realities of professional practice into the classroom discussion and reflection. The transition from the expressive phenomenological to critical analysis requires careful management by the teacher reacting to the mood, responses and capacities of students. Managing these processes Online for students studying at a distance presents additional pedagogical issues. These are; the problem of capturing 'real time' mood, managing the chaos of multiple student narratives, allowing time to dwell on the phenomena, and dealing with the impact of violent films.

Notes

Improving clinical assessment: Evaluating students' perceptions, knowledge and ability to identify and apply clinical criteria

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Current theory and research indicate that students need clear expectations¹ and support^{2,3} to effectively use assessment criteria. Access to explicit criteria and standards is not sufficient to ensure students understand them⁴ or are able to use them effectively to improve performance.^{5,6} Participation by students in assessment has been shown to improve their understanding of criteria and their performance in written assessment tasks. Investigating how these approaches might transfer to the clinical setting is the focus of this project. This presentation focusses on how we support first-year dental students to understand clinical assessment processes and how these activities impact on their perceptions and learning outcomes.

Students participated in weekly assessment (self and tutor) of their clinic performance using clinical criteria and standards and a series of specifically designed workshops. These workshops involved review and discussion of criteria as well as practice applying criteria to assess performance of 'peers' in videos. These activities were supported by discussion with and feedback from peers and tutors, as well as reflection through critiquing assessments (peer and self).

Consenting students' perceptions (Ethics Approval H 014-2006) of the first workshop and their ability to self-assess were evaluated using an anonymous Likert scale and open-ended survey. Knowledge of self-assessment and application of criteria to videos of peers in simulated clinic situations were assessed using pre- and post-tests. Responses to knowledge questions and reviews of videos were analysed blind to the timing of the tests. Knowledge questions were graded as satisfactory or unsatisfactory. Responses to assessment of peers' performances were scored when assessment criteria were identified.

The majority of students responded to the anonymous survey for evaluating workshop 1 (> 96%, n > 70). Most first-year students (81.6%; n=65) consented to their data from pre- and post-tests being used in this study. Students perceived the self-assessment activities supported their learning about assessment criteria through discussion and practice and their ability to use them to assess their performance improved over the year. It was also evident that while students perceived the participation in the activities improved their understanding of self-assessment, this was not supported by improvements in students' knowledge of key characteristics of self-assessment. However, participation in the workshop and weekly activities had a significantly positive effect on the ability of students to identify some of the behaviours demonstrated by their peers related to the criteria used for self-assessment. In particular, students' recognition in others of knowledge and professional behaviours improved significantly. This improvement was retained over the year and students were able to recognise these behaviours in other scenarios relevant to their year level.

It is considered that this early exposure to the process of self-assessment and associated criteria, coupled with ongoing self-assessment and tutor feedback throughout the first year of the course, improved perceived and actual ability of first-year students to identify and apply some key assessment criteria to observed peer behaviour, and this ability was retained over time.

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Notes

An online peer review instrument designed to facilitate reflective thinking through formative feedback and assessment

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Alternative feedback and assessment approaches in which students review their own work and the work of their peers are said to foster students' ability to reflect on their learning and on their performance as peer evaluators (Sluijsmans, Dochy and Moerkerke, 1998; Langan & Wheeler, 2003). Such strategies can lead to improved learning outcomes, the development of students' life long learning skills, and are more likely to lead to students acting on feedback to improve on their work (Falchikov, 1996; Wood and Freney, 2007). On the other hand, several studies have reported unfavourable student experiences engaging in these kinds of feedback and assessment tasks due to factors such as a lack of confidence about their ability to carry out the work, doubts about their objectivity and lack of adequate training for the task (Cheng & Warren, 1997; Olver & Omari cited in Falchikov, 2004; Topping, Smith, Swanson, & Elliott, 2000).

This presentation describes the use of an online peer review instrument designed to guide learners through the process of self and peer review, feedback and assessment. The instrument was originally developed with the support of an Australian Learning and Teaching Council grant as an online peer review tool designed to enable academics to review each other's online teaching (Wood and Friedel, 2008; Wood and Friedel, 2009). Trials of the instrument suggested its potential for extending the functionality in a way that would enable learners to use the same tool for formative self and peer review, as well as an instrument for feedback and assessment (Wood, forthcoming 2009).

The instrument incorporates banks of assessment related criteria, explanations of the meaning of these criteria, and an underlying database that can record self and peer review data, and self assessment results. Students can use the instrument in a formative manner to ensure the criteria of the assignments have been met, thereby enabling them to reflect on their learning and make adjustments to their work prior to final marking. Students also use the tool to record their final evaluations of their performance and the stored data is retrieved by the teacher and used to guide them in the final summative assessment process. The teacher uses the same review tool to provide feedback and final assessment to the student. Such a collaborative peer review and assessment process involving both students and teacher enhances the scholarship of teaching and learning by engaging teachers in a process of reflection on their own teaching, the quality of the feedback they provide students and the alignment of feedback and assessment with student learning objectives.

The instrument is currently being trialled in a first year and third year undergraduate course at the University of South Australia. This presentation will describe the rationale behind the development of the instrument, the aims and learning outcomes of the courses, the alignment of assessment tasks to the learning outcomes and graduate attributes, and the alternative feedback and assessment approach embedded within the courses. The functionality of the instrument will be described and the presentation will include a demonstration of the way in which students are using the tool for both self and peer review, and self assessment. Preliminary findings from the trials will be discussed and potential future enhancements and future trials explored.

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