Final report 2011

Peer review of online learning and teaching

Lead institution: University of South Australia

Partner institution/s
- Edith Cowan University
- Griffith University
- Lancaster University (UK)
- Monash University
- Queensland University of Technology
- RMIT University
- University of Southern Queensland
- University of Tasmania

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<www.unisanet.unisa.edu.au/peerreview>
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2011

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Executive summary

This is a report on the ‘Peer review of online learning and teaching’ project conducted by academic staff at the University of South Australia and partner institutions. The case studies documented in the report illustrate a range of applications of an online peer review system in different settings.

The online peer review system can provide a scaffold for learners undertaking self and peer review in their assignments. Its interactive nature provides highly focused just-in-time information to enhance the knowledge and expertise of learners. The online peer review system can also be used by academics to improve their own courses via a reflective approach. It also provides a summative review functionality that can support academics seeking promotion or awards.

The outputs of this project include:

• an open-source, online peer review system for learning and teaching
• nine case studies on the use of the online peer review system for learning and teaching
• evaluation of the peer review process, peer review/quality assurance processes, and deployment process
• documentation for the peer review process, peer review/quality assurance processes, and deployment process
• evaluation of the online peer review system and its effectiveness and value for money
• evaluation of the suitability of the online peer review system used in this project.

The project achieved the following outcomes:

• a web-enabled peer review process for online learning and teaching
• procedures that promote quality online learning and teaching, and peer review data that can be used for the recognition and reward of learning and teaching
• dissemination and promotion of the online peer review system and procedures throughout the Australian higher education community
• collaborative sharing and discussion about partner institutions’ processes
• dissemination of technical knowledge regarding the process and tools for enhancing the open-source peer review tool
• enhancement and dissemination of practical knowledge and understanding of standards-based online learning material peer review
• extending the number and range of staff involved in peer review of learning and teaching
• increase in the creation of standards-based online learning materials
• increased reviewees’ engagement with examples and literature related to online learning and teaching
• increased reviewers’ engagement with online peer review.

The online peer review system promotes a scholarly approach to learning and teaching because it sustains reflective practice, and provides a structured and informed approach to peer review.
1 Introduction

The ‘Peer Review of Online Learning and Teaching’ project was funded under the 2007 ALTC Priority Projects scheme and was carried out between August 2007 and March 2010.

The project has involved collaboration between the lead institution, the University of South Australia, and Edith Cowan University, Griffith University, Lancaster University (UK), Monash University, Queensland University of Technology, RMIT University, the University of Southern Queensland and the University of Tasmania. In addition, academics from several Australian universities have contributed their expertise to the project through their participation in trials of the peer review system in development and as members of the reference group.

The project has built on extensive work undertaken both within Australia and overseas in the development of peer review processes that support and stimulate the scholarship of learning and teaching. The peer review system developed through this project can be used to guide academic staff in the development or redevelopment of their own courses through reflective processes, and also enable academics to apply these same criteria to the evaluation of their courses. In this way the outputs from this project have the capacity to promote and support quality learning and teaching through course development, evaluation and improvement. Evidence produced through such quality processes can be used by academic staff as evidence to support claims for recognition and reward.

The following sections of this report document the aims and objectives of the project, the approach taken, the outcomes from the project as well as the findings from evaluations and recommendations for taking the project further. The major deliverables from this project include an open-source, online peer review system, accompanying user guide and systems documentation, and a series of case studies demonstrating the application of the system for both formative and summative review. These deliverables can be accessed via the project website at http://www.unisanet.unisa.edu.au/peerreview/

2 Objectives

The project aimed to build on the knowledge gained from existing approaches to peer review of learning and teaching to develop an open-source, web-enabled peer review tool and to deliver the benefits of this project to ALTC higher education members through the numerous networks involved in this project. The project complements the work of the project team ‘Embedding peer review of learning and teaching in e-learning and blended learning environments’ led by Dr Jo McKenzie from the University of Technology, Sydney, which has focused on developing a scholarly framework, processes and resources for peer review in e-learning and blended environments.
The objectives of this project were to:

- encourage and raise awareness and practice of the scholarship of online learning and teaching, and the collection of evidence for promotion purposes by academic teaching staff who use the online environment to support learning
- assemble comprehensive research-based learning and teaching standards based on research with associated nationally agreed on criteria that can be used to guide academic staff who are not skilled in the development and practice of online learning and teaching
- affirm the work of academics in the area and provide a highly practical approach to peer review of learning and teaching
- locate responsibility for the quality of learning and teaching with academic staff and guide them in the development or redevelopment of their own courses through reflective processes, and use these same criteria to have their work evaluated
- facilitate ‘just-in-time’ academic staff development by providing the accepted standards, information about how to meet these standards and examples of how this can be achieved within the one web-enabled peer review tool
- support academic staff in the development of their courses by encoding the elements of good practice in research-based checklists for learning and teaching
- provide a comprehensive, integrated open-source peer review system that enables staff to record their achievements in online learning and teaching, and to use that information in support of their applications for academic promotion and/or awards.

The distinctive component of this project has been its focus on developing, trialling and evaluating a research-based, web-enabled system based on an existing prototype that was developed and trialled at the University of South Australia (George, Wood & Wache, 2004). The system incorporates banks of standards-based criteria for use in peer review, explanations of the meaning of these criteria, exemplars and an underlying database that can record peer review results and make them available for promotion or awards. The system has been developed to open-source standards to enable it to be adapted by other institutions to suit their learning and teaching and technical contexts.

3 Approach and methodology

This project was conducted over a two-and-a-half year period beginning in August 2007 and concluding in March 2010. The iterative nature of the systems life cycle undertaken throughout the project has involved formative evaluation throughout the project and revisions of the design of the system in response to feedback from project team and reference group members, as well as academics who have participated in trials of the system. A summative evaluation was conducted at the conclusion of the project and the outcomes documented in a subsequent section of this report.

Project management

Management of the project has been the responsibility of the project team leader, Dr Denise Wood, who is the Teaching and Learning Portfolio Leader and a Senior Lecturer in the School of Communication, International Studies and Languages at the University of South Australia, in collaboration with a
project team including University of South Australia and partner institution colleagues.

More specifically, Dr Wood was responsible for:
- managing the overall project
- coordinating activities and maintaining communication with the ALTC, project team members, reference group and participants in trials
- monitoring progress of the project to ensure milestones were met and quality assured
- managing the budget in consultation with the University of South Australia’s Division of Education, Arts and Social Sciences Finance Manager
- assuming responsibility for trials and evaluations undertaken and submitting appropriate documentation for ethics approval prior to commencement of trials and evaluation
- maintaining the project website
- producing required documentation for the ALTC to ensure accountability of project
- liaising with the ALTC higher education community in the dissemination of deliverables and outcomes from the project.

The other project team members who contributed to the project are as follows:

**University of South Australia project team members**

**Professor Ingrid Day** was Dean of Teaching and Learning in the Division of Education, Arts and Social Sciences (UniSA) prior to taking up her current appointment Assistant Vice-Chancellor—Academic and Open Learning at Massey University. Professor Day was responsible for:
- acting in an advisory capacity
- reviewing the peer review system in development and offering suggestions for improvement
- promoting and facilitating trials and reporting on the findings
- assisting in dissemination of deliverables.

**Dr Sheila Scutter** is a senior lecturer in the School of Health Sciences (UniSA) and was former Dean of Teaching and Learning. Dr Scutter played an active role in trialling the peer review system in a range of health sciences, and also took responsibility for:
- reviewing the peer review system in development and offering suggestions for improvement
- assisting in identification of criteria, locating relevant references to embed as explanatory links and contributing exemplars of best practice
- promoting and facilitating trials across various disciplinary areas within the Division of Health Sciences
- assisting in evaluation and dissemination of deliverables and outcomes
- writing up case studies included in the reports and on the project website
- co-authoring peer reviewed publications and presenting at conferences and poster sessions
- co-authoring final reports.
Mr Martin Freney is a lecturer in the School of Art, Architecture and Design (UniSA). Mr Freney contributed to the project by:

- reviewing the tool in development and offering suggestions for improvement
- assisting in identification of criteria, locating relevant references to embed as explanatory links and locating exemplars of best practice
- participating in trials
- assisting in evaluation and dissemination of deliverables.

Associate Professor Ian Reid was Associate Director of the Flexible Learning Centre (UniSA) prior to leaving the university to take up another appointment. Mr Richard Lamb, Manager: Learning and Teaching Systems replaced Associate Professor Reid’s position on the team. Associate Professor Ian Reid and Mr Richard Lamb provided advice on technical functionality.

Ms Dale Wache is an academic developer in the Learning and Teaching Unit (UniSA) and was responsible for:

- reviewing the peer review system in development and offering suggestions for improvement
- assisting in identification of criteria, locate relevant references to embed as explanatory links and contribute exemplars of best practice
- promoting and facilitating trials across various disciplinary areas within the Division of Education, Art and Social Sciences
- assisting in evaluation and dissemination of deliverables and outcomes
- writing up case studies included in the reports and on the project website
- co-authoring final reports.

Ms Kirstin Wache, Mr Kyal Tripodi and Mr Mathew Hillier undertook research assistant responsibilities at various points of time in the project. They assisted with:

- reviewing the literature
- preparing ethics approval documentation
- constructing evaluation tools
- populating the peer review system
- organising poster sessions, workshops and fora
- maintaining the project website
- preparing reports and final documentation for the project.

Australian partner university team members

Edith Cowan University

Professor Ron Oliver is Pro Vice-Chancellor at Edith Cowan University in Western Australia. He has wide experience in the design, development, implementation and evaluation of technology-mediated and online learning materials. Professor Oliver assisted in:

- reviewing the tool in development
- facilitating trials and promoting the dissemination of deliverables and outcomes.
Griffith University

**Professor Kerri-Lee Krause** is Chair in Higher Education; Director of the Griffith Institute for Higher Education and Dean (Student Outcomes). She has expertise in the area of e-learning, the first-year student experience, and the teaching and research nexus, and in enhancing assessment and curriculum across disciplines. Professor Krause acted in an advisory capacity, helping to facilitate trials of the tool and assisting with dissemination at Griffith University.

Lancaster University (UK)

**Dr Paul Rodaway** is the Director, Centre for the Enhancement of Learning & Teaching (CELT), Lancaster University. He has expertise in e-learning, with a particular focus on reflective learning, and has experience in peer review processes in online and blended learning contexts. Dr Rodaway is a fellow of the Higher Education Academy (HEA) and specialist reader for the National Teaching Fellowship Awards (UK). Together with CELT team members, Mark Bryon who is the Learning Technology Group Manager, and Susan Armitage, National Teaching Fellow and Teaching Developer Advisor, the CELT team acted in an advisory capacity, facilitating trials at Lancaster University and assisting with dissemination of deliverables to an international audience. Representatives from Lancaster University also assisted in benchmarking the tool against international standards.

Monash University

**Associate Professor Marilyn Baird** is Head and Associate Professor, Department of Medical Imaging and Radiation Sciences, Monash University. She has particular skill in the design and development of innovative problem-based learning technologies.

Queensland University of Technology

**Professor Sally Kift** is Professor of Law and Director of the First Year Experience Project at the Queensland University of Technology. Professor Kift acted in an advisory capacity and provided expert advice to the project team about factors contributing to student retention and issues for consideration in the design and development of courses that are adapted to meet the needs of students in their first year of university study.

RMIT University

**Associate Professor Andrea Chester** is an Associate Professor in the School of Health Sciences at RMIT University and joined the project in late 2009 as a replacement for Judith Lyons who had left the institution. Associate Professor Chester has assisted in the following ways:

- acting in an advisory capacity, reviewing the tool in development and offering suggestions or improvement
- assisting in identification of criteria, locating relevant references to embed as explanatory links to each criterion and locating exemplars of best practice
- assisting in evaluation of the system and in dissemination of deliverables
- negotiating on-going strategies for taking the peer review project further in a proposed RMIT-UniSA action-research project.
Ms Judith Lyons was a Senior Lecturer in learning and teaching development at RMIT University at the commencement of the project. She has particular expertise in educational development, e-learning and evaluation. Ms Lyons contributed to the project by:

- acting in an advisory capacity, reviewing the tool in development and offering suggestions or improvement
- assisting in identification of criteria, locating relevant references to embed as explanatory links to each criterion and locating exemplars of best practice
- assisting in evaluation of the system and in dissemination of deliverables.

Dr Jenny Sim is Stream Leader in Radiologic Imaging and Senior Lecturer at RMIT University. Dr Sim contributed to the project in the following ways:

- undertaking trials of the tool in the School of Medical Sciences at RMIT
- assisting in evaluation of the system and dissemination of deliverables (promoting uptake within RMIT and via her institutional networks)
- co-authoring a paper submitted for review to the HERDSA 2010 conference.

University of Southern Queensland

Dr Shirley Reushle, Senior Lecturer in online pedagogies within the Faculty of Education, University of Southern Queensland and Dr Jacquie McDonald, Coordinator (Learning and Teaching Design) at the University of Southern Queensland have extensive experience in the design and development of online learning and teaching materials. Dr Reushle and Dr McDonald contributed their skills to the project by:

- acting in an advisory capacity
- reviewing the tool in development
- assisting in identification of criteria, locating relevant references and exemplars
- assisting with evaluation of the system and in dissemination of deliverables.

University of Tasmania

Associate Professor Rigmor George was employed as Associate Dean (Teaching and Learning), Faculty of Education, University of Tasmania, at the commencement of the project. Associate Professor George worked collaboratively with Dr Wood in the design and development of the prototype of the peer review tool that was redesigned and enhanced through this project. She has particular expertise in program course development, appropriate use of learning technologies, flexible delivery and the scholarship of learning and teaching. Associate Professor George contributed to the project by:

- assisting in the redesign of the prototype
- acting in an advisory capacity, reviewing the tool in development
- assisting in identification of criteria, locating relevant references and exemplars
- assisting in evaluation of the system and in dissemination of deliverables.

Project team members met regularly via Centra (an online voice enabled communication system) and extensive documentation was maintained, updated regularly and minutes of meetings circulated electronically to the team.
members each month in advance of scheduled online meetings. The
documentation maintained throughout the project includes:

- records of communication with team members and other stakeholders
- Gantt chart showing each stage of the project, milestones and time lines
- status report documenting the status of work completed
- online issues log keeping a record of problems, identified, priorities, impact,
  resolution strategy and the date the issue was resolved.

A reference group was established to review the achievement of milestones at
regular intervals. The reference group met via teleconference three times
during the life of the project. The expertise of the group contributed significantly
to the decision-making process. The reference group members are as follows:

- Ms Mandi Axmann (Open Universities Australia)
- Ms Caroline Cottman (Queensland University of Technology)
- Professor Geoffrey Crisp (The University of Adelaide)
- Dr Helen Forbes (Deakin University)
- Ms Beatrice Johnson (Australian Catholic University)
- Dr Geraldine Lefoe (University of Wollongong)
- Dr Jo McKenzie (University of Technology, Sydney)
- Dr Nicola Parker (University of Technology, Sydney)
- Ms Nicole Wall (Open Universities Australia)
- Associate Professor Gail Wilson (Bond University).

The project website <http://www.unisanet.unisa.edu.au/peerreview/> was
established as a means of dissemination of project information and
deliverables, and also provided a vehicle for recruiting academic staff wishing
to participate in the project. The website also provided a mechanism for
ensuring transparency and public accountability throughout the project.

**Approach taken**

The peer review system has been developed on the basis of an agreed set of
criteria and standards of good practice. It provides a comprehensive, integrated
peer review system that enables staff to record their achievements in online
learning and teaching. It also provides staff with information to support their
applications for academic promotion.

The approach taken has involved the following activities:

- collaborating with online learning and teaching specialists in Australian
  universities to identify primary and source materials relevant to the peer
  review of online learning and teaching
- populating the peer review tool with banks of criteria and exemplars
- building on and extending previously developed criteria for the peer review
  of online learning and teaching
- enhancing the prototype peer review tool to develop a web-enabled peer
  review system that can be used across different online platforms
- extending the banks and criteria from the original focus, which was limited
to peer review of online learning and teaching, to also incorporating other
areas of focus including: core principles, face-to-face teaching, first-year
experience, embedding research in the undergraduate curriculum,
internationalisation of the curriculum and blended learning
- piloting the online peer review system with staff and students, and
  evaluating the value and effectiveness of the tool from both reviewer and
  reviewee perspectives
developing and disseminating case studies of the use of the online peer review system via workshops, fora, seminars, poster sessions, conference presentations and peer reviewed publications

developing and disseminating documentation that supports the use of the online peer review system

developing and disseminating technical systems documentation about the online peer review system

establishing and enhancing networks amongst the Australian university community with an emphasis on the cultural acceptance between institutions of the value of an online peer review system for learning and teaching.

Project team members undertook the following responsibilities:

- extending the review of existing peer review systems already undertaken to identify features to be incorporated in the tool
- assisting in identification of criteria that needs to be included in the system, locating relevant references to embed as explanatory links to each criterion and locating exemplars of best practice
- advising on the technical aspects of the tool throughout design and development stages of the project
- undertaking trials of the tool, as well as promoting and facilitating trials across different disciplinary areas within their respective institutions and via their networks in the wider higher educational community
- assisting in formative and summative evaluation
- promoting dissemination of the project deliverables.

Through our extended networks and in collaboration with project leaders of other ALTC funded peer review projects, the project team also participated in workshops, fora, and poster sessions to share information about the development of the online peer review system, while also extending the scope of the project to incorporate relevant content from the outputs of those ALTC funded peer review projects.

The project activities, milestones and time lines undertaken during the life cycle of the project are shown in Table 1 below.
## Table 1: Project activities, milestones and timelines

<table>
<thead>
<tr>
<th>Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage 1 - Project initiation</strong></td>
</tr>
<tr>
<td>Meet with all team members to establish work procedures: meeting times etc; contract project officer</td>
</tr>
<tr>
<td>Make contact with ALTC representative from stakeholder universities</td>
</tr>
<tr>
<td>Create project website: for dissemination of project information, conducting surveys, tool access, etc.</td>
</tr>
<tr>
<td>Milestone 1 sign-off</td>
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<tr>
<td><strong>Stage 2 - Consultation</strong></td>
</tr>
<tr>
<td>Conduct research into appropriate criteria to populate tool with modularised banks of questions</td>
</tr>
<tr>
<td>Research glossary items, pedagogical evidence and exemplars to be linked from each criterion</td>
</tr>
<tr>
<td>Compile a list of required features of system identified through collaboration with stakeholders</td>
</tr>
<tr>
<td>Investigate IT solutions</td>
</tr>
<tr>
<td>Milestone 2 sign-off - compile a report of research activities from stages 1-2</td>
</tr>
<tr>
<td><strong>Stage 3 - Product definition</strong></td>
</tr>
<tr>
<td>Prioritise all stakeholders’ requirements (i.e. features and functions of the system)</td>
</tr>
<tr>
<td>Classify banks of modules and develop criteria relating to those modules</td>
</tr>
<tr>
<td>Prepare product specification documentation for use by software developers</td>
</tr>
<tr>
<td>Update product specifications documentation in response to testing and evaluation of prototype</td>
</tr>
<tr>
<td>Milestone 3 sign-off - product specifications finalised</td>
</tr>
<tr>
<td><strong>Design and development</strong></td>
</tr>
<tr>
<td>Brief software developers: discussion of revised product specification document</td>
</tr>
<tr>
<td>Program online peer review system</td>
</tr>
<tr>
<td>Develop support resources (e.g. online tutorials, guidelines and user documentation); apply for ethics approval</td>
</tr>
<tr>
<td>Internal alpha testing</td>
</tr>
<tr>
<td>Usability beta testing</td>
</tr>
<tr>
<td>Final changes and M4 sign-off</td>
</tr>
<tr>
<td><strong>Evaluation</strong></td>
</tr>
<tr>
<td>Trial of Peer Review System by staff at UniSA and partner institutions</td>
</tr>
<tr>
<td>Surveys conducted- stakeholders and academics participating in trials</td>
</tr>
<tr>
<td>Focus groups - stakeholders and academics participating in trials</td>
</tr>
<tr>
<td>Evaluate findings from trials and user surveys</td>
</tr>
<tr>
<td>Finalise report summarising findings of testing and evaluation stage</td>
</tr>
<tr>
<td>Milestone 5 sign-off</td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
</tr>
<tr>
<td>Disseminate findings from trials; update software; package for distribution</td>
</tr>
<tr>
<td>Finalise production of guidelines, training materials</td>
</tr>
<tr>
<td>Final changes to resource website providing access to support materials and to download source software</td>
</tr>
<tr>
<td>Training workshops conducted</td>
</tr>
<tr>
<td>Prepare interim report for ALTC</td>
</tr>
<tr>
<td>Final changes and M4 sign-off</td>
</tr>
<tr>
<td><strong>Dissemination continues in 2009</strong></td>
</tr>
<tr>
<td>Present research findings at learning and teaching conference(s)</td>
</tr>
<tr>
<td>Journal publications</td>
</tr>
<tr>
<td>Software and website updates; Final Report for ALTC submitted</td>
</tr>
<tr>
<td>Milestone 5 sign-off</td>
</tr>
</tbody>
</table>
Evaluation plan

Evaluation was undertaken in a formative manner throughout the design and development stages, and a summative evaluation was conducted at the completion of the project. The evaluation strategy considered:

- the user’s experience as a peer reviewer
- the user’s experience as a peer reviewee
- the potential use of the system for peer review and peer assessment of assignments undertaken by students
- how the findings from the project could contribute to the individual institutions and the participating institutions as a collective
- the project overall and, in particular, how the collaboration of institutions in this area could be taken forward
- fitness for purpose and technical adequacy of the online peer review system developed through the project.

The summative evaluation involved a formal approach using an anonymous online structured questionnaire (refer to Attachment 16.3). These results together with informal feedback and records from the system logs and bug tracking system (refer to Attachment 16.12) were analysed and further amendments made to the system based on user feedback. An independent review was also conducted by eight academic staff from the Centre for Enhancement of Learning and Teaching at Lancaster University. Student feedback on the use of the peer review system for self and peer review in courses was obtained via the online course evaluation conducted at the end of the courses in which the peer review system was trialled. The findings from formative and summative evaluations are documented in subsequent sections of this report.

4 Peer review system

The open-source, online peer review system and the associated user and systems documentation are the major deliverables from this project. The initial focus of the project was on developing a web-enabled peer review system for online learning and teaching. However, since the peer review system has been designed to function as a dynamic system with a supporting database for storage of banks of criteria, custom peer review templates and user reviews, it became apparent the system could be used beyond its limited focus of online learning and teaching. Moreover, feedback from users of the alpha version of the system suggested the need for a more flexible instrument: one that could be used for peer review of online courses or components of an online course, face-to-face teaching, as well as blended learning. Thus, the final peer review system has been extended to incorporate all these features. In addition, banks of criteria have been created to enable academic staff to construct peer reviews that focus on particular areas of concern, such as the first-year experience, embedding research into the undergraduate curriculum, internationalisation of the curriculum, and supporting student diversity.

This extended dynamic peer review system is made of the following components:

- a main template with consistent look and feel
- a level of permission (i.e. ‘administrators’, ‘authors’ and ‘users’), where tasks are performed depending on the user’s level
- a database that stores all of the data, including peer reviews, user data, criteria, glossary items and exemplars
- a reporting function enabling users to view or export results from a review to an Excel spreadsheet.

The most powerful feature of this dynamic approach is its runtime configurability. The initial, static version of the prototype peer review instrument included a number of pre-defined categories and criteria to assist with the peer review process. While this set of criteria is useful and well-rounded, updates are hard to achieve, requiring input from a web developer to add, remove or modify categories or criteria. Such an approach would have been problematic in view of the rapidly evolving learning technologies, including Web 2.0, Flash, AJAX-powered applications, and 3D virtual learning environments.

By using the database and dynamically-prepared web pages, the users may add, remove or modify existing criteria. This flexibility future-proofs the system, ensuring that as new technologies emerge, they can be added into the system without additional programming. The dynamic instrument also provides a greater level of customisability for each unique review; some categories and criteria may not be applicable to all peer reviews. The dynamic version of the instrument enables the user to choose from banks of existing criteria to create customised peer review checklists at runtime, without the need for technical HTML knowledge. A user can also assign their peer review to one of the specified categories; for example, ‘online learning and teaching’, ‘practicum’, ‘tutorial’, ‘print materials’, and so on. This means each peer review can be fully customised to suit the requirements of the review itself, independent of all other reviews in the system (Figure 1).

**Content: banks, criteria and additional information**

The underlying data structure supporting the online peer review system enables administrators and users to maintain both generic and highly customised banks of criteria for their reviews. Each bank in the instrument can contain either one or more criteria, or one or more nested banks. This sequence enables banks to be nested within another ‘grouping’ bank to assist with the assimilation of banks and criteria illustrated in Figure 2.
Figure 1: Design of the peer review system ensures maximum flexibility.
Figure 2: Banks containing nested banks, which in turn contain criteria

Administrators have access to build and manage sets of banks and criteria, which can then be released to authors who are creating a review. Also, these administrator-created banks can be duplicated into an author’s review as required (Figure 3). Banks and criteria are duplicated from the administrator-created data tables into the review-based data tables. This means the administrator can make changes to the banks without them filtering into the author’s review. The duplication of this data ensures that when an author selects a bank and creates their review, it remains as they intended, and is not affected by the administrator’s changes. When duplicating an existing bank, authors can select either the highest bank (which contains more banks) or a nested bank (which only contains criteria).

An author can also select the bank into which the content will be populated, thereby enabling the author to create their own nesting of banks as they create their review. Authors can also create their own banks and criteria, which are then flagged as their own user-created banks. These user-created banks appear in the duplicate banks module when the author creates a new review. By default, a user-created bank is only available to its author; however, the author can choose to share a bank with other authors, or recommend their bank be placed in the default administrator-created bank group. This feature provides the online peer review system with a flexible means to extend and refine criteria in the database.
Figure 3: Creating a custom peer review template focusing on student engagement in a first-year online course

Educative aspects

The educative dimension is central to the just-in-time approach to academic development and the approaches which involve more formal educational development. Each criterion has a ‘More Information Text’ button (blue ‘i’ icon), which is a hyperlink to detailed information about the aspect of learning and teaching under review, including explanations and references to the literature. Moreover, authors of custom reviews can add information to each of the criteria created specific to the area of focus. By clicking on the ‘i’ button next to each criterion, the reviewer can check their understanding of these terms and also learn more about effective techniques for specifying objectives or learning outcomes from the hyperlink references included in the related explanatory screen (Figure 4).

Some criteria have already been populated with More Information Text. This can still be customised to suit the specific review. In the following example, the author has customised the More Information Text field by highlighting the ways the course under review has been designed to achieve the criterion. Figure 4 shows the criterion ‘The student assessment workload is reasonable’ as well as the associated More Information Text revealed by clicking the ‘i’ button. The additional information contained in this field provides the rationale behind the
criterion drawn from resources available via the Centre for the Study of Higher Education at The University of Melbourne. The academic staff member has customised this field to explain how the modules in the course under review are staged to provide adequate time for learners to synthesise the module material and practice the related applied skills as they prepare for each assignment. This additional, customised information helps the reviewer to consider the academic staff member’s perspectives and to provide more focused feedback. Similarly, the process of completing the More Information Text field helps the academic staff member whose course is being reviewed to reflect on their own teaching and the design of their course materials.

Figure 4: Customised More Information Text field designed to facilitate reflection and to provide contextual information

**Inclusivity**

Items addressing issues of inclusivity have been embedded across the four sections of the tool. These relate to socio-cultural aspects, including gender and culture, and have a particular focus on the World Wide Web Consortium’s (W3C) Techniques for Web Content Accessibility Guidelines (1999, 2008). The decision to embed these rather than extract them into separate categories is based on the view that the items essentially reflect good teaching and ought to be presented in a more integrated way. For example, a course that includes streaming media presentations containing voice-over or dialogue would need to be reviewed to determine whether the media is accessible to students with hearing impairments. Information on accessibility issues for people with disabilities and the relevant W3C checkpoints can be accessed by selecting the ‘i’ button next to the criterion relating to synchronised captions for video clips that contain audio tracks in the ‘Use of Media’ section of the tool.

**Areas of focus**

As mentioned above, the focus of the project was initially limited to peer review of online learning and teaching. This section summarises the extended areas of
focus that have been incorporated into the system. Full details of banks and
criteria incorporated into the system are available in Appendix 16.11.

**Core principles**
The criteria embedded in the Core Principles Bank are based on the ‘Peer
Review of Teaching for Promotion Applications: Peer Observation of Classroom
Teaching Information Protocols and Observation Form’ (Crisp et al., 2009) from
the ALTC-funded project ‘Peer review of teaching for promotion purposes: a
project to develop and implement a pilot program of external peer review of
teaching in four Australian universities’.


These principles include the following considerations:
- active student engagement in learning
- building on students’ prior knowledge and experience
- catering for student diversity
- encouraging students to develop/expand their conceptual understanding
- student awareness of key learning outcomes
- active use of links between research and teaching
- appropriate use of educational resources and techniques
- logical presentation of material
- student evaluation of course and teaching encouraged and acted upon.

**Online learning and teaching**
The online learning and teaching bank of criteria is constructed around four
sets of considerations: instructional design, interface design, the use of
multimedia to engage learners, and the technical aspects of interactive
educational multimedia. These areas have been developed through
consideration of the literature as documented in Wood and Friedel (2008;
2009), George and Wood (2005), George, Wood and Wache (2004); George

These considerations include:
- instructional design
- clarity of expectations
- building student knowledge
- learning activities
- assessment
- evaluation
- human interaction
- interface design
- use of media
- interactive multimedia
- Web 2.0 and 3D virtual learning
- writing style and accuracy of text
- copyright
- technical aspects.

Criteria were developed in each section (or sub-section) for each bank and
sub-bank. These criteria:
- directly relate to quality concerns agreed in the literature
- are expressed in non-technical ways
• use the same language and constructs as checklists developed for other areas of teaching, such as lecturing
• incorporate an easy-to-use ratings system
• provide for qualitative feedback through comments.

Face-to-face teaching
The bank of criteria focusing on face-to-face teaching has been drawn from a variety of scholarly sources, including: Race et al. (2007); and Sullivan and McIntosh (1996). These criteria address the following considerations:
• planning
• content
• presentation
• general interaction
• evaluating lectures
• small group interaction.

First-year experience
A growing body of literature addresses principles for the design of a curriculum that is engaging as well as supportive of students’ needs in their first year of university study (Scutter & Wood, 2009). In addition to adhering to good curriculum principles applicable to all university courses, the curriculum provided to first-year students needs to offer opportunities for students to change from previous learning experiences to the higher education sector. Kift identifies five key aspects of the first-year experience, one of which is the first-year curriculum. According to Kift (2008) the first-year curriculum should:
• inform the student’s vocational aspirations early in the course
• address the learning needs and skills required for their current area of study
• promote student involvement in their learning
• provide quality and authentic learning experiences
• assist with the transition to studying at tertiary level.

The criteria incorporated into the peer review system are informed by these principles and address the following considerations:
• creating a sense of belonging
• giving students an understanding of what their learning will involve
• promoting and supporting student engagement with their peers
• developing the knowledge and skills of students from diverse backgrounds.

Teaching and research nexus
Brew and Boud (1995) and Boyer (1990) suggest teaching and research are more likely to relate when teaching is regarded as a process rather than an outcome or product. This process is one which fosters an enquiry-based approach to learning, in which both teaching and research are regarded as aspects of the one activity. The peer review system incorporates the following areas of consideration:
• knowledge of current research
• theory and practice of research
• critical thinking and enquiry
• engagement in a scholarly community
• reflective practice.
Internationalisation of the curriculum

The criteria addressing internationalisation of the curriculum have been drawn from the online resource *Internationalising the Curriculum, GIHE Good Practice Resource Booklet – Internationalising the Curriculum Tip Sheet – Course level Strategies*, Griffith University: http://www.griffith.edu.au/__data/assets/pdf_file/0011/186905/IoC_Course-level.pdf.

The following areas of consideration are incorporated into the bank:

- broadening subject areas through international/intercultural approaches
- encouraging interactive cross-cultural exchanges
- aligning course content, learning activities and assessment
- encouraging and modelling inclusive strategies and openness to diversity
- demonstrating sensitive and inclusive teaching practices.

Blended learning

The criteria considered in the blended learning bank have been drawn from the guidelines for embedding peer review in blended learning environments arising from the work of the ALTC-funded priority project ‘Embedding peer review of learning and teaching in e-learning and blended learning environments’. This focuses on creating a scholarly framework, processes and resources for peer review of learning and teaching in e-learning and blended learning environments, developing individual and institutional peer review capacity and embedding the use of peer review evidence in quality improvement, performance review, promotion and teaching award processes.

Use of the peer review system

There are varying opinions about the role and purposes of peer review in the Australian higher education sector. Similarly, there is a range of different terms used to describe ‘peer review’ processes. For example, university guidelines for academic promotion may use the term ‘peer evaluation’, while performance management process (PMP) documentation makes use of terms such as ‘peer assessment’. On the other hand, university policies dealing with the evaluation of teaching policies may refer to terms such as ‘peer review’, while academic development resources that support the improvement of teaching speak of ‘peer observation’. Often, specific terms are used to denote ‘what’ teaching is being reviewed, ‘how’ that teaching is being reviewed or by ‘whom’ the teaching is being reviewed.

The varied use of terms relating to peer review is further complicated by applying formative or summative aspects to the process. Taking a formative or summative approach to peer review indicates the ‘purpose’ or intended use of the feedback generated by the peer review process. For example, formative peer review relates to seeking feedback and constructive suggestions from peers that will support the development of teaching or improvement of teaching materials. Alternately, it could also mean creating an atmosphere of mutual support and feedback among a group of academics as part of an ongoing process of reflection on teaching practice or course content. Summative feedback, on the other hand, is used when academics wish to collect evidence of their teaching for renewal of their contract, tenure, or to support applications for promotion or a teaching award. However, this evidence could equally be used to support a teacher in formatively reflecting on and improving their teaching or teaching materials.
The online peer review system does not distinguish among the various terms used in relation to peer review, nor are any assumptions made about the purpose for the collection of evidence or feedback. The purpose for obtaining evidence produced via this system is up to the individual academic staff member. However, it is important that academics using the system:

- identify the intended use of the resulting evidence/feedback
- reflect on the different types of evidence that will be collected
- develop a plan for using the online peer review system.

The main functions of the online peer review system are to:

- provide the banks of criteria that act as prompts for what could be self or peer reviewed—academic staff still have the key role of identifying the items they would like to have reviewed
- provide a means by which academic staff can then use the selected criteria as a mechanism for discussing with their chosen peer reviewer/s how the peer review process will take effect
- ensure the collected evidence/feedback is stored in a secure database so it may be used by the academic for the intended purpose.

When creating a peer review, academic staff members need to consider whether they want to receive feedback/evidence about their teaching in the form of:

- qualitative feedback, such as constructive suggestions, which will support the development of teaching, the improvement of teaching materials, or the development of a culture supportive of improving learning and teaching
- quantitative feedback, such as agreement ratings, which will support applications for promotion or teaching awards, and compare against academic benchmarks and standards
- qualitative and quantitative feedback, which can be used for either formative and/or summative peer review purposes.

As a new author of a peer review process, an academic staff member needs to plan how they will use the peer review system. For example, they might want to use the system:

- for self-review and reflection as a course is designed or redeveloped
- in a formative way to obtain constructive feedback from peers to help course development
- to reflect on peer feedback prior to using the system for summative purposes, for example, to support applications for awards or promotion.

The online peer review tool can assist academic staff in each of these purposes. One of the issues around the development of the system has been to ensure it has maximum flexibility. For this reason, the tool is very detailed and may be used in part or as a whole depending on the intended outcome. These may include:

- course development or improvement through personal reflection
- formative or summative evaluation of online materials by peers
- career advancement through providing evidence that supports applications for promotion, tenure, or awards
- framework for professional development staff to use when working with academics.
Summary

The online peer review system allows academic staff to have their own courses and curriculum critiqued through user evaluation methods. The system can be used for self-evaluation, reflection, professional development, or peer review. Authors of the review are easily able to create custom reviews that are structured with a wide range of commonly used academic criteria, as well as creating and specifying their own criteria. Peers can then be invited to participate in a review by addressing these criteria with their own responses and comments, using easy web-based forms. When the data is collected, it can be exported onto a spreadsheet for ease of analysis and presentation. This data can then be used to evaluate the course and identify areas for possible improvement.

In summary, the online peer review system, and the supporting user and systems guides and website provide highly focused, just-in-time information to enhance the learning and teaching knowledge and expertise of academic staff. The online peer review system promotes a scholarly approach to learning and teaching because it sustains reflective practice, and provides a structured and informed approach to peer review. Furthermore, the peer review system provides a means by which staff can have their work publicly affirmed and use this as evidence to support their applications for promotion and awards.

5 Case studies

A series of case studies have been developed to illustrate ways in which the online peer review system can be used. These case studies are available via the project website at http://www.unisanet.unisa.edu.au/peerreview/ and include examples of the application of the peer review system for the following:

- formative review of an online research proposal course undertaken by the academic staff member as self-review
- summative review of course by lecturer and colleagues through the peer review process to determine inter and intra-rater reliability of the online peer review system
- summative review of course by an academic colleague compared with student evaluation of the course during course evaluation and student evaluation data to investigate relationship between these elements
- summative peer review of an online third-year web design course, which was undertaken to provide evidence in support of the academic staff member’s application for promotion
- formative review of a postgraduate health sciences research course aimed at providing the academic staff member with peer feedback as the course is developed with a summative review planned at the conclusion of the course
- formative peer review of a first-year course within a blended learning environment with a focus on feedback to the academic about the effectiveness of engaging the first-year learner in practice-led research activities
- formative peer review of the effectiveness of a new resource in an undergraduate course, focusing on idea generation and student engagement
- self-review by a group of academics who used the paper-based version of the peer review system to guide them in course design and redevelopment
• self and peer review undertaken by students in a first-year and third-year course for formative purposes to facilitate self-reflection by students and the teacher, as well as a means for providing students with a scaffold to support them in critiquing the work of other students (see Wood, 2009b).

Several additional case studies are in progress (for example, the use of the online peer review system to undertake review and redevelopment of all foundation courses in several undergraduate programs offered within a school of humanities). These case studies will be added progressively to the project site beyond the life of the project. The project site will continue to be a mechanism for recruiting academic staff interested in trialling the use of the online peer review system in their own courses, and contributing the case studies arising from the trials to the project site.

6 Evaluation findings

Evaluation of the project was undertaken in a formative manner throughout the design and development stages, and a summative evaluation was conducted at the completion of the project. The following sections describe the findings from both formative and summative evaluations.

Formative evaluation

The iterative nature of the design and development process, together with the built-in quality assurance processes and collaborative requirements, ensured that formative feedback was integral to the project.

Formative feedback was provided through a variety of means including:
• project wiki website http://peerreview.unisa.edu.au/wiki/index.php/Main_Page
• online bug tracking system http://peerreview.unisa.edu.au/mantis/my_view_page.php (see also Appendix 16.12)
• online reference group meetings
• informal communications from stakeholders via email
• formal course evaluation data based on student experiences, using the peer review system for self and peer review of assignments.

Feedback obtained via project wiki and bug tracking system

Appendix 16.12 provides a summary of the issues reported by participants during the alpha and beta trials of the peer review system. In addition to these technical concerns, participants offered valuable feedback about the ease of use and likely application of the system within their own institutional contexts. All of the technical issues/bugs reported have been quickly resolved.

The additional feature requests logged appear in Table 2 below. The requested feature and current status for these requests are reported.
<table>
<thead>
<tr>
<th>Feature</th>
<th>Priority</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add explanation to access URL field</td>
<td>Medium</td>
<td>Completed</td>
</tr>
<tr>
<td>Show only banks and sub-banks in wizard—user should expand banks as required to show criteria</td>
<td>Medium</td>
<td>Completed—banks and sub-banks can be expanded and collapsed as required.</td>
</tr>
<tr>
<td>Ensure wizard continues if screen refreshed</td>
<td>High</td>
<td>Completed</td>
</tr>
<tr>
<td>Provide clearer instructions for creating new bank in wizard</td>
<td>High</td>
<td>Completed</td>
</tr>
<tr>
<td>Change wording and keep navigation consistent for instructions to progress to next screen in wizard</td>
<td>High</td>
<td>Completed</td>
</tr>
<tr>
<td>Provide option to delete a review</td>
<td>High</td>
<td>Completed</td>
</tr>
<tr>
<td>Provide option to re-send invitations to reviewers</td>
<td>Low</td>
<td>Completed—button provided on ‘invite reviewers’ page</td>
</tr>
<tr>
<td>Add more titles to options for new reviewers (‘Assoc Prof’, ‘Fr’ and ‘Sr’)</td>
<td>Low</td>
<td>Completed</td>
</tr>
<tr>
<td>Alert user when review is published to ensure the review is also made available</td>
<td>High</td>
<td>Completed—review automatically published now</td>
</tr>
<tr>
<td>Add contextual information on home page for first-time users</td>
<td>Medium</td>
<td>Completed—includes introductory text and link to additional information that can guide academic staff member on effective strategies for use of the peer review system</td>
</tr>
<tr>
<td>Provide sample template reviews for all areas of focus for new users</td>
<td>Medium</td>
<td>In progress</td>
</tr>
<tr>
<td>Provide option for reviewer and reviewee to interact using Web 2.0 functionality</td>
<td>Medium</td>
<td>An option has been added to enable the reviewee to post feedback /comments in response to a review and to maintain a log of their comments.</td>
</tr>
</tbody>
</table>

Student evaluations

The online peer review system was also trialled during the BETA stage of testing in a first-year course, *Introduction to Digital Media (IDM)*, and a third-year course, *Accessible Interactive Media (AIM)*. There were 72 students enrolled in *IDM* and 20 students enrolled in *AIM*. As reported by Wood (2009a, 2009b), the method adopted for the trials followed an action research process involving cycles of action and reflection as described by Ballantyne, Hughes and Mylonas (2002). Students enrolled in the courses used the peer review system in three cycles representing each of the assessment points. Following each cycle of action, student comments through their qualitative responses to criteria within the reviews as well as their postings to discussion forums and email correspondence to the teacher were reflected upon. These comments provided insight into their experiences using the online peer review system and highlighted any technical problems they encountered.

Technical issues were logged and reported to the programmer, which were addressed prior to implementation of the next action cycle. Student comments indicating lack of clarity in the criteria, or the need for further descriptive examples, helped to improve the design of formative and summative reviews for subsequent assignments. In this way, the action research approach incorporated both reflection and action (Schon, 1995); reflection on student experiences and action that in turn ‘gives rise to new forms of knowledge’ (Schon, 1995, p. 31) which transfer to new situations.

In the first cycle, students undertook formative review of their assignments using the instrument, prior to final submission and marking of the assignment. Students received non-evaluative audio podcast feedback from the teacher following their reviews in which the teacher commented on areas where there was agreement and areas where there were differences in viewpoints between the student and the teacher’s assessment of their work. Students were given the opportunity to make changes based on this feedback prior to final submission.

In the second cycle, students used the system for formative peer review of their second assignments. Students were invited to complete a formative peer review of their peers and to act on that feedback prior to final submission of their work, at which time they completed a self-assessment using the peer review system. In the final cycle, students again participated in peer review using the instrument and were able to act on their peers’ and teacher’s feedback prior to final submission and self-assessment of the final assignment for the courses.

Students were invited to complete an anonymous online evaluation at the conclusion of the course, which included a combination of five-point Likert scale items and open-ended questions. It was designed to measure their satisfaction with the learning experience, the extent to which they believed the approach facilitated reflective practice and increased their confidence in undertaking self and peer assessment, and to identify any technical issues in using the system that might have impacted on the learning process (see Appendix 16.6). Several questions from course evaluations conducted in previous offerings of the course without the use of the instrument as a scaffold were included in the evaluation to provide comparison between the groups.
Findings

Introduction to Digital Media (IDM) trials
Seventy-two students enrolled in IDM completed the formative review of their first assignment, during the first cycle of the action research process. The marks allocated by students were compared to the marks allocated by the teacher using a paired t-test. When all students were considered as a group, there was no significant difference between the marks allocated by the teacher and those of the students. There was also a strong correlation between the two sets of marks ($r+.69$, $p<0.000$).

Of the 72 students who participated in the formative self-review, 32 elected to act on the feedback provided by the teacher and resubmitted their work. The students completed a final summative self-assessment at the time they submitted their updated assignments. The teacher also assessed their revised work. The marks allocated by the teacher and students were compared before and after resubmission, to determine whether the process improved agreement between the student and the teacher's marks. The findings from this analysis show students marked themselves lower than the teacher in their first submission, and marked themselves higher than the teacher after resubmission. This was significant at the $p<=0.05$ level (Table 3). This finding was further supported by students' qualitative comments in the initial self-review and the subsequent self-assessment following feedback, and after they had acted on that feedback.

These findings indicate there was strong alignment between student and teacher's assessment of their work overall. However, for the sub-set of students who elected to improve on their work, the formative review process appeared to boost their confidence in their ability to accurately assess their own work. This observation is further supported by student comments to the discussion forum after first using the instrument, in which two students indicated a degree of discomfort at marking themselves too high. With the exception of two students who did not feel they had improved on their performance, the remaining students who posted comments in the free-form text fields noted the ways they had improved through applying the feedback.

It was also apparent from initial observations of the findings that students who did not add comments to justify or elaborate on the reasons for how they rated themselves on each of the criteria generally rated their performance higher than the teacher.
Further analysis was undertaken to determine whether students who made comments about their work rated their work differently to those who did not comment. This provided greater insight into this finding.

Students were divided into three groups: those who filled in the comments field for each criteria; those who did not add comments relating to individual criteria, but summarised their reflective process in the overall comments field at the end of the review screen; and students who rated their performance using the drop down scale, but did not write any comments in their reviews. The student-allocated mark was compared to the teacher’s mark and reported as a percentage. Thus, a score of less than 100% indicated that a student had scored themself lower than the teacher and vice versa. One-way analysis of variance was used to compare the percentage scores and a significant difference ($f=9.07$ $p<0.000$) was found between the three groups (Table 4).

**Table 4: ANOVA comparing students' and teacher's ratings across the three student groups (comments for criteria, reflective comments, and no comments)**

<table>
<thead>
<tr>
<th></th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>9173.833</td>
<td>2</td>
<td>4586.917</td>
<td>9.074</td>
<td>.000</td>
</tr>
<tr>
<td>Within groups</td>
<td>35891.391</td>
<td>71</td>
<td>505.513</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>45065.225</td>
<td>73</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tukey's HSD (honest significant difference) indicated there was no significant difference between groups one and three (comments for all criteria and general comments only). However, students who made no comments had significantly higher percentage scores, showing they rated their work higher than that of the teacher and with greater variability.

The students enrolled in *IDM* who completed the online course evaluation at the end of the semester ($n=21$), answered three questions focusing on the use of the peer review system in their course. The results of which are reported in Table 5 below.
As these findings indicate, 57% of students either strongly agreed (24%) or agreed (33%) that the online peer review system helped them better reflect on their work. However, 24% of students responded with a neutral rating and 19% either disagreed (14%) or strongly disagreed (5%) with this statement.

Almost half (47%), of the respondents, either strongly agreed (14%) or agreed (33%) that the peer review system and process helped them develop better skill in critiquing the work of their peers. In contrast, 43% of students were neutral and 10% either disagreed (5%) or strongly disagreed (5%) with this statement.

The majority (62%) of respondents either strongly agreed (29%) or agreed (33%) that the online peer review system and process helped them to improve the quality of their assignments, whereas 33% were neutral, and only one student (5%) stated the process did not help them to improve their work.

Students were also asked to comment on their experiences using the online peer review system. The majority of comments were positive such as: ‘It was fantastic! It allowed me to achieve my best and assess my work against my peers’; ‘Incredibly useful. Peers would often pick up on things I myself could not see, and so it was valuable to have someone else's thoughts’; ‘It was really useful as it always told me what I could improve on’. A few students suggested the peer review process would be more effective if there were marks assigned to the quality of the review. One student noted, ‘I didn’t find the feedback of other students all that useful because most of the time it was just a few words and this didn’t really help me that much’. Similarly, another suggested, ‘It was very useful, though perhaps its completion could be worth a minor percentage of the assignment weighting to ensure a higher rate of completion’. Two students were negative about the process of peer review as indicated by this comment: ‘I find self-assessment fairly pointless, and realistically am under no selfish obligation to review my peers’. This comment was more a reflection of the principles underlying peer review than the actual online peer review system used for the process.

In summing up how the benefits of both the self/peer review process and the online peer review system can support reflective practice, this student commented:

I found the peer review site very helpful because I was able to see what my peers’ opinions were on my assignments and at the same time, make changes if I felt it would make my assignments better. I also found it useful to reflect on my peers’ work as well because I
was able to give my own opinions as well and took an interest into their assignments.

Students were also asked to comment on whether they experienced any technical or usability issues with the system. The majority of students reported that they had no problems. However, three students reported difficulty in working out how to find their reviews. This usability issue was reported to the programmer and resolved for future trials and implemented following BETA testing.

**Accessible Interactive Media (AIM) trials**

Nineteen students enrolled in AIM participated in peer review and self-assessment of their assignments. The marks allocated by students were again compared to the marks allocated by the teacher using a paired t-test. When all students were considered as a group, there was no significant difference between the marks allocated by the teacher and those of the students. A more detailed analysis was carried out on the relationship between the formative peer reviews, the students' self-assessments and their final grades for the major assignment in the course (assignment three). Only the 12 students for whom there were marks in all three categories (formative peer review score, self-assessment and final grade) were included in this analysis. Analysis of variance was used to compare the scores achieved by peer review of the assignment, student self-assessment and the final assessed grades for the assignment. The mark allocated by self-assessment was significantly higher than that provided by the combined peer review (p<0.05). Indeed, every student who submitted their work for peer review gave themselves a higher score in the self-assessment (Table 6). This suggests that students responded to the peer review and felt that as a result of the changes made, they had produced a high quality piece of work. There was no significant difference between the scores allocated by the peer review and the final marks achieved by the student. This would suggest that the peer review is a better predictor of final score than self-assessment, although more data and analysis would be needed to investigate this further.

For the students who submitted their work for peer review, the final mark achieved by the student was in every case higher than the peer review (Table 6). There was insufficient data to establish a statistically significant trend for students who did not submit their work for peer review: two students received a final grade 20% lower than their self-assessment, whereas two students received 3% more in their final assessment compared to self-assessment.
Table 6: *AIM* students’ peer review ratings, self-assessment and final grade in their final major assignment

<table>
<thead>
<tr>
<th>Peer review rating</th>
<th>Student’s self-assessment</th>
<th>Final grade assessed by teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>92</td>
<td>93</td>
</tr>
<tr>
<td>54</td>
<td>80</td>
<td>85</td>
</tr>
<tr>
<td>81</td>
<td>86</td>
<td>93</td>
</tr>
<tr>
<td>46</td>
<td>76</td>
<td>73</td>
</tr>
<tr>
<td>59</td>
<td>74</td>
<td>78</td>
</tr>
<tr>
<td>61</td>
<td>67</td>
<td>74</td>
</tr>
<tr>
<td>55</td>
<td>100</td>
<td>91</td>
</tr>
<tr>
<td>59</td>
<td>77</td>
<td>67</td>
</tr>
<tr>
<td>53</td>
<td>61</td>
<td>75</td>
</tr>
<tr>
<td>66</td>
<td>79</td>
<td>82</td>
</tr>
<tr>
<td>53</td>
<td>83</td>
<td>79</td>
</tr>
<tr>
<td>59</td>
<td>95</td>
<td>70</td>
</tr>
</tbody>
</table>

Figure 5 shows there was a moderate positive relationship between the final mark for the assignment and the student’s self-assessment (r = 0.054). There was no relationship identified between the peer review and the student's self-assessment (r=0.2).

Figure 5: Scatter plot showing moderate positive relationship between the final mark for the assignment and the student’s self-assessment (r = 0.054)

The outcomes from the responses to the custom questions relating to peer review by students enrolled in the *Accessible Interactive Media* course are reported in Table 7 below. As the data shows, of the six students (30%) who completed the course evaluation at the end of the semester, 83% either agreed (33%) or strongly agreed (50%) that the process helped them to reflect on their work. Only one student (17%) was neutral about this criterion and there were no students who disagreed with the statement. Similarly, 84% of students either agreed (67%) or strongly agreed (17%) that the peer review process helped
them to develop better skill in critiquing the work of other students, and only one student (17%) responded with a neutral rating. All of the students either agreed (67%) or strongly agreed (33%) that the process helped them improve their work.

Table 7: *AIM* student responses to course evaluation questions about their experiences using the online peer review system

<table>
<thead>
<tr>
<th>Course evaluation question</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I found the self/peer review process helped me to better reflect on my own work.</td>
<td>3 (50%)</td>
<td>2 (33%)</td>
<td>1 (17%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt I developed better skill in the ability to critique the work of others.</td>
<td>1 (17%)</td>
<td>4 (67%)</td>
<td>1 (17%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was able to improve on the quality of my assignments.</td>
<td>2 (33%)</td>
<td>4 (67%)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Students’ qualitative comments also indicate they found the process helpful. One student commented, ‘I found the self review to be particularly useful as it provided me with an opportunity to justify my work as well as check through it thoroughly before submission’. Several students noted that the online peer review system helped them to better focus on the requirements of the assignments. For example, one student stated, ‘It was helpful in clearly stating what was required for assignments and helped me to improve my work’. Another student commented that ‘The marking template and the feedback allowed me to produce better focused assignments’. In this course, students were designing websites for real clients. One student found the peer review process valuable for obtaining peer feedback prior to showing the finished project to their client; ‘very helpful. It allowed my work to be critiqued before I showed my client the end product’.

When asked to comment on the technical adequacy and usability of the online peer review system, several students noted issues in the peer review templates not displaying correctly in Internet Explorer. This issue was investigated further with the programmer, and it was found the student had copy/pasted descriptive content into the peer review template directly from MS Word. As a result several invalid symbols and codes were transferred across, which could not display correctly in some browsers. This issue has since been resolved by the implementation of an HTML ‘cleaning process’, which removes invalid code from textual content imported into reviews.

Discussion

The trials of the online peer review system, with both first and final-year students enrolled in a media arts course demonstrated its benefits for students. The majority of students reported they were better able to reflect on their work and improve on the quality of their work through the peer review process. It also provided critical feedback for the teacher about the alignment between students’ and teacher’s judgements on performance. The online peer review system provided the academic staff member with greater insight into the extent to which students appeared to reflect on the criteria and feedback they received. The higher rate of positive scores obtained from the evaluations completed by final-year students is not unexpected; they had undertaken peer
review in assignments for previous courses, albeit without the aid of the online peer review system.

The trials also provided invaluable formative feedback from the 72 IDM students and the 20 AIM students. While the system was shown to be robust and relatively easy to use, some technical issues were identified as noted in the findings section, as well as areas for improvement in terms of usability and functionality. These early, comprehensive trials enabled the programmer to address the issues prior to BETA trials with a broader audience during the summative evaluation stage.

**Summative evaluation**

Summative evaluation involved formal trials of the BETA version of the peer review system undertaken by academic staff members who registered their interest to participate via the project website sign-up page: [http://www.unisanet.unisa.edu.au/peerreview/register.asp](http://www.unisanet.unisa.edu.au/peerreview/register.asp)

They also undertook an independent review conducted by academic staff from the Centre for Learning and Teaching at Lancaster University, UK.

The evaluation sought to address the following considerations:

- the effectiveness of the newly developed instrument in facilitating just-in-time academic staff development
- the usefulness of the information provided on the supporting website about how to achieve high quality curriculum
- the usefulness of examples of good practice included within the instrument
- whether the instrument’s user interface ensures that changes can be implemented prior to the first major release of the system
- whether the features employed in the system enable academics to adequately record their achievements in learning and teaching
- whether academics have/plan to use the recorded information in support of academic career progression.

**Methodology**

Approval of the Human Research Ethics Committee was obtained prior to undertaking these formal trials.

The following research questions were posed:

- Is an online peer review system an effective mechanism for academics in developing their curriculum materials, or improving on their teaching?
- How effective is such a system for formative and summative peer review?
- How useful is the peer review system for:
  - developing new course materials
  - evaluating existing course materials
  - gaining feedback from others about course materials
  - creating a review checklist?
- How might the peer review system be improved?
The research method involved:

- sending an email link to academics who have expressed interest in trials of the peer review system via the project website, with a cover email (Appendix 16.4) inviting them to register for the final trials of the instrument. Information about the trials and the evaluation protocol was also included in the email.
- emailing the Deputy Vice-Chancellors and Pro Vice-Chancellors of the relative institutions, requesting permission for their staff to participate in the trials (Appendix 16.5).
- emailing academic staff members who had registered for participation, to advise them that permission had been obtained. Information about the project together with details about the evaluation process and an invitation to complete an anonymous online questionnaire (Appendix 16.3) was included in the email.
- analysing the quantitative and qualitative data in the context of the literature in the field of learning and teaching.
- revising the instrument on the basis of participant feedback.
- reporting results via the ALTC final report, project website and peer reviewed publications.

Permission from Deputy Vice-Chancellors and Pro Vice-Chancellors for academics to participate in formal trials and to provide feedback via the anonymous online evaluation (see Appendix 16.5) was received from the following universities:

- Deakin University
- Massey University
- Open Universities Australia
- Queensland University of Technology
- RMIT University
- University of South Australia
- University of Southern Queensland
- University of Tasmania
- University of Wollongong.

While 43 academic staff participated in the trials during the summative evaluation stage of the project, only six (13.9%) completed the online evaluation. This was despite several email reminders about the importance of the feedback for informing final changes to the system. Five of the respondents are academic staff from Australian higher education and institutions and the sixth is an academic staff member from Lancaster University (UK). Since the findings from the UK review panel are reported in greater detail in a subsequent section of this report, the following analysis focuses only on the responses of academic staff from Australian higher education institutions.

**Findings**

The research instrument used for the anonymous online evaluation appears in Appendix 16.3. The instrument includes a mixture of Likert Scale and qualitative free-form text questions. The responses to each of these questions are summarised in the following section.
Please indicate how you used the online peer review instrument (you can choose more than one response).

The most frequent response to this item (five responses) was ‘I used the instrument to create a peer review that other people would complete’. This could be classified as a summative approach to the use of the peer review system as the course had been developed and colleagues had been asked to review the course. The other two main responses (four responses each) were ‘to guide me in the development or redevelopment of the course through reflective processes’ and ‘to raise awareness of the scholarship of teaching and learning’.

Did you use the online peer review instrument to adapt an existing peer review or did you design a peer review from scratch? (You can select more than one response).

Of the four respondents who created a peer review, the most frequent use of the tool was to ‘create a peer review from scratch’. No respondents converted a paper-based tool into the online format.

Comments on use of tool for creating a peer review.

One of the Australian respondents indicated that they found the tool very user friendly, especially when using the ‘wizard’ to create a peer review template using a step-by-step guide. Another Australian respondent commented that the criteria provided were useful, although perhaps a little overwhelming. The UK respondent suggested the system is more suitable for peer assessment than formative peer review. They commented that it appeared as though the assessment was primarily concerned with assessing performance against a set of generic criteria, rather than taking into account the specific objectives of the course. Part of this feedback appeared to be due to a difference in interpretation of the terms ‘peer review’ and ‘peer assessment’ in the UK and Australian higher education context. This concern has been addressed by the inclusion of clarifying statements at the beginning of the User Guide (Online Peer Review System: User Guide, 2010, p. 3). Furthermore, a section was added in that guide, explaining the value of an academic staff member adding customised information to the More Information Text field, which elaborates on how they have addressed the given criterion in their teaching (p. 17). The process of completing the More Information Text field helps the academic staff member whose course or teaching is being reviewed, to reflect on the design of their course materials. It also helps the reviewer to consider the academic staff member’s perspectives when providing feedback. The second action arising from the UK staff member’s feedback has been to provide an additional step in the wizard process, enabling the academic staff member to specify the default response types to be used for the generated review templates, and to activate the qualitative free-form text field used for additional comments, as the default option for all new peer reviews.

When creating your peer review form, did you use existing banks of criteria in the online peer review instrument or did you create your own banks of criteria?

All respondents used a mix of existing and newly created banks, and commented positively on this arrangement. One respondent commented that they would like to be able to delete a number of banks and criteria in bulk rather than individually. Similarly, the UK respondent indicated that the large number of potential criteria made selection difficult and that pre-setting the focus of the review in the wizard would be helpful. The wizard has been modified in response to this feedback to enable a ‘cascade’ view of individual banks and nested sub-banks, which can be selected or unselected. The UK respondent indicated that the large number of potential criteria made selection difficult and that pre-setting the focus of the review in
What types of responses did you use?

Likert Scales were the most frequently used type of scale, followed by different frequency scales. One respondent indicated that they did not realise they could change the question type. The UK respondent indicated that they would use more free response items if they had more time. This issue has been addressed by the provision of the extra step in the wizard process, enabling academic staff to select the preferred default response type for selected criteria.

How long have you been using the online peer review instrument? How long did it take before you felt confident using the instrument?

The results of these two questionnaire items and the associated comments fields have been combined as there is some degree of overlap. There was a large range in the amount of time that it took users to be comfortable with the online peer review system, ranging from two hours or less (two users) to one week. One respondent indicated that they still were not confident, though it was not clear how long they had been using the instrument. It is likely that the wide range in the amount of time taken to become comfortable with the instrument depended on familiarity with online tools and the depth to which the instrument was explored. There would also be a difference in the time taken to learn to respond to a review, compared to the development of a review. Whether users chose to use the wizard or to explore the impact of using the wizard, may also have affected the time taken to become confident using the system. One respondent indicated that they became frustrated with the review process after a few hours, but when they came back and referred to the tutorial they found that it was easy to learn how to use the system. As a result, links to the online tutorial have been added on each page of the online peer review system to prompt users to consult the help features as required.

The low response rate makes it difficult to provide numeric comparison of questions about how respondents used the tool and how useful it was in each application. However, all respondents agreed that the online peer review system was useful in developing and practising online learning and teaching. No respondents disagreed with the statement that the online peer review system is useful for just-in-time staff development and/or course development or redevelopment through reflective processes. Australian respondents agreed the online peer review system is useful for promotional purposes. One respondent commented that the tool reminded them of important issues to address, and that the resources provided were ‘excellent’ as it enabled the staff member to follow up on aspects of their teaching and seek additional ideas and information. The UK respondent stated that the tool ‘only assesses perceived performance against a set of criteria and would not align to our promotional criteria or system’. This respondent also expressed concern about the limited scope for the reviewee to engage in dialogue with reviewer. In response to this comment, an additional feature has been added to the online peer review system to allow a reviewee to comment on any feedback provided about their course or teaching and to maintain a log of their feedback.

There were mixed responses about the potential of the peer review system. Australian respondents indicated an interest in investing more time in the online peer review system and applying it in different applications. The UK respondent could not see any advantage in the system without further modification. As indicated in the previous sections, the feedback from this online evaluation was
invaluable as it enabled the project team to identify areas for improvement, including the following modifications/additions that have since been implemented in the final version of the online peer review system.

In summary, the changes made to the online peer review system in response to the findings from the online evaluation are as follows:

- The inclusion of clarifying statements at the beginning of the associated user guide (p. 3) as well as a section explaining the value of an academic staff member adding customised information to the More Information Text field, which elaborates on how they have addressed the given criterion in their teaching (p. 17). The process of completing the More Information Text field helps the academic staff member whose course or teaching is being reviewed to reflect on the design of their course materials. It also helps the reviewer to consider the academic staff member’s perspectives when providing feedback.

- An additional step has been incorporated into the wizard process, enabling the academic staff member to specify the default response types to be used for the generated review templates and to activate the qualitative free-form text field used for additional comments, as the default option for all new peer reviews.

- Banks and nested sub-banks are by default ‘closed’ and can be ‘opened’ selectively by the user to reveal the associated criteria for that bank. An entire bank or sub-bank can be selected, as can individual criteria within the bank.

- An additional feature has been added to the online peer review system to allow a reviewee to comment on any feedback provided about their course or teaching and to maintain a log of their responses to this feedback.

Reliability and validity

The value of using a variety of sources of feedback for quality improvement of teaching is well documented (Berk, 2005; Murphy, MacLare & Flynn, 2009). A variety of sources of information about teaching quality is particularly important when one considers the wide variations in reliability of both peer and student ratings of teaching effectiveness (Paulsen, 2002). Thus, the value of using a variety of sources of feedback in assessing the quality of teaching, as well ensuring the reliability and validity of instruments used for such evaluative purposes was investigated as part of the formal evaluation process.

Inter-rater reliability

The concept of reliability addresses whether the same tool applied by different people will generate the same results (Creswell, 2007). Although it is expected that reviewers will have different backgrounds, and thus, there will be some differences in interpretation of criteria, the criteria need to be written so that all reviewers will interpret them in much the same way. Therefore, it is necessary to compare the responses between two independent reviewers undertaking the same course review to determine the reliability of the instrument.

The online peer review system has also been designed for academic staff as a way of evaluating their own courses for the purposes of professional development and course improvement. It would be expected that the teacher
delivering the course should have a good understanding of the design and materials, as well as some insight into strengths or weakness of the course. However, the structure of the review and the clarity of the criteria should be such that an external reviewer can identify similar aspects of the curriculum. Therefore, the review responses from the instructor of the course should also be compared with those of the external reviewers.

Method
The course selected for review was Research Proposal, a fully online course offered to postgraduate Masters by coursework and Honours students. The structure of the course comprises a series of modules provided on a weekly basis, with a discussion board facilitated by the instructor. The aim of the course was for students to develop a clear understanding of the requirements, structure and function of research proposals through the development of a specific student-directed research proposal.

The teacher, in consultation with the intended reviewers, developed an online peer review template. The peer review template addressed the instructional design of the course as well as the way in which the instructor interacted with students. A total of 15 items were included across five criteria, as shown in Table 8 below. Either Likert (from strongly agree to strongly disagree) or Frequency scales (always, sometimes, never) were used for each item.
Table 8: Online peer review of Research Proposal (A: Agree, SA: Strongly Agree, Al: Always, N: Never, S: Sometimes)

<table>
<thead>
<tr>
<th>Clarity of expectations</th>
<th>The course purpose was clearly stated</th>
<th>Learning modules include an overview of the content to be covered and the processes by which it will be achieved</th>
<th>Objectives or learning outcomes are clearly stated and achievable for each section or module</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reviewers ratings</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
</tr>
<tr>
<td></td>
<td>A        SA        A</td>
<td>N        Al        Al</td>
<td>N        Al        Al</td>
</tr>
<tr>
<td>Learning activities</td>
<td>Learning activities are appropriate for the targeted learning</td>
<td>Learning activities promote self-assessment</td>
<td>Learning activities reflect the increased complexity of the ideas</td>
</tr>
<tr>
<td>Reviewers ratings</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
</tr>
<tr>
<td></td>
<td>A        A        A</td>
<td>S        A        A</td>
<td>A        SA        A</td>
</tr>
<tr>
<td>Building knowledge</td>
<td>The materials include appropriate examples or case studies</td>
<td>The course provides ways for students to follow up ideas and scholarship</td>
<td>The materials use summaries to consolidate what has been learnt</td>
</tr>
<tr>
<td>Reviewers ratings</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
</tr>
<tr>
<td></td>
<td>A        SA        A</td>
<td>A        A        A</td>
<td>A        SA        A</td>
</tr>
<tr>
<td>Human interaction</td>
<td>Name of lecturer and contact details clear and correct</td>
<td>Online community activities provided</td>
<td>Teacher feedback is timely and appropriate</td>
</tr>
<tr>
<td>Reviewers ratings</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
</tr>
<tr>
<td></td>
<td>A        SA        A</td>
<td>A        A        A</td>
<td>A        SA        A</td>
</tr>
<tr>
<td>Assessment</td>
<td>Assessment criteria are provided for each summative assessment task</td>
<td>Opportunities for formative assessment are provided</td>
<td>Models or examples of summative assessment items are provided</td>
</tr>
<tr>
<td>Reviewers ratings</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
</tr>
<tr>
<td></td>
<td>Al        Al        Al</td>
<td>S        S        S</td>
<td>Al        Al        Al</td>
</tr>
</tbody>
</table>

**Findings**

There was agreement between the two external reviewers and the instructor on nearly all criteria. In all criteria, except two in the Clarity of Expectations items, there was a maximum of one point score difference between the reviewers (for example, Agree and Strongly Agree). This was the only area in the review where the reviewers disagreed. The source of this disagreement was investigated further by discussion between the reviewers. The instructor had scored the items ‘Learning modules include an overview of the content to be covered and the processes by which it will be achieved’ and ‘Objectives or learning outcomes are clearly stated and achievable for each section or module’ as ‘never’. Reviewer 2 had scored these as ‘always’ and commented: ‘Module well designed. Students were constantly reminded where they were: i.e. at which stage as they progressed through each module’. The external reviewer commented that ‘the course guide and the clearly highlighted learning activities provided clarity and clear learning outcomes’. Further, in response to ‘Objectives or learning outcomes are clearly stated and achievable for each section or module,’ the level of disagreement in this item was explained by Reviewer 1 that ‘the course guide and the clearly highlighted learning activities provided clear learning outcomes’.
Another area of disagreement between the instructor and the external reviewers was in the category of Learning Activities. While the instructor had scored ‘Learning activities promote self-assessment’ as ‘neutral’, both the external reviewers ‘agreed’. This difference was explained by Reviewer 1:

The adoption of various learning strategies, self-reflection, in particular the collaborative discussions online, had the effect of promoting students to reflect on their own learning and assessing not only their individual work but that of their peers. The act of (deep) reflection should result in students assessing their work, and consequently evaluating how their own work compares to that of their peers. This is especially so in the way the discussion forum has been structured in this course to support student learning.

The reviewers had quite different backgrounds, one from the health sciences and the other from a humanities discipline. The reviewers also had different levels of experience in curriculum evaluation. Despite this, there was a high agreement between their responses. One of the reviewers has a particular interest in web accessibility, leading to a comment that one diagram should have text to explain the content to assist students who may have a visual impairment. This was reflected in a difference ‘agree’ vs. ‘strongly agree’ for the item ‘The materials include appropriate examples or case studies’.

The findings of this case study indicate there is a degree of reliability in the responses to the online peer review system. This suggests the format of the questions is specific enough to allow the reviewer to clearly identify what is being asked. This review also shows that the reviewee (the academic whose course was being reviewed) rated the criteria included in the peer review template similarly to the external reviewers. The reviewee was slightly more critical of the course than the external reviewers. This is important as it illustrates that the strengths and weaknesses of the course were brought to the attention of the reviewee in a similar way as they were identified by the reviewers.

**Conclusion**
More studies are required to determine reliability of the peer review system, but this case study has established the reliability of the system to a greater extent than for most other tools. The different background, discipline and skills of reviewers will always be a source of variability in measurement. However, this preliminary analysis has shown that the peer review tool criteria are sufficiently robust to interpretation by different academics.

**Validity**
The concept of validity addresses whether the online review tool actually measures what it purports to measure (Marczyk, DeMatteo & Festinger, 2005). There are a variety of levels of validity, including simple face validity, where an instrument appears to measure what it is intended to, to construct validity, which seeks agreement between the theoretical concepts and a specific measuring instrument. Criterion validity is used to demonstrate the accuracy of a measure or procedure by comparing it with another measure or procedure which has been demonstrated to be valid. However, there are a limited number of validated tools for measuring course quality with which to compare the online peer review system. Thus, this project also sought to establish face validity and some elements of construct validity by comparing responses to the online peer
review system to two other measures of course quality and the quality of delivery: the Course Evaluation Instrument (CEI) and the Student Evaluation of Teaching (SET), which are routinely administered at the completion of each course.

Method
The course coordinator developed a review tool using the online peer review system. The focus of the review was on human interaction, as this course is conducted totally online and the coordinator wanted to determine whether students received adequate and timely communication with the lecturer. An external reviewer was asked to complete the evaluation of the course using the online peer review system.

A fully online course offered to postgraduate Masters by coursework and Honours students was reviewed. The structure of the course comprises a series of modules provided on a weekly basis with a discussion board facilitated by the instructor. The aim of the course was for students to develop a clear understanding of the requirements, structure and function of research proposals through the development of a specific student-directed research proposal. A total of 15 items were included across five criteria, as shown in Table 9 below. Either Likert (from Strongly Agree to Strongly Disagree) or Frequency scales (Always, Sometimes, Never) were used for each item.

The students were asked to complete the standard SET instrument used by the university. This consists of a number of questions related to student satisfaction with the instructor for the program. Students also completed the CEI for the course. The review was structured to compare the evaluation of the course by an external academic with student responses to the course evaluation and teacher evaluation questionnaires.
Table 9: Items included in the online peer review of *Research Proposal*

<table>
<thead>
<tr>
<th>Clarity of expectations</th>
<th>The course purpose was clearly stated</th>
<th>Learning modules include an overview of the content to be covered and the processes by which it will be achieved</th>
<th>Objectives or learning outcomes are clearly stated and achievable for each section or module</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reviewers ratings</td>
<td>Always</td>
<td>Always</td>
<td>Always</td>
</tr>
<tr>
<td>Learning activities</td>
<td>Learning activities are appropriate for the targeted learning</td>
<td>Learning activities promote self-assessment</td>
<td>Learning activities reflect the increased complexity of the ideas</td>
</tr>
<tr>
<td>Reviewers ratings</td>
<td>Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Building knowledge</td>
<td>The materials include appropriate examples or case studies</td>
<td>The course provides ways for students to follow up ideas and scholarship</td>
<td>The materials use summaries to consolidate what has been learnt</td>
</tr>
<tr>
<td>Reviewers ratings</td>
<td>Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Human interaction</td>
<td>Name of lecturer and contact details clear and correct</td>
<td>Online community activities provided</td>
<td>Teacher feedback is timely and appropriate</td>
</tr>
<tr>
<td>Reviewers ratings</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>Assessment</td>
<td>Assessment criteria are provided for each summative assessment task</td>
<td>Opportunities for formative assessment are provided</td>
<td>Models or examples of summative assessment items are provided</td>
</tr>
<tr>
<td>Reviewers ratings</td>
<td>Agree</td>
<td>Strongly Agree</td>
<td>Always</td>
</tr>
</tbody>
</table>

*Results*

As Table 10 shows, student responses to the CEI and the SET were generally very positive.
Table 10: Student responses to the course evaluation and student evaluation of teaching for the Research Proposal course

<table>
<thead>
<tr>
<th>CEI</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>SET</th>
<th>Strongly Agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have a clear idea of what is expected of me in this course.</td>
<td>40%</td>
<td>60%</td>
<td>1. The staff member made the aims and objectives of the course clear from the outset.</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>2. The ways in which I was taught provided me with opportunities to pursue my own learning.</td>
<td>40%</td>
<td>60%</td>
<td>2. The staff member made the subject matter interesting.</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>3. The course enabled me to develop a number of the qualities of a UniSA graduate.</td>
<td>60%</td>
<td>20%</td>
<td>3. The staff member motivated me to do my best work.</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>4. I felt there was a genuine interest in my learning needs and progress.</td>
<td>80%</td>
<td>20%</td>
<td>4. The staff member provided adequate opportunities for me to pursue my own learning.</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>5. The course developed my understanding of concepts and principles.</td>
<td>40%</td>
<td>60%</td>
<td>5. The staff member helped me to develop my understanding of concepts and principles.</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>6. The workload for this course was reasonable given my other study commitments.</td>
<td>40%</td>
<td>60%</td>
<td>6. The staff member displayed a genuine interest in my learning needs and progress.</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>7. I have received feedback that is constructive and helpful.</td>
<td>60%</td>
<td>40%</td>
<td>7. The staff member gave me helpful feedback on how I was going.</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>8. The assessment tasks were related to the qualities of a UniSA graduate.</td>
<td>60%</td>
<td>20%</td>
<td>8. The staff member used up-to-date learning and teaching approaches.</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>9. The staff teaching in this</td>
<td>100%</td>
<td>0%</td>
<td>9. The staff member made it clear how</td>
<td>20%</td>
<td>60%</td>
</tr>
</tbody>
</table>
Peer review of online learning and teaching

It was possible to map some items in the CEI and SET questions against the items in the online peer review system. This allows comparison between student perceptions of the course and the teacher with the reviewer to items included in the online peer review system. This gives an element of comparative validity to the findings of the review. For example, the Clarity of Expectations items in the online peer review system related closely to question one of the CEI and SET. The students’ responses indicated both the course and the instructor were clear about the Clarity of Expectations.

Item five in the CEI and the SET addressed how the course and the teacher’s input in developing concepts and principles. Students rated both the course and the instructor highly in this area, with scores for the teacher at a higher level than for the course. This item relates to all three items in the building knowledge bank, all of which were scored highly by the reviewers.

Item seven in both the CEI and the SET relate to the provision of feedback to students. This issue was addressed in the Human Interaction Bank as ‘Teacher feedback is timely and appropriate’. The student rating in the SET was more positive than in the CEI, although the items were very similar. Also, the reviewers scored this item highly in the online peer review system.

The flexibility of the online peer review system enables the instructor to include and, therefore, evaluate items that were not available in the standard CEI and SET tools. For instance, in the Assessment Bank, the inclusion of both formative and summative assessment items enabled the instructor to seek feedback from an external reviewer regarding this important aspect of the course. Thus, the ability of the online peer review system to include question bank(s) to cater for different course contexts is critical in ensuring widespread adoption.

**Conclusion**
A degree of both face and comparative validity has been established as the tool for comparison of a reviewer’s findings with the evaluations provided by students. More studies are required to determine reliability and validity of this instrument, but these have been established to a greater extent than for most other tools.

**Independent review**
A panel of learning and teaching staff from Lancaster University conducted an independent review of the online peer review system. The panel members included:
Ms Susan Armitage, Teaching Development Advisor, Centre for the Enhancement of Learning & Teaching (CELT)
Ms Ann-Marie Houghton, Department of Educational Research (and University Disabilities Coordinator)
Mr Rich Ranker, Manager, Learning Technology Group
Dr P. Rodaway, Director, CELT
Ms Hilary Thomas, JISC Regional Support Centre, and former lecturer at the University
Dr Casey Wilson, Lecturer and e-learning Development Officer, Management School
Ms Joanne Wood, Student Learning Development Tutor, CELT
Mr Steve Wright, e-learning Development Officer.

Findings
In summarising the findings of the review, the Chair of the panel, Dr Paul Rodaway reported:

Generally, people found the tool easy to use, and could see its potential (if using the user defined features more fully rather than relying on the wizard, though the latter is great for getting started). The main concern our colleagues had was whether it would be useful in the UK context where peer review is more about dialogue and development, and less about assessment and comparability of standards. Having said this, at a recent Heads of Educational Development Group event I attended in London, it was clear that a number of UK HEIs are starting to build into their performance review systems 'indicators' teaching standards, and a tool like this could feed nicely into this more performance driven model.

The key findings reported by the panel identified some differences in terminology used in the UK and Australian higher education context. As noted in a preceding section of this report, within the Australian higher education sector there are varying opinions about the role and purposes of peer review. Similarly, there are a range of different terms used to describe peer review processes. The varied use of terms relating to peer review is further complicated by applying formative or summative aspects to the process. Taking a formative or summative approach indicates the intended use of the feedback generated by the peer review process. The online peer review system does not distinguish among the various terms used in relation to peer review, nor are any assumptions made about the purpose for the collection of evidence or feedback. The purpose of using evidence produced via this system is up to the individual academic staff member. However, it was clear from the feedback from the Lancaster University review that panel members were concerned about the emphasis on 'recording perceptions of relevance to assumed positive teaching attributes—implying more an evaluation model of peer observation'.

The other key points arising from the review conducted by the Lancaster University review panel are as follows:

- The review panel reported the online peer review system to be 'fairly intuitive to use in the “get started mode” of using the wizard to create a simple review'. However, they also expressed concern that the default response type in criteria generated through the wizard is a Likert Scale.
- The review panel commented that the full list of criteria presented in the wizard is 'comprehensive and organised nicely by category'. However, they suggested it would be beneficial for the system to incorporate a
method of pre-filtering. For example, a content developer would be more interested in questions about the design and organisation of online content than criteria on the student-tutor interaction.

- Several technical issues requiring attention were also identified by the panel: some icon keys are a little confusing as they only indicate the ticks and crosses added to icons, and it is not always obvious why some icons are blanked out and others active at different points. Also, in some places the rollovers did not appear to be working. Furthermore, instructions in the wizard to create a simple review indicate that one must choose at least one criterion—some initially interpreted this as one from each category when it was literally minimum choice required is one criterion. Finally, the tool was set at South Australian time; this caught some Lancaster people out when setting up a live review as they forgot to take into account the difference to UK time.

- Suggestions made by the review panel included: the possibility of integrating with an institutional email system to support inviting reviewers to undertake a review; the default ‘open from’ and ‘until’ settings could be more useful as a day or week, rather than the identical setting as is the case at present; and the integration of Web 2.0 technologies to support developmental dialogue between practitioners.

- The potential benefits reported by the panel included: the customisable comprehensive nature of the tool and the potential to create interesting, locally-customised reviews; potential use in informing curriculum planning and review (a number of the criterion identify potential good practice in online and blended learning practices) and could be used as a self-review tool by staff.; the potential use of the tool by students to evaluate their teachers and the need to be interoperable to a significant degree with other university online systems.

Response to the review

The project team have noted the confusion in terminology and the potential for academic staff to focus too much on the supplied checklists of good practice, rather than developing their own customised peer review templates. The team also agree that a more nuanced approach to pre-filtering according to the particular focus of the academic staff member would be of value. The concerns raised by the panel about the Likert Scale response type being set as the default for wizard-generated templates have also been noted. In response to these concerns, an additional step has been added to the peer review system encouraging the author to reflect on the purpose of the review and to then select the appropriate default response type informed by that focus. Additional resources are also being embedded into the system to encourage academic staff to consider whether they want to receive feedback/evidence about their teaching in the form of:

- qualitative feedback, such as constructive suggestions, which will support the development of teaching, the improvement of teaching materials or the development of a culture supportive of improving teaching
- quantitative feedback, such as agreement ratings, which will support applications for probation, promotion or teaching awards
- both qualitative and quantitative feedback which can be used for either formative or summative peer review purposes.
The suggestion to make better use of Web 2.0 technologies to encourage dialogue between reviewer and reviewee is also an important consideration. While that level of functionality is beyond the scope of this project, and also raises some potential issues if a review is to be used for summative purposes, an option has been added to the system to enable the reviewee to respond to a reviewer’s feedback via an open-ended comments field.

Outcomes reported via case studies

There were nine case studies completed during the BETA trials. These demonstrated the use of the online peer review system for self-reflection, formative review, summative review and as a means of providing a scaffold for learners undertaking self and peer review in their assignments. These case studies are available in Appendix 16.7–16.8 and also online via the project website.

The key findings from these case studies are as follows:

- The banks of criteria incorporated into the peer review system, which are derived from review of the literature and the outcomes from other ALTC funded peer review projects, can be helpful in guiding academic staff in the design and redevelopment of courses, even in paper-based format.

- The process of learning to construct a focused peer review involves much more than mastery of the technical functionality of the peer review system. As one academic staff member discovered through her trial and error attempts at setting up an effective peer review template, there is a need for formative feedback from colleagues prior to finalising a review template for summative purposes. Thus, it is important to combine formative and summative approaches if planning to use a review as evidence to support an application for academic awards or promotion.

- Comparison of summative review of a course undertaken by an academic colleague, and student evaluation of the course using course evaluation and student evaluation data provides valuable insight into the different perspectives of colleagues and students.

- Consideration should be given to undertaking reviews where there is triangulation of data; for example, self-review, peer review and student evaluation of teaching.

- It is also important to make available to a reviewer a range of materials to enable them to provide a balanced review of teaching. For example, it might be useful to provide the reviewer with access to discussion forum postings, course materials and student evaluations of teaching, as well as course evaluation data.

- The More Information Text field associated with each criterion is most effective when customised by the academic staff member to demonstrate to a reviewer how their teaching or course materials address the criterion.

- The online peer review system has the potential to act as a scaffold to support learners undertaking self and peer review, while also enabling the teacher to identify gaps in student knowledge or in the clarity of the assignment criteria. In this way the system supports reflective and reflexive practice for both students and academic staff.

- While quantitative data from peer reviews may be important for summative review purposes, a combination of quantitative and...
qualitative data is important to support the formative review process. As the Lancaster University review highlighted, and as some student comments also indicated, such qualitative data enables the reviewee to reflect more deeply and act on the feedback. Moreover, as recommended by the Lancaster academic staff who participated in the independent review of the online system, two-way dialogue is more likely to facilitate the sharing of developmental opportunities, for both reviewer and reviewee.

- The inclusion of a free-form text field enabling the academic staff member to comment on the review of their course or teaching by peers or students provides a means for enhancing self-reflection in the case of formative review. It is also a mechanism for demonstrating that the staff member has taken action in response to peer and student feedback. Such evidence can be provided in conjunction with the summative review data in support of applications for promotion and awards.

7 Advancing existing knowledge

Relationship to research in the area

This project has involved the development of an online peer review system and associated website to provide a scaffold for the development and evaluation of online courses. There has been a clear focus on quality through the identification of learning and teaching standards made accessible via checklists, which codify these standards. The approach has drawn on the Boyer (1990) notion of scholarship by facilitating learning opportunities which involve both personal reflective practice and engagement of the academic community through peer review. Central to this approach was the view that the development of academic staff occurs in real contexts with support provided in real time, and with the involvement of other academic staff.

Scholarly engagement

One of the critical aspects of this approach is it sought to develop a system that would support the achievement of scholarly outcomes in course development through scholarly processes. The Boyer notion of scholarship is arguably the most widely used framework for considering academic work within universities. Boyer (1990) identified four scholarships—discovery, teaching and learning, integration and application. His approach is predicated on an understanding of the communal basis of all scholarly activity. Scholarship, by its very nature, is a public, rather than private, activity; it is open to critique and evaluation by others. A field of study is progressed through the scholarly activity of building new ideas, which are then open to the same processes of public scrutiny. All of the scholarships are exposed to the same rigorous approaches of peer review as a way of gaining quality, transparency and accountability (Schulman, 2002). Within this framework, the scholarship of learning and teaching has emerged as a major theme in the higher education sector.

One of the key areas in the notion of the scholarship of learning and teaching is that of the ‘learning community’—the recognition of the value of relationships and practices that occur in and through the work practices of staff. These communities provide generative learning opportunities through highly
contextualised and often discipline specific activities. They emphasise the networks of people that emerge around particular ideas, values and directions. These networks are more than just resources to be exploited; rather, they embody the corpus of knowledge and practice and are the very essence of the professional life of academics. Within this context, peers play a significant role in networking and non-hierarchical forms of leadership and training central to development of expertise. All staff are potentially ‘seed carriers’ of new ideas and new practices (Senge et al., 1999, p. 17).

The primary focus of the processes described above is the academic rather than the materials, a position central to the notion of the scholarship of teaching. That is, all work done on the materials is undertaken by the academic staff member responsible, with support provided by academic development staff. However, several issues emerge from this: how can an institution provide support for the continued development of materials after the initial intensive stage? How can a consistent framework for the development of online materials that is based on research be provided across the university? How can the peer review process, an increasingly important aspect of academic life, be supported for online teaching?

The solution this project sought to develop was to provide structured opportunities or a scaffold for discussion and reflection (Boyer, 1990; Schön, 1983) through checklists of agreed good practice. This has the capacity to encapsulate a range of issues that impact significantly on learning outcomes and to foster discussion around possible solutions. This approach is more organic because it is under the control of the individual, and is responsive to individual needs and the particular context. Staff can set their own academic development goals and seek the kind of peer involvement which supports the progress of these goals.

8 Analysis of critical factors

The project achieved and exceeded the original aims and objectives specified in the project proposal. However, there were some challenges in completing the project within the planned time lines. The factors critical to the success of the project, as well as some of the challenges, are listed below.

Factors critical to the success of the approach

- dedicated core of UniSA project team members
- large representation from several universities on project team
- diversity of skills of the project team, with representation from a range of disciplinary areas
- large number of stakeholders involved throughout the project
- valuable external review throughout the project undertaken in a formative and summative manner by academic staff at Lancaster University
- engaged dissemination throughout the life of the project via fora, colloquia, conference presentations and peer reviewed publications.
- skilled programming staff
- collaboration with project team leaders from all of the other ALTC funded peer review projects.
Factors that impeded success

- While 43 academics participated in trials, only six of those participants completed the anonymous online evaluation, despite several reminders from the project leader. However, the combination of the completed evaluations, together with a detailed evaluation conducted by the eight academic staff at Lancaster University, anonymous feedback from 92 students who trialled the system in self and peer review/assessment activities in two separate courses, as well as reporting via the online bug tracking system, and informal email feedback, provided an invaluable source of rich formative and summative evaluation data, which has informed decisions regarding final changes incorporated into the system.

- The project team had envisaged that it would be possible to finalise the categories and criteria for inclusion in the instrument prior to commencement of programming. However, this proved an unrealistic and undesirable approach given the rapid changes in technologies adopted for online learning and teaching. Instead, the online peer review system has been adapted to be more easily updated to accommodate such ongoing changes.

- It also became evident that programming could not be completed in advance of trials. It was apparent that funding for programming tasks should occur over the life of the project, rather than concentrated in the first year. In future, grant applications will better reflect the need to budget for programming support over the lifetime of a project rather than aiming to complete all programming activities prior to trials. This is also more consistent with a formative approach to design and development.

- Time lines had to be re-negotiated to align with the completion of a related ALTC project, since we had agreed to share the deliverables from the two projects. However, the additional time enabled us to extend the functionality of the peer review system beyond its original focus on the review of online learning and teaching. With this extended functionality, the instrument can be used for both formative and summative peer reviews of online learning and teaching, face-to-face teaching and in blended learning environments. Our extended trials over the last six months of the project also demonstrated its use by students for peer review and peer/self-assessment tasks within courses.

Other comments

- The final deliverables from this project have exceeded the aims and objectives outlined in our original project proposal. As mentioned above, the final open-source peer review system can be used for a variety of review situations in addition to its original focus on online learning and teaching. The system incorporates banks of criteria that have been drawn from the outputs of other ALTC-funded peer review projects as well as areas of particular concern, such as first-year experience, embedding research in the undergraduate curriculum, supporting student diversity, internationalisation of the curriculum and blended learning. In addition, the system can also be used by students for self and peer review and assessment.

- The data-driven approach has meant that the peer review system can be developed continuously by contributions from the higher education community. It is envisaged that over time, academics will further extend
the system by adding to the banks and criteria incorporated into the system.

- Through our collaboration with RMIT we have an agreement, in principle, to carry this project further, focusing on developing strategies to implement the use of the system across the higher education sector.

9 Applicability to other institutions

Applicability of outcomes

The project has involved collaboration with eight partner institutions including Edith Cowan University, Griffith University, Lancaster University (UK), Monash University, Queensland University of Technology, RMIT, the University of Southern Queensland and the University of Tasmania. The rationale behind establishing such an extended project team was to ensure adequate input into the project from a range of stakeholders as well as a means for ensuring the outcomes from the project would be applicable to the wider higher education community. In addition to the core project team members, more than 40 academic staff registered interest via the project site and contributed to the project in various ways, such as participating in trials, attending workshops and/or attending reference group meetings.

The interest expressed by the project leaders of the five related ALTC-funded projects in incorporating their content into the instrument, together with the considerable interest expressed via the public wiki and at conference, workshop and forum presentations, provides considerable evidence of the impact of the project, and its likely benefit to the higher education community. We believe the value-added features we are able to incorporate into what is already a robust and flexible tool for reviewing online learning and teaching will extend its impact beyond that which was envisaged in the original proposal to focus only on one dimension of peer review. Our engagement with a wide stakeholder base and key leaders in the field has enabled us to realise these extended features.

Feedback from summative review undertaken by the Lancaster University identified some differences between the approach and understanding of terminology in the UK and Australian context. The feedback highlighted the need for greater clarity in defining what we mean by the term ‘peer review’ as applying to both peer review for formative as well as summative purposes. On the basis of that feedback, a section guiding academics on the use of the peer review system has been added as well as further explanatory notes incorporated into the first screen of the peer review system. The UK feedback also highlighted the need for reviewees to have the opportunity to engage in dialogue with the reviewer. Given the dual use of the peer review system for formative and summative purposes, it was not possible to incorporate a two-way option for ongoing dialogue. Despite this, the system has been modified to enable the reviewee to respond to the reviewer’s feedback and have that response stored with the review, so that their reflection on the review and the process can be taken into account, should the review be used for summative purposes.
The project team believe with these modifications in approach and design, and given the flexibility of the system to be adapted to the institutional context, the outcomes from the project will be well received.

**Applicability of approach**

This project was conducted over a two-and-a-half year period beginning in August 2007 and concluding in March 2010. The iterative nature of the systems life cycle proposed for this project involved formative evaluation throughout the project and revisions of the design of the tool in response to feedback from project team and reference group members, as well as academics who participate in trials of the tool. A summative evaluation was conducted at the conclusion of the project. The peer review system was initially trialled and evaluated by the participating universities during the alpha stage of development. The participation of UK partners enabled the project to be benchmarked against international standards. A website was established to disseminate project information and deliverables and provide a vehicle for recruiting universities wishing to participate in the project. The website also provided a mechanism for ensuring transparency and public accountability throughout the project.

**10 Dissemination**

Dissemination was designed to occur as a two-way sharing of the outcomes and learning resulting from the project at different stages with stakeholders and the community.

Dissemination activities occurred throughout the project via a range of activities including fora, seminars, workshops, poster sessions, conference presentations and peer reviewed publications. A website has been maintained throughout the project to enable academics from any institution to have input into the development of the system, or to register their interest in participating in the trials.

These dissemination activities enabled the project team to engage with stakeholders at strategic points in the project’s life cycle to:

- identify features that should be incorporated into the peer review system
- identify issues that might impact the outcomes
- increase the opportunities for the large number of academic staff involved in the project to disseminate the outcomes within their respective institutions.

The publications and presentations arising from the project are as follows

**Peer reviewed journal publications**


Peer reviewed conference papers


Engaged dissemination strategies

As noted above, a variety of activities aimed at ensuring adequate input and shared responsibility for the design of the project were undertaken throughout its life. These activities are a means of increasing stakeholder commitment to adopting strategies arising from the project, as well as carrying the project further. These activities are summarised in Table 11 below.

Table 11: Activities contributing to the engage dissemination strategy
<table>
<thead>
<tr>
<th>Date</th>
<th>Title of event</th>
<th>Purpose of the event</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>21/11/2008</td>
<td>Peer review workshop at the UniSA, City West campus</td>
<td>A hands-on workshop was conducted during the ATN assessment conference in Adelaide in 2008. The aim of the workshop was to provide the opportunity for participants to learn about the peer review system and contribute suggestions for changes.</td>
<td>16</td>
</tr>
<tr>
<td>21/11/2008</td>
<td>Peer review of university teaching: capitalising on collegial expertise and feedback forum</td>
<td>This colloquium, hosted at the University of Melbourne by Dr Kerri-Lee Harris, provided a forum for discussion about the potential benefits of peer review of teaching, while also examining the challenges. We presented a poster session on the peer review system under development.</td>
<td>85</td>
</tr>
<tr>
<td>5-6/02/2009</td>
<td>First-year experience curriculum development symposium</td>
<td>Poster session focusing on the use of the online peer review system to address quality concerns in designing and developing engaging first-year curricula.</td>
<td>40</td>
</tr>
<tr>
<td>12/06/2009</td>
<td>A one-day national peer review forum was held at UniSA Magill campus</td>
<td>This forum brought together all of the project leaders from ALTC-funded peer review projects to share experiences and plan strategies for incorporating the outputs from the peer review projects into the online peer review system under development.</td>
<td>20</td>
</tr>
<tr>
<td>9-10/09/2010</td>
<td>Workshop: Using the online curriculum review tool</td>
<td>Workshop conducted at the ULE Futures: Rethinking learning in your discipline, University of New England.</td>
<td>20</td>
</tr>
</tbody>
</table>

The project website was effective in recruiting more than 60 academic staff members representing 18 universities, who indicated their interest in fulfilling a variety of tasks including: contributing to the development of the database of banks and criteria, and providing exemplars; participating in trials; becoming a member of the reference group and/or assisting with dissemination within their institutions. The website also provided a vehicle for ongoing dissemination of outputs from the project, including podcast sessions from the national forum conducted in June 2009, access to the online peer review system in development, resources and tutorials on how to use the peer review system, and a bug tracking system enabling academic staff to log issues encountered and also to request new features.
Project team members from Edith Cowan University, Griffith University, Massey University, Queensland University of Technology, RMIT, and the University of Southern Queensland also assisted in dissemination activities within their institutions and encouraged colleagues to participate in trials.

The national peer review forum hosted at the University of South Australia in June 2009 was successful in bringing together the project team leaders of the other ALTC-funded peer review projects. An important outcome of this forum was the agreement by the project leaders to collaborate and share deliverables from their respective peer review projects. As a result, the final version of the online peer review system incorporates content from the other ALTC-funded projects as shown in Appendix 16.11.

11 Links to other ALTC projects

The online peer review project contributed to the project led by Dr McKenzie, which has focused on developing systemic institutional capacity for conducting peer review in blended learning environments, by developing a comprehensive, integrated web-enabled peer review tool that can be incorporated into the framework developed by the McKenzie project team. Dr McKenzie’s project contributed to the development of the tool by extending its scope to include standards-based and qualitative criteria relating to learning and teaching in blended learning environments.

The national peer review forum referred to in the previous section of this report was hosted at the Magill Campus, University of South Australia on 12 June 2009. Delegates attending the forum represented a range of tertiary institutions including Deakin University, LaTrobe University, The University of Adelaide, The University of Melbourne, The University of Sydney, University of South Australia, University of Technology, Sydney, and University of Wollongong. The aim of the forum was to bring together the project leaders of related ALTC projects. The following academics presented at this forum and participated in roundtable discussions following the formal presentations about ways to strengthen the links between the five related ALTC-funded projects:

Professor Geoffrey Crisp (The University of Adelaide) presented on the ‘Peer Review of Teaching for Promotion Purposes’ project and, as noted in a preceding section of this report, the core principles incorporated into the online peer review system are based on the outputs from that ALT-funded project.

Dr Jo McKenzie (University of Technology, Sydney) presented on the ALTC funded peer review project ‘Embedding Peer Review of Teaching & Learning in Blended Learning Environments’. The guidelines developed through this project have also been incorporated into the online peer review system.

Dr Kerri-Lee Harris (The University of Melbourne) presented on the ALTC-funded project, ‘Developing and Embedding Programs of Peer Review of Teaching’, that led to the development of a handbook for institutions.

Ms Elizabeth Devonshire (The University of Sydney) presented on the outcomes from the ALTC-funded project that led to the development of a peer review framework for online role-play practice.

Dr Denise Wood and Dr Sheila Scutter (University of South Australia) presented on the progress (to date) of the development of the online peer
review system and proposed extension of the system to incorporate outputs from the other ALTC-funded peer review projects.

12 Outcomes

Project outputs

- an open-source, online peer review system for learning and teaching
- nine case studies on the use of the online peer review system for learning and teaching
- evaluation of the peer review process, peer review/quality assurance processes, and deployment process
- documentation for the peer review process, peer review/quality assurance processes, and deployment process
- evaluation of the online peer review system and its effectiveness and value for money
- evaluation of the suitability of the online peer review system used in this project.

Project outcomes

- web-enabled peer review process for online learning and teaching.
- procedures that promote quality online learning and teaching, and peer review data that can be used for the recognition and reward of learning and teaching
- dissemination and promotion of the online peer review system and procedures throughout the Australian higher education community
- collaborative sharing and discussion about partner institutions’ processes
- dissemination of technical knowledge regarding the process and tools for enhancing the open-source peer review tool
- enhancement and dissemination of practical knowledge and understanding of standards-based online learning material peer review
- extending the number and range of staff involved in peer review of learning and teaching
- increase in the creation of standards-based online learning materials.
- increased reviewees’ engagement with examples and literature related to online learning and teaching
- increased reviewers’ engagement with online peer review criteria.

13 Further action

Undertaking a comprehensive review of a course is a time consuming process. The online peer review system provides a system to standardise this process and tailor the review to the specific priorities identified by the academic. However, the time taken to carry out the review still remains and this needs to be recognised by academics and management.

A comprehensive bank of questions is provided. However, care should be taken in the selection of criteria, and it may be advisable to limit a review to a manageable number of items.
If the online peer review system is to be used as evidence for promotion, then it may be strategic to have a standardised section that all applicants address. This core set should be established with input from academics and management. The academic staff member could then include additional sections to highlight particular areas.

Further mapping against student evaluation and possible modification of instruments used by students will allow for greater alignment between the review by academics and comparison against the views of students.

While it was beyond the scope of this project to incorporate comprehensive support for Web 2.0 technologies, the recommendation to include such functionality to facilitate greater engagement and dialogue between reviewer and reviewee warrants further consideration. The new feature described in the evaluation section of this report goes some way to addressing this need by providing the reviewee with the opportunity to provide and maintain a log of their comments and feedback in response to a completed peer review. However, as the Lancaster University review panel noted, the incorporation of Web 2.0 tools such as blogs, discussion fora, wiki, or audio-visual tools like Skype could enrich the peer review process.
14 Conclusions and recommendations

This report documents the outcomes of a project that follows a scholarly approach to quality assurance in learning and teaching. The project involved developing an open-source, web-enabled peer review system and an associated website, user and systems documentation and case studies that will assist academic staff with the course development of their materials and provide a structured approach to peer review.

The design and development of the system has been informed by research into learning and teaching and identifies criteria relating to course development and the standards associated with them. These standards have been codified into checklists of simple statements, which can be used by staff without technical expertise. The interactive checklists are linked to a dynamic database so the results of peer reviews of teaching and course materials are recorded centrally, and the data can be retrieved by academic staff members to support their applications for academic promotion and awards. The extensible nature of the approach ensures the system is flexible and adaptable to accommodate new and emerging learning technologies to address the challenges associated with a rapidly changing online learning and teaching landscape. The interactive peer review system, which is also supported by a website, provides highly focused just-in-time information to enhance the knowledge and expertise of staff. This approach is consistent with a scholarly approach to learning and teaching because it supports staff in reflective practice and provides a structured and informed approach to peer review. Beyond this, the system provides a means where staff can have their work publicly affirmed and they can use this as evidence to support them in their applications for promotion and awards.

The formative and summative evaluation processes documented in previous sections of this report involved alpha and beta testing with project team members, external independent stakeholders and students. The trials identified areas for improvement, and this led to the incorporation of several new features into the final version of the open-source solution. One of the more significant developments arising from the findings has been the addition of a feedback function enabling a reviewee (the academic staff member whose course is being reviewed) to respond to reviewer comments and to have these comments saved as a log with the final peer review.

Several case studies have been completed demonstrating the use of the online peer review system for self-reflection, formative review, summative review and as a means for providing a scaffold for learners undertaking self and peer review in their assignments. Further research will involve trials in subsequent offerings of courses and across courses from different disciplinary fields to determine whether the instrument is suitable and adaptable enough for use in a variety of disciplinary contexts.

Case studies demonstrating the value of using a variety of sources of feedback in assessing the quality of teaching, as well as the importance of ensuring the reliability and validity of instruments used for such evaluative purposes, were also completed as part of the formal evaluation process. While further studies are required to determine the reliability and validity of the peer review system, the case studies undertaken through this project established the reliability and validity of online peer review system to a greater extent than for most other tools.
While it was beyond the scope of this project to incorporate comprehensive support for Web 2.0 technologies, the recommendation to include such functionality to facilitate greater engagement and dialogue between reviewer and reviewee warrants further consideration. The online peer review system has been designed to open-source standards, and its extensible nature means further developments to incorporate Web 2.0 functionality are possible. Similarly, while the online peer review system has been developed as a stand-alone server solution, the open-source code developed through this project and distributed via the project website can be easily adapted and packaged into a component for incorporation into existing open-source learning management systems such as Moodle.
15 References


*Ideas for effective large-group learning and teaching*, Learning & Teaching @ UNSW, University of New South Wales. Retrieved 20 February 2007, from http://learningandteaching.unsw.edu.au/content/userDocs/large_group_ideas.pdf


### 15.1 Additional sources

The following sources were also consulted in addition to the references cited in the report:


Learning & Teaching Centre website, University of Glasgow, *Good practice resources, First year experience*. Retrieved 20 February 2007, from [http://www.gla.ac.uk/services/learningteaching/goodpracticeresources/firs tyearexperience/#d.en.115859](http://www.gla.ac.uk/services/learningteaching/goodpracticeresources/firstyearexperience/#d.en.115859)


16 Appendices

1. Peer reviewed publications
2. Additional presentations, workshops and fora
3. Online peer review instrument questionnaire
4. Recruitment materials
5. Permission for participation of academic staff in trials
6. Custom course evaluation questions for evaluation of student experience using the peer review system for self and peer review of assignments
7. Case study template
8. Case studies (additional case studies available via project website)
9. Screen shots of the system
10. National peer review forum program
11. Banks and criteria incorporated into the peer review system
12. Issues reported via the online bug tracking system
13. User guide (separate document)
14. Systems documentation (separate document)
16.1 Peer reviewed publications

Peer reviewed journal publications


Peer reviewed conference papers


16.2 Additional presentations, workshops and fora


Peer Review forum hosted for Australian Learning and Teaching Council Peer Review project leaders, 12 June 2009, UniSA.

Peer Review workshop training session hosted at the ATN Assessment Conference, Adelaide, 2008.
Poster session conducted at the QUT First-year Experience Curriculum Design Symposium, Enhancing the first-year student learning experience through quality improvement of courses, 5 & 6 February 2009.

Poster session conducted at the University of Melbourne Peer Review Forum. 20 November 2008.
16.3 Online peer review instrument questionnaire

Thank you for taking part in the trial of the Online Peer Review Instrument. The aim of this anonymous questionnaire is to find out how and why you used the instrument, in what ways it was useful to you, any challenges you encountered as well as any improvements you would recommend.

Data collected through this questionnaire will be used in an aggregated form in external publications and presentations. Individual responses will remain confidential and no individuals or Institutions will be identified.

1. Please indicate how you used the Online Peer Review Instrument (you can choose more than one response)
   - To create a peer review form that others would be asked to complete.
   - To provide feedback into someone else's existing review form.
   - For 'just in time' academic staff development by using the available standards, information and examples related to the teaching category I was interested in.
   - To guide me in developing and practising online learning and teaching.
   - To guide me in the development or redevelopment of my courses through reflective processes.
   - To contribute to the peer review criteria databanks.
   - To raise my awareness and practice of the scholarship of online learning and teaching.
   - To collect evidence for promotion purposes.

The following questions are relevant if you created a peer review form using the Online Peer Review Instrument. If you did not create a peer review form, please go to question 16.

2. Did you use the Online Peer Review Instrument to adapt an existing peer review or did you design a peer review from scratch? (You can select more than one response).
   - I converted an existing paper based peer review form to online format
   - I adapted or expanded an existing peer review form
   - I created a peer review form from scratch
3. Please provide any comments you would like to make here:

(Enter text into this box, maximum 2000 characters)

4. When creating your peer review form, did you use existing banks of criteria in the Online Peer Review Instrument or did you create your own banks of criteria?

☐ I used existing banks of criteria
☐ I used a mix of existing and newly created banks
☐ I created my own banks of criteria

5. Please provide any comments you would like to make here:

(Enter text into this box, maximum 2000 characters)

6. The peer review form I created used the following response types (you can select more than one response).

☐ Boolean (allows ‘Yes’ AND ‘No’ responses)
☐ Boolean Neutral (allows ‘Yes’, ‘No’ and ‘Neutral’ responses)
☐ Combo (allows you to define a multiple responses drop down combo box)
☐ Freeform Text (no scale applied, users provide a written a response. This can also be achieved by using the ‘Comments’ function)
☐ Frequency Scale A (allows ‘Never’, ‘Sometimes’ and ‘Always’ responses)
☐ Frequency Scale B (allows ‘Never’, ‘Sometimes’ and ‘Frequently’ responses)
☐ Multiple Choice (allows users to select a single response from a list of criteria)
☐ Multiple Option (allows users to select multiple responses from a list of criteria)
☐ Phrase Completion (allows users to define a custom scale response, from 1 to 10, naming the minimum to maximum)
☐ Yes / No (allows ‘Yes’ OR ‘No’ responses)

7. Please provide any comments you would like to make here:
The following questions explore the usability of the Online Peer Review Instrument.

8. In terms of work hours, how long have you been using the Online Peer Review Instrument?
- Less than 2 hours
- Half a day (about 4 hours)
- One day (about 8 hours)
- Two days
- One week
- More than one week

9. Please provide any comments you would like to make here:

10. How long did it take before you felt confident using the Online Peer Review Instrument?
- Less than 2 hours
- Half a day (about 4 hours)
- One day (about 8 hours)
- Two days
- One week
- More than one week
- I am still not confident

11. Please provide any comments you would like to make here:

The following statements explore how useful you found the Online Peer Review Instrument. Please indicate your level of agreement to the following statements.

12. The Online Peer Review Instrument was useful for creating a peer review form that others would be asked to complete.
- Strongly Agree
13. The Online Peer Review Instrument was useful for providing feedback into someone else’s existing review form.

14. The Online Peer Review Instrument was useful for ‘just in time’ academic staff development. (e.g. use of available criteria, information and examples related to a teaching category I was interested in etc.)

15. The Online Peer Review Instrument was useful for guiding me in developing and practising online learning and teaching.

16. The Online Peer Review Instrument was useful for guiding me in the development or redevelopment of my courses through reflective processes.

17. The Online Peer Review Instrument was useful for contributing to the peer review criteria databanks.
18. The Online Peer Review Instrument was useful for raising my awareness and practice of the scholarship of online learning and teaching.

19. The Online Peer Review Instrument was useful for collecting evidence for promotional purposes.

20. Please provide any comments you would like to make here:

(Enter text into this box, maximum 2000 characters)

21. For those who used the Online Peer Review Instrument to review the work of others – the Online Peer Review Instrument enabled me to give my colleague high quality feedback.

22. Please provide any comments you would like to make here:
23. For those who used the Online Peer Review Instrument to establish a peer review form for others to complete— the Online Peer Review Instrument enabled me to receive high quality feedback.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

24. Please provide any comments you would like to make here:

(Enter text into this box, maximum 2000 characters)

25. I can see a lot of potential in the peer review system but feel that I would need to invest more time using it before I could benefit from it.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

26. Please provide any comments you would like to make here:

(Enter text into this box, maximum 2000 characters)

27. Now that I have experienced the peer review system I see it as a viable option to paper-based peer review.

- Strongly Agree
- Agree
28. Please provide any comments you would like to make here:

(Enter text into this box, maximum 2000 characters)

29. In future I plan to use the peer review system (please select one response):

- Always - as a replacement to paper-based peer review
- Sometimes (in conjunction with paper-based peer review
- Never again

30. Please provide any comments you would like to make here:

(Enter text into this box, maximum 2000 characters)

The following questions explore any challenges you may have experienced using the Online Peer Review Instrument.

31. The Online Peer Review Instrument was easy to use (I could find the buttons I needed quickly and the interface was logical).

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

32. Please provide any comments you would like to make here:

(Enter text into this box, maximum 2000 characters)
33. The ‘Help’ documentation was useful:
- Always
- Sometimes
- Never
- I didn’t use ‘Help’

34. Please provide any comments you would like to make here:

(Enter text into this box, maximum 2000 characters)

35. What aspects of the Online Peer Review Instrument did you find challenging to use? (e.g. button meanings were unclear, the menu structure was difficult to understand, it was unclear how to accomplish a task, ‘Help’ functions were not useful etc.).

(Enter text into this box, maximum 2000 characters)

The following questions explore suggestions for improving the Online Peer Review Instrument.

36. What improvements should be made to the Online Peer Review Instrument? What features are missing? (e.g. self assessment functionality, guided tours, step-by-step review set-up wizard etc.)

(Enter text into this box, maximum 2000 characters)

37. Do you have any other comments or suggestions for the Online Peer Review Instrument developers?

(Enter text into this box, maximum 2000 characters)

Thank you for your time—it is greatly appreciated. If you have any questions contact Denise Wood ph 83024642, email: denise.wood@unisa.edu.au
16.4 Recruitment materials

Email to participants

Dear <participant>,

Thank you for your interest in participating in the trials and evaluation of the online peer review system. Your feedback will help ensure that the final release, scheduled for early 2010 includes the functionality you require and that it is free from defects. Your feedback may also be used to report research findings to the funding body, the Australian Learning and Teaching Council (ALTC), and to the wider learning and teaching community.

Comments and suggestions regarding the effectiveness of the peer review system and improvements can be logged via the voluntary, anonymous, online questionnaire which can be accessed at http://www.unisanet.unisa.edu.au/tellus2/. Data collected through this survey will be used to improve the quality of peer review and could also be used in external publications and presentations. Individual responses will remain confidential and no individuals will be identified.

Support for this new system is available from within the online peer review system itself (via the Help Menu) and via a general information website www.unisanet.unisa.edu.au/peerreview/ or you can call Denise Wood on (08) 83024642, or email denise.wood@unisa.edu.au

Thank you again for your help with evaluating this new peer review system.

Dr Denise Wood
Teaching and Learning Portfolio Leader
School of Communication, International Studies and Languages
University of South Australia

Information sheet

This information will be provided on a public access website that is referenced in the Recruitment Material email.
Peer Review of Online Learning and Teaching Project Wiki.  
http://peerreview.unisa.edu.au/

The peer review system allows academic staff to have their own courses and curriculum critiqued through user evaluation methods. The instrument can be used for self-evaluation, reflection, professional development or peer review. Authors of the review are easily able to create custom reviews that are structured with a wide range of commonly used academic criteria, as well as creating and specifying their own criteria. Peers can then be invited to participate in a review by addressing these criteria with their own responses and comments, through the use of easy web-based forms. When the data is collected, it can be exported onto a spreadsheet for ease of analysis and presentation. This data can then be used to evaluate the course and identify areas for possible improvement.

**Contributing feedback via the peer review system**
A link to the instrument is sent to the invited peer reviewer via email from their colleague. The peer reviewer needs to create an account in order to log on to the system. A list of reviews the peer reviewer is permitted to contribute to appears on the screen. If no reviews are visible, or the specific review the peer reviewer has been invited to complete does not appear, the author or co-author of the review (usually the person who sent the email) needs to invite the Peer Reviewer to using the Invite Users function.

**Creating, configuring and managing a peer review.**
To create a review, users will require Author privileges. Only Author, Admin and Super Admin accounts have this permission. If individuals do not already have an author account, it can be requested as detailed in the Getting Started section. Authors have access to the ‘Review Management’ section of the peer review system.

Author and administrator users have access to create new review – to create a new peer review; manage my reviews – to access a list of reviews they have created or have been assigned by other authors and which also allows them to swap reviews and modify content; Use Selected Review -, this takes the user to the management page of a selected review. No one is able to create a peer review without Author privileges.

Administrator users have access to create new review for user – which allows an administrator to create a review and assign it to another user’s account; supervise reviews - Allows an administrator to modify and update other user review formats.

**Content creation, criteria and question banks**
Question Banks are used to categorize criteria into sets and subsets, so that criteria can be organised under different headings. For example, if you had a review that judged a course on two points, one for the structure of the course and one for the interaction of the teacher, you could split your criteria into separate banks in order to make navigation easier for you and people using your reviews.

Also available is a set of question banks that contain common course review criteria that have been researched and structured by a team of professional academics from Universities all over the globe for the purpose of this project. There are a large variety of criteria available, from categories such as digital
media to accessibility concerns. The availability of these criteria is a time saving mechanism in that new criteria need do not need to be constructed. If academics have added new criteria to the system and made these publicly available, other academic users will be able to utilize the added criteria. A full list of the criteria can be viewed in the public question banks, or alternatively by viewing the criteria outline page of the peer review wiki.
Glossary of commonly used terms
- Review: an online evaluation of a course, created through web forms and buttons.
- Question Bank: a structured set of criteria, usually specific to a certain category.
- Criteria/Criterion: individual criteria that a course material is to be judged on.
- User/Author/Administrators: User categories of the system. (see Categories of users).
- Publish/Unpublish: publishing a review allows it to be accessible by all your assigned users for filling out the questions and surveys.
- Exporting Results: exporting results refers to exporting the end results of a review into an Excel spreadsheet.
- Response type/Scale: the type of response a user will make to a question in a peer review.

Explanation of response types (scale type)
There are many response types available when creating criteria. The preset response types function include the following options:
- Boolean: Allows possible answers ‘Yes’ and ‘No’.
- Boolean Neutral: Allows answers ‘Yes’, ‘No’ and ‘Neutral’.
- Combo: Allows you to define a multiple answer drop down combo box.
- Freeform Text: There is no scale, only offering the user to write a response. This also can be achieved with other scales by using the ‘Comments’ function.
- Frequency Scale B: Allows answers ‘Never’, ‘Sometimes’ and ‘Frequently’.
- Likert Scale: A single selection scale of Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree.
- Multiple Choice: Allows the user to select a single option from a list of criteria.
- Multiple Option: Allows the user to select multiple options from a list of criteria.
- Phrase Completion: Allows the user to define a custom scale, from 1 to 10, naming the minimum to maximum.
- Yes/No: User can select ‘YES’ or ‘NO’ as possible answers.

The author can export the entire review or the responses within an individual bank to an Excel spreadsheet. Once the review data is exported the author and any other authorised users can manipulate, analyse and graph the results to suit their specific requirements.

The ability to create custom banks of criteria enables authors to focus on particular areas of concern within a course review. Authors can also create their own banks and criteria, which are then flagged as their own, user-created banks. the author can choose to share a bank with other authors, or recommend that their bank be placed in the default, administrator-created bank group. This collaboration feature of banks and criteria provides the instrument with a flexible means to extend and refine criteria in the system.

The peer review system uses a flexible and multi-tiered security system that provides access to specific modules based on the logged in user's access level.
In summary, the interactive peer view system, and the supporting website, provides highly focused, just-in-time information to enhance the teaching and learning knowledge and expertise of academic staff. It promotes a scholarly approach to learning and teaching because it sustains reflective practice, and provides a structured and informed approach to peer review. Further, the peer review system provides a means by which staff can have their work publicly affirmed and use this as evidence to support their applications for promotion and awards.
16.5 Permission for participation of academic staff in trials

Email to Deputy Vice-Chancellors and Pro Vice-Chancellors

Dear Professor <Deputy Vice-Chancellor>

We wish to seek approval to access <University> staff who have expressed interest in providing feedback on the ALTC funded Peer Review of Online Learning and Teaching system. The system is currently in the final stages of development by the University of South Australia with funding provided by the Australian Learning and Teaching Council (ALTC). It allows academic staff to have their courses and learning and teaching approaches peer reviewed using an online system. The peer review system has been developed collaboratively by staff at UniSA and partner institutions across Australia and in the UK which includes Queensland University of Technology, RMIT University, Edith Cowan University, Monash University, Griffith University, University of Tasmania, University of Southern Queensland and Lancaster University (UK).

The current stage of research is a requirement of the funding from ALTC. The project requires access to staff which will occur via anonymous online surveys (TellUS) delivered to staff by email. The collection of this data will fulfil the aims of the grant. Please find information about the project below.

Name of the project: Peer Review of Online Learning and Teaching

Who is conducting the research?
- Dr. Denise Wood (School of Communication, International Studies and Languages) phone (08) 830 24642, email Denise.Wood@unisa.edu.au
- Dr Sheila Scutter (School of Health Sciences) phone (08) 830 22082, email Sheila.Scutter@unisa.edu.au
- Ms Dale Wache (Learning and Teaching Unit) phone (08) 8302 4454, email dale.wache@unisa.edu.au

What is the research project about?
This project seeks to evaluate:
- the effectiveness of the newly developed peer review system in facilitating just-in-time academic staff development by providing the accepted standards
- the information provided on the supporting website about how to achieve accepted standards
- the examples of accepted standards included within the online peer review system
- the peer review system’s user interface which ensures that changes can be implemented prior to the first major release of the system
- whether the features employed in the peer review system enables academics to adequately record their achievements in online learning and teaching
- whether academics have/will use the recorded information in support of academic career progression.
The following research questions are posed broadly:

1. The extent of participants’ satisfaction with the peer review system

2. Whether the peer review system was used for:
   - staff development when designing courses
   - contributing to the peer review criteria databanks
   - creating a peer review checklist
   - recording data for a peer review

3. How useful the peer review system is for:
   - staff development when designing courses
   - contributing to the peer review criteria databanks
   - creating a peer review checklist
   - recording data for a peer review

4. How the peer review system could be improved in the short term before release.

Research methodology

This project will use both quantitative and qualitative methods. The quantitative approach will provide an overall picture of participants’ satisfaction with the peer review system while the qualitative approach will collect data about participants’ experience of using the peer review system.

The research is designed to survey a broad spectrum of academics. A diverse range of disciplines will be involved to ensure that it is possible to draw conclusions about the efficacy of the peer review system across a range of disciplines.

The research method is an online questionnaire (using the TellUS website) with Likert scale responses and some free text entry responses. The questionnaire is designed to obtain answers to specific questions, and it provides ‘open-ended’ response items to enable more general comments.

Research participants

The University’s teaching staff who have indicated that they would like to participate in trials of the peer review system based on interest generated by the project website and various conference presentations will be invited to participate. Some staff have registered the specific nature of their interest via the project website.

Participation in the project will be voluntary. Potential participants will be under no pressure to volunteer. An Information Sheet will ensure that potential participants understand that their participation is voluntary; they can withdraw from the research process at any time and are under no obligation to assist with the study.
How will participants be recruited?
Those who have expressed interest in the project via the project website and have indicated their wish to participate via a voluntary, anonymous, online questionnaire.

How would participants be involved?
Teaching staff will be invited to respond to an online TellUS survey about their experience using the peer review system. The staff survey will take approximately 10 minutes to complete. The link to the respective surveys will be provided via email and will also be made available on the project's website at www.unisanet.unisa.edu.au/peerreview/

How will staff and student feedback be used?
Staff feedback will assist the project team to improve the peer review system in the short term before release.

A summary of the research findings will be published in a journal article and/or in a conference proceeding. All publications will be made available online on the project's website at www.unisanet.unisa.edu.au/peerreview/

How will participant confidentiality be assured?
In compliance with the ethics requirements of UniSA HREC, all data collected will be held for five years in a locked cupboard in a secure office in the School of Communication, International Studies and Languages at the University of South Australia. Access will be limited to the research team. Responses will not be linked with any identifying data in the report, any journal articles or conference presentations.

How can participants find out more information?
If participants would like more information about the survey and the research project, or if they have any further concerns, they may contact Dr. Denise Wood on (08) 830 24642.

The Chairperson of the University's Human Research Ethics Committee (HREC) has granted ethics approval in accordance with the requirements of the National Statement on Ethical Conduct in Human Research. Should participants wish to discuss the project with someone not directly involved, in particular in relation to matters concerning policies, information about the conduct of the project, or their rights as a participant, they can contact the UniSA Ethics Officer, Ms Vicki Allen on 8302 3118; fax 8302 3921; email: vicki.allen@unisa.edu.au

Deliverables and outcomes
This project will have immediate and long term impact for the University. Proposed deliverables and outcomes include:

Project outputs
- An open-source, web-enabled peer review tool for online learning and teaching.
- An open-source peer review system and workflow process model.
- Evaluation of the peer review system; its effectiveness and value for money.
- Evaluation of the suitability of the open-source tool used in this project.
If you are in agreement for staff from your institution who have already expressed their interest in participating in the trials we would be most grateful if you could advise by return email at your earliest convenience.

Yours sincerely,

Denise

Dr Denise Wood
Senior Lecturer (Media Arts), Teaching and Learning Portfolio Leader
School of Communication, International Studies and Languages
Assoc Editor Higher Education Research and Development Journal

University of South Australia
16.6 Custom course evaluation questions for evaluation of student experience using the peer review system for self and peer review of assignments

INFT 1014 - Introduction to Digital Media (100744) - 2009 / SP5
Magill Campus (UNISA-MAG) - 23297 (Practical)

This evaluation form may consist of two types of questions. The first type asks you to respond to a series of statements by indicating your agreement or disagreement with each of the statements. **It is important that you respond to each item.**

The second type is a straightforward question to which you respond with text. You do not have to complete the text response items.

**Key to the characters**

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<td>2. The ways in which I was taught provided me with opportunities to pursue my own learning.</td>
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<td>3. The course enabled me to develop and/or strengthen a number of the qualities of a University of South Australia graduate.</td>
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<td>4. I felt there was a genuine interest in my learning needs and progress.</td>
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<td>5. The course developed my understanding of concepts and principles.</td>
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20. I was able to improve on the quality of my assignments as a result of participating in the self/peer review.

21. How useful did you find the online self/peer review site in helping you to reflect on the criteria and on the quality of your work and the work of your peers?

22. Did you encounter any problems using the self/peer review tool? If yes what were the issues? Any suggestions for improvement?

23. How did the creative idea generation approach delivered early in the course help you in coming up with your research topic and applying that to your chosen digital media production?
16.7 Case study template

Peer review system case study

Purpose of the peer review

Description of how the system was used

Benefits from the peer review

Issues identified

Suggestions for future use

Conclusion
Purpose of the peer review
This peer review was undertaken to provide the course coordinator with formative feedback about the effectiveness of the course in:

- engaging first-year media arts students in enquiry learning within the undergraduate curriculum
- facilitating the development of undergraduate students’ understandings of the role of research and their capacity to undertake research within their disciplines.

Description of how the system was used
The course under review is a first-year course in which students undertake practice-led research based on a social issue of their choice. The objectives of the course are for students to develop both an understanding of and applied skill in the use of a variety of media. This is completed through a practice-led research approach.

Previous attempts at introducing research into this course had mixed results. As noted by Wood (2009a), while some students responded positively to the opportunity to undertake a project of their own choice, many were clearly overwhelmed by the task despite several support mechanisms in place. Most students had not previously experienced this kind of freedom and were expecting to be given a set topic with less scope for creative thought. Students who made active use of the discussion forum coped much better through the reflective process and were able to revise and more clearly define their topics over the weeks leading up to submission of their first assignment.

An unanticipated finding was the level of resistance to this enquiry learning approach. The resistance was exhibited by students enrolled in the film and television major within the program in the second offering of the course. Even though these students were encouraged to choose a research topic focusing on film or television, many of the students expressed concern to their tutors that the course had very little to do with film and television. It was clear from these students’ comments and feedback in the course evaluation, that some students had enrolled in the program with the expectation that all courses would be practically oriented with only a minimal component of theory.

This finding is consistent with Quin’s (2006) observation that media studies programs offered by universities have tended to attract students who regard training in media production as an ‘entrée to the media industries’. Quin (2006) goes on to say that attempts to integrate such training with education in media theory and criticism have produced ‘apparent contradictions and misalignments that are obvious to teachers and students alike’ (p. 90). Similarly, Thornham and O’Sullivan (2004) highlighted these issues in the UK context, citing debates about the pedagogy of media studies raised by Durant (1991) who questioned whether practice can be regarded as ‘learning a theory, performing critical
discourse, analysis, researching an industry or ‘making films or tapes?’ (Thornham & O'Sullivan 2004, p. 720).

The course has undergone several revisions in an effort to provide a better balance between the theoretical principles underpinning practice-led research, and the applied tasks involved in developing an artefact that is both informed by and through students’ research. While the current offering appears to have been more successful in engaging and motivating students than previous attempts, the coordinator was interested in determining whether independent reviewers agreed that the balance between theory and application was appropriate.

One of the reviewers who completed the peer review is a tutor and former student. Her feedback was important since she was in a position to comment on the impact the changes had made compared to previous offerings. A second reviewer from the Allied Health Sciences field was invited to complete the peer review. It was felt that someone from a sciences background would provide a balanced perspective regarding the effectiveness of the strategies employed to embed research within the curriculum.

Benefits from the peer review
Both reviewers were positive in their reviews of the course. One reviewer made particular comment on the effectiveness of the activities in motivating students and engaging them through the practice-led research approach in their chosen area of focus for assignments. This formative feedback has been reassuring to the coordinator who has been modifying the course progressively to address the challenges in engaging media arts students in research.

Issues identified
One reviewer noted that while there is extensive feedback from the lecturer, some students appear to be still missing the experimental nature of practice-led research as evidenced by the number of students asking for specific requirements for assignments. For example, ‘should assignment one be 1500 words or 1000 words’, which this reviewer noted is a recurring question.

Suggestions for future use
It will be useful to conduct another formative review before the completion of the semester. This review will include additional peer reviewers from other disciplinary backgrounds as well as a summative review at the completion of the course. It might also be useful for students to complete the summative review for comparison in addition to the prescribed course evaluation and student evaluation of teaching, which are carried out at the conclusion of every offering of courses.

Conclusion
The online peer review system has been useful in identifying areas for improvement in this first-year course. The review also provides reassurance for the coordinator that the revisions implemented thus far have been effective in achieving the stated objectives.
Case study: summative review of a third-year service learning course

Purpose of the peer review
This peer review had two main aims:
- to establish the inter-rater reliability of the peer review system when applied to a service learning course
- to review the quality of the course from both an academic and industry perspective.

Description of how the system was used
The course coordinator developed a focused peer review template using the online peer review system. The focus of the peer review is on the quality of the course content as well as providing a benchmark against industry standards. Several reviewers were invited to complete the peer review. This included academic staff from UniSA and RMIT as well as experts from the industry.

Benefits from the peer review
The peer review is currently still underway. Thus far, three academics have completed the review; however, we are still waiting for the representative from the industry. Initial attempts at creating the peer review highlighted the need for an academic who is not experienced in setting up a peer review. This academic would receive formative feedback prior to finalising the peer review template. The first peer review template created by the academic staff member was too long and lacked sufficient clarity and focus.

Moreover, the reviewers did not have access to all components of the course (for example the discussion forum postings and student blogs). The formative feedback from reviewers played an important role in guiding this academic staff member in the construction of a customised peer review. This peer review would provide her with meaningful feedback, as well as more accurate results in the final summative review.

Issues identified
While the inter-rater reliability has not yet been tested since this peer review is still in process, the case study highlights the need for academic staff to engage in a formative peer review process in preparation for summative review.

Suggestions for future use
As noted above, the next stage in this process will be to conduct inter-rater reliability tests. This will involve comparing the feedback of academic staff members from two separate institutions.

Conclusion
This case study aims to demonstrate the potential use of the online peer review system for determining inter-rater reliability in formative and summative review of courses. These courses are undertaken by academic staff as well as representatives from the industry. An unexpected finding from this case study has been the observation that the formative peer review process provides valuable feedback. This feedback can help an academic staff member prepare
for summative review. Such formative feedback can also guide the academic in the development of the required skills. These skills give the ability to construct a peer review template that is more focused and thus more likely to yield more accurate feedback from a summative review.
Case study: formative review of a first-year health science foundation course

Purpose of the peer review
This peer review was undertaken to give formative feedback. This feedback would be received after five weeks of a new foundation course undertaken by students in Health Science. This course addresses professional and academic issues that are common to students irrespective of which health science program they are enrolled.

Description of how the system was used
A review with a focus on the appropriateness of the course for first-year students was developed. As this was the first time a foundation course had been developed for students across the whole school, it was important to provide formative input as the course was rolled out.

Benefits from the peer review
Based on the outcomes of the review, future modules of the course could be amended.

Issues identified
Suggestions for improving the course consisted of a clearer explanation of the relationship of each module to the overall purpose of the course and a more evenly distributed workload introduced across the course. Assumptions about digital literacy of students should be checked and addressed if necessary.

Suggestions for future use
It is suggested the course be reviewed again in a formative and summative manner including a review of student feedback. Suggestions for modification for next year will then be made.

Conclusion
The online peer review system has been useful in identifying areas for improvement in this first-year course.
Case study: inter-rater reliability

Purpose of the peer review
- To establish the inter-rater reliability of the peer review instrument.

Description of how the system was used
The course coordinator developed a review tool using the online peer review system. The focus of the review was on human interaction, as this course is run totally online and we wished to determine whether students received adequate and timely communication with the lecturer. The review was sent to two reviewers, who completed the review independently. The lecturer completed the review as a professional development and quality review exercise. The reviews were then compared.

The course selected for review was Research Proposal, a fully online course offered to postgraduate Masters by coursework and Honours students. The structure of the course comprises a series of modules provided on a weekly basis, with a discussion board facilitated by the instructor. The aim of the course was for students to develop a clear understanding of the requirements, structure and function of research proposals through the development of a specific student directed research proposal. A total of 15 items were included across five criteria, as shown in the Table 12 below. Either Likert (from strongly agree to strongly disagree) or Frequency scales (always, sometimes, never) were used for each item.

Benefits from the peer review
The reviewers were from two different institutions in different states and were able to complete the review independently. The results could then be compared to the self-assessment of the lecturer running the course. The results of the review could be downloaded into an Excel file and viewed.

Issues identified
The peer review responses from the two external reviewers and the instructor were collated as seen in Table 12 below. Overall, there was agreement between the two external reviewers and the instructor on all major criteria with the exception of Clarity of expectations and Learning activities.
### Table 12: online peer review of *Research Proposal* (A: Agree, SA: Strongly Agree, Al: Always, N: Never, S: Sometimes)

<table>
<thead>
<tr>
<th>Clarity of expectations</th>
<th>The course purpose was clearly stated</th>
<th>Learning modules include an overview of the content to be covered and the processes by which it will be achieved</th>
<th>Objectives or learning outcomes are clearly stated and achievable for each section or module</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reviewers ratings</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
</tr>
<tr>
<td></td>
<td>A SA A</td>
<td>N Al Al</td>
<td>N Al Al</td>
</tr>
<tr>
<td>Learning activities</td>
<td>Learning activities are appropriate for the targeted learning</td>
<td>Learning activities promote self-assessment</td>
<td>Learning activities reflect the increased complexity of the ideas</td>
</tr>
<tr>
<td>Reviewers ratings</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
</tr>
<tr>
<td></td>
<td>A A A</td>
<td>S A A</td>
<td>A SA A</td>
</tr>
<tr>
<td>Building knowledge</td>
<td>The materials include appropriate examples or case studies</td>
<td>The course provides ways for students to follow up ideas and scholarship</td>
<td>The materials use summaries to consolidate what has been learnt</td>
</tr>
<tr>
<td>Reviewers ratings</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
</tr>
<tr>
<td></td>
<td>A SA A</td>
<td>A A A</td>
<td>A SA A</td>
</tr>
<tr>
<td>Human interaction</td>
<td>Name of lecturer and contact details clear and correct</td>
<td>Online community activities provided</td>
<td>Teacher feedback is timely and appropriate</td>
</tr>
<tr>
<td>Reviewers ratings</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
</tr>
<tr>
<td></td>
<td>A SA A</td>
<td>A A A</td>
<td>A SA A</td>
</tr>
<tr>
<td>Assessment</td>
<td>Assessment criteria are provided for each summative assessment task</td>
<td>Opportunities for formative assessment are provided</td>
<td>Models or examples of summative assessment items are provided</td>
</tr>
<tr>
<td>Reviewers ratings</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
<td>Inst 1 Rev 1 Rev 2</td>
</tr>
<tr>
<td></td>
<td>Al Al Al</td>
<td>S S S</td>
<td>Al Al Al</td>
</tr>
</tbody>
</table>

There was agreement between the two external reviewers and the instructor on nearly all criteria. In two of the *Clarity of expectations* items there was a maximum of a one point score difference between the reviewers (for example agree and strongly agree). This was the only area in the review where the reviewers disagreed. The source of this disagreement was investigated further by discussion between the reviewers. Where the instructor had scored the item ‘Learning modules include an overview of the content to be covered and the processes by which it will be achieved’ and ‘Objectives or learning outcomes are clearly stated and achievable for each section or module’ as ‘never’. 
Reviewer 2 had scored these as ‘always’ and commented ‘Module well designed’. ‘Students were constantly reminded where which stage they were: i.e. at as they progressed through each module’. The external reviewer commented that ‘the course guide and the clearly highlighted learning activities provided clarity and clear learning outcomes’. Further in response; ‘Objectives or learning outcomes are clearly stated and achievable for each section or module’. The level of disagreement in this item was explained by Reviewer 1: ‘the course guide and the clearly highlighted learning activities provided clarity and clear learning outcomes’.

Another area of disagreement between the instructor and the external reviewers was in the category of Learning activities. While the instructor had scored ‘Learning activities promote self-assessment’ as ‘neutral’, both the external reviewers ‘agreed’. This difference was explained by Reviewer 1: the adoption of various learning strategies reading, self-reflection, in particular the collaborative discussions online, had the effect of promoting students to reflect on their own learning and assessing not only their individual work but that of their peers. The act of (deep) reflection should result in students assessing their work, and consequently evaluating how their own work compares to that of their peers. This is especially so in the way the discussion forum has been structured in this course to support student learning.

The reviewers had quite different backgrounds, one was from the health sciences and the other came from a humanities discipline. The reviewers have different levels of experience in curriculum evaluation. Despite this, there was a high agreement between their responses. One of the reviewers has a particular interest in web accessibility. This lead to a comment that one diagram should have text to explain the content to assist students who may have a visual impairment. This was reflected in a difference ‘agree’ vs. ‘strongly agree’ for the item: ‘The materials include appropriate examples or case studies’.

Suggestions for future use
The findings of this case study indicate that there is a degree of reliability in the responses to the online peer review system. This suggests the format of the questions is specific enough to allow the reviewer to clearly identify what is being asked.

Conclusion
More studies are required to determine reliability of this peer review system, but these have been established to a greater extent than for most other tools. The course Research Proposal received positive reviews from both students and reviewers.
Case study: comparison of student evaluations and peer review to determine validity

Purpose of the peer review
The primary aim of the peer review was to compare peer review instrument findings with results of student evaluations of the course. This would thus determine some comparative validation of the instrument.

Description of how the system was used
The course coordinator developed a review tool using the online peer review system. The focus of the review was on human interaction as this course is run totally online. We wished to determine whether students received adequate and timely communication with the lecturer.

A fully online course offered to postgraduate Masters by coursework and Honours students was reviewed. The structure of the course comprises a series of modules provided on a weekly basis with a discussion board facilitated by the instructor. The aim of the course was for students to develop a clear understanding of the requirements, structure and function of research proposals through the development of a specific student directed research proposal. A total of 15 items were included across five criteria, as shown in the Table 13 below. Either Likert (from strongly agree to strongly disagree) or Frequency scales (always, sometimes, never) were used for each item.

The students were asked to complete the standard Student Evaluation of Teaching (SET) instrument used by the university. This consists of a number of questions related to the student satisfaction with the instructor for the program. Students also completed the Course Evaluation Instrument for the course.

Benefits from the peer review
The review was structured to compare the evaluation of the course by an external academic with student responses to the course evaluation and teacher evaluation questionnaires.
## Issues identified

### Table 13: items included in the online peer review of the Research Proposal

<table>
<thead>
<tr>
<th>Clarity of expectations</th>
<th>The course purpose was clearly stated</th>
<th>Learning modules include an overview of the content to be covered and the processes by which it will be achieved</th>
<th>Objectives or learning outcomes are clearly stated and achievable for each section or module</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reviewers ratings</td>
<td>Always</td>
<td>Always</td>
<td>Always</td>
</tr>
<tr>
<td>Learning activities</td>
<td>Learning activities are appropriate for the targeted learning</td>
<td>Learning activities promote self-assessment</td>
<td>Learning activities reflect the increased complexity of the ideas</td>
</tr>
<tr>
<td>Reviewers ratings</td>
<td>Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Building knowledge</td>
<td>The materials include appropriate examples or case studies</td>
<td>The course provides ways for students to follow up ideas and scholarship</td>
<td>The materials use summaries to consolidate what has been learnt</td>
</tr>
<tr>
<td>Reviewers ratings</td>
<td>Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Human interaction</td>
<td>Name of lecturer and contact details clear and correct</td>
<td>Online community activities provided</td>
<td>Teacher feedback is timely and appropriate</td>
</tr>
<tr>
<td>Reviewers ratings</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>Assessment</td>
<td>Assessment criteria are provided for each summative assessment task</td>
<td>Opportunities for formative assessment are provided</td>
<td>Models or examples of summative assessment items are provided</td>
</tr>
<tr>
<td>Reviewers ratings</td>
<td>Agree</td>
<td>Strongly Agree</td>
<td>Always</td>
</tr>
</tbody>
</table>

Responses to the Course Evaluation Instrument and the Student Evaluation of Teaching were generally very positive as shown in Table 14.

It was possible to map some items in the CEI and SET questions against the items in the online peer review system. This allows comparison between student perceptions of the course and the instructor with the reviewer. Instructor responses to items are included in the online peer review system. This gives an element of comparative validity to the findings of the online peer review system. For example, the *Clarity of expectations* items in the OPRI
related closely to question one of the CEI and SET. The students’ responses indicated that the Course and Instructor were both clear about the Clarity of expectations. This was one area where the instructor and the reviewers differed in their scoring of the course materials.

Item five in the CEI and the SET addressed the course and the instructor’s input into developing concepts and principles. Students rated both the course and the instructor highly in this area, with scores for the instructor at a higher level than for the course. This item relates to all three items in the building knowledge bank, all of which scored highly by the reviewer.

Item seven in both the CEI and the SET relate to the provision of feedback to students. This issue was addressed in the Human Interaction Bank as ‘Teacher feedback is timely and appropriate’. The student rating in the SET was more positive than in the CEI, although the items were very similar. Similarly, the instructor and the reviewers scored this item highly in the online peer review system.

The flexibility of the online peer review system enables the instructor to include and therefore evaluate items that were not available in the standard CEI and SET tools. For instance, under the assessment bank, the inclusion of both formative and summative assessment items enabled the instructor in this instance to seek feedback from an external reviewer. Thus, the ability of the online peer review system to include question bank(s) to cater to different course context is critical in ensuring widespread adoption.

Table 14: Results of the Course Evaluation Instrument and the Student Evaluation of Teaching

<table>
<thead>
<tr>
<th>Course Evaluation Instrument (CEI)</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Student Evaluation of Teaching (SET)</th>
<th>Strongly Agree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have a clear idea of what is expected of me in this course.</td>
<td>0%</td>
<td>0%</td>
<td>1. The staff member made the aims and objectives of the course clear from the outset.</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2. The ways in which I was taught provided me with opportunities to pursue my own learning.</td>
<td>0%</td>
<td>0%</td>
<td>2. The staff member made the subject matter interesting.</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>3. The course enabled me to develop a number of the qualities of a University of South Australia graduate.</td>
<td>0%</td>
<td>0%</td>
<td>3. The staff member motivated me to do my best work.</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>4. I felt there was a genuine interest in my learning needs and progress.</td>
<td>0%</td>
<td>0%</td>
<td>4. The staff member provided adequate opportunities for me to pursue my own learning.</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>5. The course developed my understanding of concepts and principles.</td>
<td>0%</td>
<td>0%</td>
<td>5. The staff member helped me to develop my understanding of concepts and principles.</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>6. The workload for this course was reasonable given my other study commitments.</td>
<td>0%</td>
<td>0%</td>
<td>6. The staff member displayed a genuine interest in my learning needs and progress.</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>7. I have received feedback that is constructive and helpful.</td>
<td>0%</td>
<td>0%</td>
<td>7. The staff member gave me helpful feedback on how I was going.</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>8. The assessment tasks were related to the qualities of a UniSA graduate.</td>
<td>0%</td>
<td>0%</td>
<td>8. The staff member used up-to-date teaching and learning approaches.</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>9. The staff teaching in this course showed a genuine interest in their teaching.</td>
<td>0%</td>
<td>9. The staff member made it clear how her/his teaching developed the qualities of a UniSA graduate.</td>
<td>0%</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>10. Overall I was satisfied with the quality of this course.</td>
<td>0%</td>
<td>0%</td>
<td>10. Overall, I was satisfied with the performance of this staff member.</td>
<td>0%</td>
<td></td>
</tr>
</tbody>
</table>

**Suggestions for future use**
A degree of face and comparative validity has been established for the tool by comparison of a reviewer’s findings with the evaluations provided by students.

**Conclusion**
More studies are required to determine the validity of this peer review system but these have been established to a greater extent than for most other tools.
Case study: course development and reflection

Purpose of the peer review
The aim of this peer review was to promote course development and reflection.

Description of how the system was used
All staff in the School of Health Sciences at RMIT (n=60) were emailed a paper-based list of the review criteria and encouraged to use them as they prepared their courses for first semester. They were invited to complete the online evaluation.

Benefits from the peer review
The facilitator of the session advised that she received thank you emails from several staff who noted how useful the checklists were for course development and reflection. The facilitator used the checklists to focus her thinking as she was finalising revisions to her courses. The facilitator reported that the checklists served as a useful reminder. The checklists were particularly useful when she thought about her first-year course and the key facets that need to be considered in course development and redesign.

Issues identified
No issues were identified by the facilitator.

Suggestions for future use
The facilitator of the session reported that she would find it useful to use the checklists each semester during the planning period.

Conclusion
The facilitator reported that she appreciated having the opportunity to use the checklists to reflect on her teaching. She further advised that academic staff members in the Department are going to be working on course guides later in the semester. She plans to use the checklists again to help guide planning and reflection.
Case Study: review of face-to-face teaching in a creative idea generation course

Purpose of the peer review
The aim of this peer review was to evaluate a guide to a creative thinking exercise. We wished to evaluate whether students could use the paper-based guidelines to guide them through a creative thinking exercise. If successful, this guide could be used to supplement face-to-face tutorials.

Description of how the system was used
The system was used to set up a review of the document. The session where the paper-based guidelines were first used were observed by two reviewers, one of whom was familiar with the course approach and one who was not. Notes taken paid attention to the ways in which the students used the guidelines and audio-recording of comments and responses. The reviewers then met to establish whether the peer review system could be used for evaluating the usefulness of the guidelines. A review was set up and both reviewers responded independently, then comparing responses to compile the final report.

Benefits from the peer review
The lecturer wished to know whether it was feasible to replace or supplement face-to-face tutorials with a self-guided process of creativity.

Issues identified
The students did not use paper-based guidelines. They looked at them and put them aside in favour of the techniques they had used previously. They found the sheets intimidating. The written instructions did not suit their style of working. The paper-based guidelines appeared to conflict with the teachings of the previous two days because they were fluid, verbal, dynamic and organic.

Conclusion
The written guidelines in their current form did not replace or supplement the face-to-face contact with the lecturer.
16.9 Screen shots of system

Users can create new criteria and customise the method for rating performance against each of the criteria. Supported response options in addition to the Likert scale metrics include yes/no, drop-down selections, multiple response and occurrence scales as well as the qualitative responses (Figure 6).

Figure 6: Selection of criteria and response type can be customised by the academic.

The instrument is based on a standardised XHTML form generation system. This system creates customised forms and makes it easy to create a new form for a module without knowledge of accessible forms and XHTML. This enables the rapid and accurate development of new modules (Figure 7).
Figure 7: The design of the peer review system ensures maximum flexibility and adaptability.

The instrument uses a flexible and multi-tiered user authentication system that provides access to specific modules based on the logged-in user’s access level. By default there are four levels of access: Reviewer, Author, Admin and Super Admin (Figure 8).
Figure 8: Four user levels and their respective module permissions

The levels have been created with cascading privileges. This means an author has the permission of other authors as well as all permissions of any levels below it. This enables administrative level modules and menus to be hidden from lower privileged users (Figure 9).
The underlying data structure supporting the instrument enables administrators and users to maintain both generic and highly customised banks of criteria for their reviews. Each bank in the instrument can contain either one or more criteria, or one or more banks. This sequence enables banks to be nested within another ‘grouping’ bank to assist with the assimilation of banks and criteria as illustrated in Figure 10.
Administrators have access to build and manage sets of banks and criteria which can then be released to authors who are creating a review. These administrator-created banks can be also duplicated into an author’s review as required as shown in Figure 11.
Figure 11: Duplicating a parent bank and a nested bank

The ability to create custom banks of criteria enables authors to focus on particular areas of concern within a course review. The following example illustrates the development of a custom bank of criteria focusing on the first-year experience (Figure 12).
During the review process, the reviewer is asked to complete the review bank by bank. As soon as a reviewer has completed or partially completed a review, the results can be viewed via the review management module. Results are presented on screen; these include the number and percentage of responses received and any additional comments made by reviewers as shown in Figure 13 below.

**Figure 12: Criteria from a custom bank focusing on the first-year experience**

This could include visits to professional placements, with subsequent reflection and discussion, discussions about professional expectations and ethics.


http://dx.doi.org/10.1080/0142159080189294
A project wiki was established enabling interested academics to contribute to the developing instrument (Figure 14) available at http://peerreview.unisa.edu.au/wiki/index.php/Main_Page.

In addition, a dynamic bug tracking system was developed to track user’s feedback once the BETA version of the instrument was released for trials. The project website will remain a dynamic resource. Populated with content from the higher education community, the project website enables ongoing sharing of resources and case studies. In doing so, the website is demonstrating the best practice in online learning and teaching.
Figure 14: Project wiki designed to engage the higher education community
16.10 National peer review forum hosted by Dr Denise Wood at the University of South Australia, 12 June 2009: program

ALTC Peer Review Forum 12 June 2009
Magill Campus, University of South Australia

Welcome session
Location: ‘A’ building, Aroma Café *
9.00 am Coffee, morning tea and informal gathering, meet and greet/opening

Presentation sessions
Location: G building, room 1–83 *

10.10 am Margaret Hicks (University of South Australia)—Opening/welcome
10.15 am Denise Wood (University of South Australia)—Peer Review of Online Learning and Teaching (PROTL): Progress and Future Directions
10.45 am Geoff Crisp (The University of Adelaide)—Peer Review of Teaching for Promotion Purposes: Trialling the Documentation and Procedures Developed for an ALTC Project
11.15 am Jo McKenzie (University of Technology, Sydney)—An ALTC-Funded Peer Review Project: Embedding Peer Review of Teaching & Learning in Blended Learning Environments.
11.45 am Dr Kerri-Lee Harris (University of Melbourne)—A Handbook for Institutions: Developing and embedding programs of peer review of teaching
12.15 pm Elizabeth Devonshire (The University of Sydney)—Establishing the Peer Review Framework for Project EnROLE: Encouraging critical reflection on online role-play practice
12.45 pm Questions/Overrun
1.00 pm Session close

Working Group meeting (Project Leaders, Deans and Academic Developers)
Location: ‘H’ Building, Room 2–18 *

1.00 pm Lunch
1.45 pm Discussion

Issues for discussion include:
- integrating the other outputs of other peer review projects into the online instrument
- call for contributions of case studies
- further development of the online system software, Wizard, which ones required and steps required for each
- call for help in populating descriptors, references and links to exemplars overview and discussion of Ethics approval and
- call for interest in running trials.
4.30 pm Working group concludes

* see map on reverse
Magill campus map

Magill campus is located at:

St Bernards Road,
Magill
South Australia 5072.

If coming from the city/airport, travel east along Magill Road and turn left at Lorne Avenue or St Bernards Road.

Parking is available in the side streets surrounding the campus for free (parking restrictions do apply in some places), or charged fifteen cents per hour on campus grounds.

Map below is also online at http://www.unisa.edu.au/about/campuses/magillmap.asp

Magill Road is located approximately 500 metres to the south of Broughham Street.

16.11 Built-in banks and criteria incorporated into the online peer review system

Core principles

**Active student engagement in learning**
- A supportive, non-threatening teaching/learning environment is fostered.
- Students are encouraged to express views and ask questions—time and opportunity is allocated for this to occur.
- Student engagement is encouraged through the use of suitable questions.
- Immediate and constructive feedback is provided where appropriate.
- Enthusiasm is demonstrated for learning and teaching.

**Building on students’ prior knowledge and experience**
- Measures are taken to determine students’ prior knowledge and understanding.
- Students’ current knowledge and understanding is built upon.
- Where appropriate, student contributions are used and built upon.

**Catering for student diversity**
- Appreciation is shown for the different levels of knowledge and understanding in a group.
- Different learning needs and styles within the group are addressed.
- A focus is placed on building confidence, enthusiasm and intrinsic motivation.
- Students are encouraged to take responsibility for their own learning.
- A balance of discursive interactive and didactic strategies is employed to accommodate different student needs.
- Teacher-directed strategies are implemented effectively where required.
- A balance is achieved between challenging and supporting students.
- Activities/tasks are designed to allow students of differing abilities to participate/engage and demonstrate/enhance their learning.
- Examples or opportunities for discussion that cater for cultural diversity are provided.

**Encouraging students to develop/expand their conceptual understanding**
- Students are assisted to bridge the gap between their current conceptual understanding and the next ‘level’.
- Students are assisted to become aware of what the next levels are.
- Individual student learning is stimulated, encouraging students to become self-directed learners.
- Students are challenged intellectually.
- Students are encouraged to internalise or ‘construct’ their individual conceptual understanding.
- Deep (intrinsic) rather than surface (extrinsic) approaches to learning are encouraged.
- The teacher works cooperatively with students to help them enhance their understanding.
- The teacher demonstrates a thorough command of the subject matter.
Student awareness of key learning outcomes
- Students are progressively made aware of key learning outcomes.
- A focus is placed on learning outcomes at key points in the presentation.
- Synthesis of key learning outcomes is emphasised towards the conclusion of the session so that individual student follow-up work is well focused.
- Students are encouraged to accept responsibility for learning issues that require follow-up and consolidation.
- Students are aware of the link between key learning outcomes and assessment (formative and summative).

Active use of links between research and teaching
- Links between research outcomes and learning are emphasised where appropriate.
- Research links are used appropriately, given the level of student conceptual development.
- Students' awareness of what constitutes research is developed.

Appropriate use of educational resources and techniques
- Information Technology (IT) techniques are used effectively.
- An appropriate balance of IT and other strategies are employed.
- Available classroom resources are utilised effectively to support student learning.
- Resources, materials and literature are utilised to support student learning.
- Specific educational strategies and techniques are employed in the design and delivery of teaching sessions, to achieve key objectives.

Logical presentation of material
- An early, brief structural overview of the session is provided.
- Material is presented in a coherent manner which allows students to understand the development of the session.
- Adequate time is provided for review at key stages, including closure.
- Closure is established to assist students to draw together and understand major issues and identify individual learning needs and shortcomings.

Evaluation
- Feedback is sought progressively during the session.
- Feedback is acted upon.

References
Face-to-face teaching

Planning
- Appropriate time is allocated to the content of the presentation.
- The mode of presentation is suited to course content.
- An appropriate venue is utilised.
- Use of technology is well planned and implemented.
- Key points are presented in appropriate sequence.
- Transitions between parts of the presentation are smooth.
- An appropriate amount of time is set aside for questions.
- Different teaching models are incorporated in lectures.

Content
- An opening summary is utilised to present major points and conclusions in order to assist students to organise their listening.
- Aims and objectives are stated in the opening summary.
- Key areas to be covered are outlined in the opening summary.
- Explanation of how content links with previous lectures and courses is provided in the opening summary.
- Key terms are used to act as verbal subheadings and memory aids.
- Real-life examples are provided to illustrate key ideas.
- Analogies are utilised to make comparisons between the content of the presentation and knowledge the students already have.
- A variety of visual media is utilised to enable students to see as well as hear what is being said.
- A conclusion is utilised to reinforce the presentation.
- The conclusion of the presentation summarises key areas/points.
- The conclusion of the presentation links with the opening summary.
- The conclusion of the presentation refers to the next stages of topic/course.
- The conclusion of the presentation suggests ways for students to follow up on the presentation.
- Lecture notes are provided and include key points from the lecture opening summary, body and conclusion.

Presentation
- The presentation starts and finishes on time.
- The presentation is paced appropriately.
- Eye contact is maintained with students.
- Communication occurs on a personal level, allowing the teacher to relate to students.
- Tone of voice is varied appropriately.
- Enthusiasm for the topic is exhibited.
- Physical activity such as moving around the room and gesturing with hands is utilised to hold the attention of students.
- The voice is projected or amplified so that those in the back of the room can hear clearly.
- The use of slang or repetitive words, phrases or gestures is avoided.
- Humour is used to positive effect.
- Techniques to facilitate oral comprehension are utilised.
General interaction
- Questions are asked of the entire group.
- Students’ names are used when asking and answering questions.
- All students are encouraged to participate equally in discussions (students are prevented from dominating discussion and quiet students are encouraged to engage with the group).
- Disruptive students are dealt with appropriately.
- Positive reinforcement is provided when students ask questions, answer questions or make comments.
- Questions and answers from students are repeated to ensure that all students hear the discussion (particularly for large groups).
- Questions are answered using a variety of methods.
- Students are aware when the teacher is available for consultation.

Evaluating lectures
- Immediate feedback is actively sought from students.
- Staff actively reflects on lecture presentation.

Small group interaction
- Group members are introduced to one another.
- A welcoming and engaging learning environment is provided.
- Students are involved in setting ground rules for issues such as constructive criticism, minimum participation etc.
- Student and tutor roles and expectations are discussed.
- Possible discussion topics are explored with group members.
- Discussion is monitored and kept ‘on-track’.

References


Online learning and teaching

Clarity of explanations

- The approximate effort required (hours of study) in undertaking each module is stated.
- The course content is appropriate to the learning outcomes.
- The overall purpose of the course is clearly stated.
- The approximate effort required (hours of study) in undertaking various aspects of the course reflects the objectives.
- The learning outcomes include reference to graduate attributes.
- Objectives or learning outcomes are clearly stated and achievable for each section or module.
- It is clear at the beginning of each module what learning resources the student will need to complete the module (e.g. library books, web documents, materials for experiments).
- Learning modules include an overview of the content to be covered and the processes by which it will be achieved.
- Reference is made throughout the modules to the learning outcomes.
- The course specifies any assumed knowledge.

Building student knowledge

- The course provides ways for students to review/gain assumed knowledge.
- Course content is appropriate to the student group.
- Course content is informed by current scholarship.
- Course content is gender inclusive.
- Course content is presented in a culturally sensitive way.
- New ideas are applied in real contexts.
- The materials include appropriate examples or case studies.
- Learners are given the opportunity to practice new ideas through activities.
- The course provides ways for students to follow up ideas and scholarship.
- The materials use summaries to consolidate what has been learnt.
- The course provides ways for students to reinforce their learning.

Learning activities

- Learning activities are appropriate for the targeted learning.
- The purpose of each learning activity is clearly stated.
- Learning activities are varied.
- Learning activities reflect the increased complexity of the ideas.
- Students use their personal knowledge to engage with activities.
- Learning activities are used for a variety of purposes as appropriate, introduce ideas, consolidation, recall, critical thinking.
- Learning activities are gender inclusive.
- Learning activities are culturally sensitive.
- Learning activities promote self-assessment.
- The time expected on each activity is clearly stated.
**Assessment**
- Each learning module includes an opportunity to demonstrate expected performance.
- Summative assessment requirements are clear.
- The summative assessment promotes engagement with the ideas rather than just memorisation.
- Summative assessment requirements are directly related to the stated learning outcomes of the course.
- The types of summative assessment tasks are congruent with the Graduate Qualities profile of the course.
- Assessment criteria are provided for each summative assessment task.
- Models or examples of summative assessment items are provided.
- Students are provided with information about the expectations of the form of assessment (e.g. essay, report, oral presentation).
- Students are provided with information about the presentation of the assessment (e.g. word limits, use of graphics, layout).
- The assessment criteria are reflected in the allocation of marks in the summative assessment.
- The weighting of summative assessment is appropriate to the proportion of the course being assessed.
- The summative assessment is directly aligned with the sequence and presentation of the learning materials.
- Opportunities for formative assessment are provided throughout the course.
- Formative assessment is directly related to the learning processes and outcomes.
- Formative assessment activities are varied.
- Online quizzes provide meaningful feedback about the correctness of student responses.
- Students receive positive feedback for correct responses in online quizzes.
- Online quizzes provide students with opportunity to correct their errors and try again.
- Feedback in online quizzes encourages students to explore concepts further.
- The student assessment workload is reasonable.
- The number of assessment tasks is appropriate.
- Summative and formative assessment draws on students' experiences.
- Summative and formative assessments do not make unreasonable assumptions about a student’s social or cultural background or life experiences.

**Evaluation**
- Link to evaluation is provided.
- Feedback from previous student evaluations is provided.

**Support**
- Contact information for support services is clear.
- Availability of resources from Library is clear.
- Useful resources available through Learning Connection are specified and information provided on accessing them.
- Comprehensive information about and links to administrative information such as relevant university policies and key dates is provided.
**Human interaction**
- Name of teacher and contact details are clear and correct.
- The kinds of support students can receive from the teacher and how this can be accessed are clearly stated.
- Information on how to access other learning opportunities such as audio or videoconferences or online chat sessions is clear.
- Availability of face-to-face contact opportunities is specified.
- Activities for building an online community are provided (e.g. participants page, online social discussions, defined activities).
- Clear guidelines are given for group interactions in online discussions, including aims and objectives and assessment requirements.
- Innovative use is made of synchronous (i.e. chat) and asynchronous (i.e. discussion fora, email lists) communications to enhance learning (for example online role-plays, debates, student presentations).
- Level of participation/facilitation by the teacher is appropriate for the activity.
- Feedback from the teacher is timely and designed to encourage learners to engage in further discussion.

**Interface design**
- Page layout is well designed and visually appealing.
- There is consistency in interface design and the same look and feel in all pages.
- Navigation buttons and icons are easy to use and understand.
- All navigation buttons and links can be accessed using keyboard as well as mouse.
- Home, backward and forward links are provided so that students can navigate easily.
- Hyperlinks use words that clearly identify where they lead.
- It is clear when hyperlinks take the learner out of the course materials.
- Text is broken up with appropriate use of graphical elements.
- Graphics do not dominate the screen.
- Use of screen space is appropriate.
- The use of headings and sub-headings, highlighted text and bullets enhance the readability of the text.
- Font sizes are legible (12 to 14 pt for body text and defined using styles).
- Fonts are restricted to two families per page. Extended text generally uses sans serif typeface.
- There is sufficient contrast between the type and images and the background.

**Writing style and accuracy of text**
- The style of writing encourages students to engage.
- Explanations are clear.
- The text is gender neutral.
- The text is culturally inclusive.
- New terms are introduced and explained.
- Terminology is consistent.
- Verbs are in active voice.
- The text is accurate in the facts and interpretations it provides.
- References are accurate and consistent.
• References to online articles and sites include author, title, URL provided as an active link and date last accessed.
• Spelling and grammar are correct.
• Materials from external sources are used within the boundaries of the copyright law.

**Multimedia**
• Particular media (e.g. images, animations, video, audio, print materials) are included.
• Media are designed to achieve specific learning outcomes.
• Media are integrated into the learning and teaching processes.
• Use of the media is appropriate for target student group.
• Learning outcomes can be achieved with the media used.
• Images aid visualisation and facilitate understanding of concepts.
• Images have text equivalents (alt text) and captions.
• Images use more than colour to convey information.
• Diagrams and graphics are appropriate in terms of their informational content.
• Tables and worksheets include column and row headers and captions.
• Animations/video clips are used to convey information that cannot be achieved through still graphics e.g. transition over time, 3D perspectives.
• Animations/video clips attract attention and stimulate interest.
• Animations/video clips facilitate interactivity.
• Animations/video clips can be halted.
• Animations include text equivalents and descriptions for sequences requiring detailed explanations.
• Video clips include synchronised captions for audio tracks.
• Audio clips enrich the learning material.
• Audio clips include transcriptions for spoken dialogue.
• Audio can be turned off.
• Information about the file size is provided alongside links to video and audio clips.
• Interactive components can be accessed using keyboard as well as mouse.
• Printed or online readings are at an appropriate level of difficulty for the student group.
• The readings are appropriate in content.
• Readings in PDF format are available in text mode.
• Essential readings are indicated.
• The total number of readings is appropriate.

**Web 2.0**
• The Web 2.0 technology provides an appropriate feature set.
• Appropriate training and support materials are provided.
• Appropriate security features are provided.
• Group size is appropriate to the learning activity.
• Audience is appropriate to the learning activity.
• The teacher adopts an appropriate role.
• Assessment is appropriate to the learning activity and the technology.
• Consideration has been given to the ‘afterlife’ of content generated during the learning activity.
- Staff and students have received appropriate training to use the technology.
- Students are aware of what to expect from Web 2.0 technologies and the benefits to be gained.
- Guidelines for ethical behaviour/communication are clearly defined.
- Students are aware of issues surrounding ownership of work.
- Appropriate activities are provided to build a sense of community.
- Appropriate scaffolding and support is provided.
- Students are actively encouraged to engage with content and each other.
- Assessment expectations are made clear to students.
- Assessment considers both quantity and quality of content and participation.
- Peer and self-assessment are used where appropriate.
- Appropriate backup procedures are implemented to prevent loss of assessable student work.

**Web 3D**

- The genre is appropriate to the learning activity.
- The ‘mission’ is made clear to students.
- Elements such as story, fantasy, whimsy, competition and beauty are utilised appropriately to engage students in the virtual environment.
- Opportunities are provided for students to develop and experiment with online identity.
- Students are provided with an opportunity to explore the virtual environment at their own pace.
- An electronic overview map is provided to assist students to navigate the virtual environment.
- Guiding objects or automatic guided tours are provided to familiarise students with the virtual environment.
- Navigation is easy and allows students to move freely as in the real world.
- Objects in the virtual environment are easy to identify/distinguish.
- The purposes of objects in the virtual environment are clear.
- Objects in the virtual environment are easy to access.
- Objects in the virtual environment look and behave in a manner appropriate for the learning activity.
- Students are provided with a demonstration of how to carry out actions.
- The purpose of actions is clear.
- Skills required to execute actions are achievable.
- All available actions are apparent.
- The effect of completed actions is apparent.
- Students are aware when a control has begun or ended.
- Students are aware of why a control has taken place.
- Input devices are appropriate to the learning activity and convenient to use.
- Students are provided with necessary training to use input devices.
**Technical aspects**

- The system requirements are specified.
- The online resource is robust e.g. it does not ‘crash’ the user's system and it does not cause the browser to freeze.
- Operates with standard plug-ins provided in recent browsers and operating systems.
- Functional even when features such as JavaScript are not supported.
- Hyperlinks are active.
- Links to external sites open in a new window and user is informed.
- Page download times within the courses site do not exceed 10 seconds.
- User is informed if an external site will take longer than 10 seconds to download.
- Pages are printable.
- Printed pages are accurate.

**References**

Aldrich, C. *On simulations and serious games.*
http://clarkaldrich.blogspot.com/


Palloff, R. & Pratt, K. (2007). Building Virtual Communities: Techniques that work! 23rd Annual Conference on Distance Teaching and Learning

**First-year experience**

**Familiarising students with the university’s physical environment, academic culture and support services (sense of belonging)**
- Campus maps highlighting course relevant facilities are provided to students.
- A course ‘induction pack’ containing relevant information regarding course/degree, study support and FAQs is provided to students.
- Relevant information regarding course/degree, study support and FAQs is provided on the Course or School website.
- Relevant information regarding course/degree, study support and FAQs is provided at the School office.
- Students are aware of where they can access course/degree, study support.
- Course coordinators/lectures are familiar with the support available for students.
- Students are aware of the resources they will require for the course.
- Students are aware of University operating systems and where they can access support if required.
- Relevant university policies are introduced and explained to students.
- Orientation activities are provided to familiarise students with key facilities on campus.
- Orientation activities are provided throughout the first year of study.

**Giving students an understanding of what their learning will involve and where their course will lead them**
- Students are prepared for their new learning environment.
- Students are introduced to the culture of the discipline and made aware of how their unit of study relates to future study.
- Course, assignment, assessment expectations are made explicit to students.
- Students are aware of minimum attendance/participation guidelines.
- Students are provided with clear guidelines on plagiarism.
- The course outline is easy to understand and outlines what students can expect to achieve as well as what they are expected to do.
- Essential course information is provided online (e.g. on a course website) to students.

**Promoting and supporting students’ engagement with the university and their peers**
- Students are provided with social activities to meet each other, and students from senior years.
- Appropriate time is allocated at the beginning of the course to discuss any orientation problems students may be experiencing.
- Course coordinators/lectures are available to meet with students during Orientation and at other allocated times.
- Orientation Information is part of a Faculty wide initiative and included in all unit of study outlines.
• Students who are at risk are identified early and provided with relevant support.
• Induction activities are evaluated by students.
• Student feedback regarding induction activities are discussed in an open forum.
• Good staff/student relationships are fostered.

**Developing the knowledge and skills of students from diverse backgrounds**

• An appropriate amount of time is allocated at the beginning of the course to discuss the activities students will be asked to participate in (group work, class discussion, presentations, lab work).
• Students are made aware of graduate attributes and how they will be developed in their study.
• Students are encouraged to examine their own values and explore the moral and ethical values of a diverse society.
• Students are aware of different learning styles.
• Practice exercises and quizzes are utilised to provide students with feedback.
• Feedback is provided early in the course.
• Feedback is timely and appropriate.
• Study skills are taught as part of the course.

**References**


*First year experience*, Enhancing students’ academic orientation & transition website, University of Sydney.


Learning & Teaching Centre website, University of Glasgow Good practice resources, *First year experience*, [http://www.gla.ac.uk/services/learningteaching/goodpracticeresources/firstyearexperience/#d.en.115859](http://www.gla.ac.uk/services/learningteaching/goodpracticeresources/firstyearexperience/#d.en.115859)
Teaching research nexus

Knowledge of current research
- Course and subject materials reflect current discipline knowledge.
- Students are encouraged to engage with research findings and literature.
- Students are provided with opportunities to discover and discuss new research topics and questions.

Theory and practice of research
- Discipline knowledge is explored in the course.
- Ethical issues in research, including data collection and acknowledgment practices are explored in the course.
- Students study the ways in which researchers work and examine the nature and use of specific methods.
- Students are provided with research activities to develop their research skills.

Critical thinking and enquiry
- Activities such as problem solving, enquiry, analysis, reflection and critical thinking are included in the course.
- Students are encouraged to question knowledge in the disciplines and discuss competing perspectives in the field of study.

Engagement in a scholarly community
- Students are aware of the work of faculty/discipline researchers.
- The teacher shares their interest and enthusiasm for research as part of teaching.
- Faculty seminars and workshops are provided for students to attend.
- Students collaborate with other students and with academics on research projects.
- The teacher encourages students to undertake further research.

Reflective practice
- Students are provided with activities which assist them to reflect on what and how they learn.
- The teacher applies current theories of student learning.
- The teacher undertakes and disseminates research about learning and teaching (scholarship of learning and teaching).
- The teacher reflects on their teaching and research practices and interconnections.
References

Research-teaching Nexus resources, The University of New South Wales http://learningandteaching.unsw.edu.au/content/RandI/research_nexus/rtn_resources.cfm?ss=5


Internationalisation

Broaden subject areas through international/intercultural approaches
- International content is included in the curriculum where educationally possible/desirable.
- Specific references to contemporary International and Australian content are provided.
- Ethical issues in globalisation (such as social justice, equity, human rights and related social, economic and environmental issues) are included in the course.
- International and national case studies are compared and contrasted.
- Historical accounts of the development of current international discourses/practices are included in the course.
- Studies of professional practices in other nations/cultures are included in the course.
- Studies of how knowledge is constructed differently across cultures in the subject area are compared and contrasted.
- Student/staff diversity in utilised to facilitate discussion and exchange of ideas.
- Dialogue and collaborative learning activities are included in the course.

Encourage interactive cross-cultural exchanges
- International student exchanges are incorporated or encouraged within the program.
- Students are actively encouraged to engage with others from different backgrounds in their study activities.
- Students are encouraged to join international associations that are affiliated with their discipline.

Align course content, learning activities and assessment
- Assessment is aligned with concepts, issues and events from the coursework that are relevant to the development of international and intercultural perspective.
- Learning activities and related assessment items draw on cultural contexts as well as disciplinary knowledge.
- Internationally comparative activities are included in assessment exercises.
Encourage and model inclusive strategies and openness to diversity

- Mutual respect is demonstrated between staff and students.
- Students are encouraged to gain a deeper knowledge and understanding of at least one other culture’s customs, history, language, literature, philosophy, economics, and politics.
- Students and staff are encouraged to learn a second language as a basis for appreciating the challenges of self-expression in a language other than their mother-tongue.
- Students are encouraged to complete a course in cross-cultural communication or international studies.

Demonstrate sensitive and inclusive teaching practices

- An awareness of language or behaviour that is ethnocentric or racist is demonstrated.
- An awareness of cultural stereotyping is demonstrated.
- An awareness of the complex nature of other nationalities and cultures is demonstrated.
- Materials from international and intergovernmental organisations (including international research) are utilised to broaden the learning experience and knowledge base of students and academic staff.
- The diversity of students and staff in courses is utilised to exchange knowledge and ideas.

References

Internationalising the curriculum. GIHE Good Practice Resource [Booklet].
Internationalising the Curriculum Tip Sheet – Course level Strategies, Griffith University

UniSA Graduate Quality 7: Internationalisation

Embedding peer review in blended online learning environments

Clear goals
For students’ learning and for design of the learning environment:

- Clear goals for students’ learning and an understanding of how those goals are meaningful and appropriate for the students, the course and the context.
- Clear rationale for the design of the learning environment, including the chosen blend of options.

Pre-review questions for the reviewee:

- What are your intentions for student learning in this aspect of the subject/unit/teaching?
- Why have you designed this subject/aspect of the subject in the way that you have?
Current and relevant preparation

- Currency and relevance of the content.
- Teaching and learning practices that are informed by current scholarship and awareness of relevant innovations.
- Taking into account students’ expected previous knowledge and experience, including experience of similar learning environments.
- Timely updating of teaching materials and resources for students, including currency of online learning sites.

Pre-review questions for the reviewee:

- How did you prepare for this aspect of the subject/teaching this time?
- What did you take into account in your preparation?
- How did you adapt the subject for this particular group of students?
- How did you ensure currency?

Appropriate methods for learning

- Learning and teaching and assessment methods which are appropriate for the learning objectives, students, context and available resources.
- Opportunities for student independence and choice, for example flexibility of learning modes and/or choices of content or focus.
- Opportunities for students to develop graduate attributes relevant to the subject/learning activity.
- Fostering of students' active engagement in learning, for example through opportunities for inquiry and exploration of ideas.
- Fostering of student interaction and collaboration.
- An appropriate level of intellectual challenge.
- Opportunities for students to relate what they are learning to broader contexts e.g. work, life experience, the broader discipline.
- Flexibility to respond to students' ideas and understandings, feedback and changing situations.

Pre-review questions for the reviewee:

- Are there any particular learning and teaching methods or activities on which you would like the reviewer to give feedback?
- Is there anything that you do not want feedback about (for example because you already intend to make changes)?

Effective communication and interaction

- Clear communication with students about expectations, including guidance on requirements and options in blended learning environments.
- Clear pathways and navigation in online and blended environments.
- Clear explanations
- Motivating student interest and perceived relevance.
- Responsiveness to students’ understandings, ideas and progress in learning.
- Responsiveness to students' communications and questions.
- Effectiveness of co-ordination/communication with any other staff teaching in the subject.
Pre-review question for the reviewee:

- Are there any particular aspects of your communication that you would like feedback about?

**Important questions pt. 1**

Outcomes for students:

- Evidence of student engagement
- Evidence of student learning: desired outcomes and unexpected learning outcomes.

Other outcomes if applicable:

- Evidence of outcomes related to any other intentions of the learning activity (for example evidence of the effectiveness of a learning innovation in achieving particular goals, evidence of effective collaboration with colleagues/tutors).
- Evidence of broader significance – e.g. potential for the adaptation and scaling-up of an innovation.
- Presentation of scholarly reports of practice to colleagues and others.

Pre-review question for the reviewee:

- Are there forms of engagement or intended outcomes that you would like the reviewer to give feedback about?

**Important questions pt. 2**

- Learning from students and adapting teaching in response, during teaching and afterwards.
- Seeking a variety of forms of evidence about teaching.
- Acting on the evidence – showing evidence of how previous feedback has been built-in to improve.
- Scholarly reflective practice informed by self, literature, students, peers and other sources.

Pre-review question for the reviewee:

- How has previous reflection and feedback informed this aspect of your teaching/subject?
## 16.12 Summary of issues reported via the online bug tracking system

<table>
<thead>
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<th>n</th>
<th>Type of error</th>
<th>Level</th>
<th>Date reported</th>
<th>Priority</th>
<th>Description</th>
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<tr>
<td>28</td>
<td>Program flow/Sequence</td>
<td>Feature</td>
<td>29/03/10</td>
<td>High</td>
<td>Need to give option to user as to default response type for criteria created during use of wizard</td>
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<tr>
<td>27</td>
<td>Unexpected</td>
<td>Major</td>
<td>29/03/10</td>
<td>High</td>
<td>If I create one review and publish and don't log out the next review I create already has the previous criteria</td>
</tr>
<tr>
<td>26</td>
<td>Functionality</td>
<td>Minor</td>
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<td>Normal</td>
<td>Rollovers not working on all icons</td>
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<tr>
<td>25</td>
<td>Unexpected</td>
<td>Major</td>
<td>29/03/10</td>
<td>Normal</td>
<td>Review constructed appears to have ascii codes showing in amongst normal text</td>
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<tr>
<td>24</td>
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<td>High</td>
<td>Error on trying to create new review</td>
</tr>
<tr>
<td>23</td>
<td>Functionality</td>
<td>Minor</td>
<td>14/12/08</td>
<td>Low</td>
<td>Adding More Information Text doesn't break formatting.</td>
</tr>
<tr>
<td>22</td>
<td>User interface</td>
<td>Minor</td>
<td>31/10/08</td>
<td>Normal</td>
<td>Yes / No redundant when there is Boolean options?</td>
</tr>
<tr>
<td>21</td>
<td>Program flow/Sequence</td>
<td>Minor</td>
<td>31/10/08</td>
<td>Normal</td>
<td>Wiki needs to have proper scale descriptions and type.</td>
</tr>
<tr>
<td>20</td>
<td>Functionality</td>
<td>Minor</td>
<td>20/10/08</td>
<td>Normal</td>
<td>Ability to remove created elements?</td>
</tr>
<tr>
<td>19</td>
<td>Program flow/Sequence</td>
<td>Minor</td>
<td>10/10/08</td>
<td>Normal</td>
<td>Updating of links/adding new links to information parts of the system.</td>
</tr>
<tr>
<td>18</td>
<td>Unexpected</td>
<td>Major</td>
<td>20/10/08</td>
<td>Normal</td>
<td>Exported filename not working on Macintosh</td>
</tr>
<tr>
<td>17</td>
<td>User interface</td>
<td>Minor</td>
<td>20/07/08</td>
<td>Normal</td>
<td>No character limits on forms.</td>
</tr>
<tr>
<td>16</td>
<td>Functionality</td>
<td>Minor</td>
<td>05/10/08</td>
<td>Normal</td>
<td>Selecting 'manage review' through the supervise (admin only) area results in a permission denied error</td>
</tr>
<tr>
<td>15</td>
<td>User interface</td>
<td>Minor</td>
<td>10/10/08</td>
<td>Normal</td>
<td>Table width of Cascades in Internet Explorer 7 is poorly managed</td>
</tr>
<tr>
<td>14</td>
<td>Functionality</td>
<td>Minor</td>
<td>14/12/08</td>
<td>Low</td>
<td>Next page button clears filter data</td>
</tr>
<tr>
<td>13</td>
<td>Functionality</td>
<td>Minor</td>
<td>29/09/08</td>
<td>High</td>
<td>Saving a criterion does not always return to Cascade View</td>
</tr>
<tr>
<td>12</td>
<td>Program flow/sequence</td>
<td>Major</td>
<td>16/09/08</td>
<td>Low</td>
<td>Password reminder should redirect to the login page, not reload the same page</td>
</tr>
<tr>
<td>11</td>
<td>Spelling/ Grammar</td>
<td>Trivial</td>
<td>21/09/08</td>
<td>Low</td>
<td>Typo on categories administration page</td>
</tr>
<tr>
<td>10</td>
<td>Unexpected</td>
<td>Minor</td>
<td>21/09/08</td>
<td>Normal</td>
<td>'Too many redirects' error</td>
</tr>
<tr>
<td>9</td>
<td>User interface</td>
<td>Minor</td>
<td>29/09/08</td>
<td>High</td>
<td>Saving a criterion does not always return to Cascade View</td>
</tr>
</tbody>
</table>