

1998

# Assessing learners through the WWW

Meg O'Reilly  
*Southern Cross University*

Karey Patterson  
*Southern Cross University*

---

## Publication details

O'Reilly, M & Patterson, K 1998, 'Assessing learners through the WWW', in H Ashman & P Thistlewaite (eds), *Proceedings of the Seventh International World Wide Web Conference*, Brisbane, Qld., 1-7 April, Computer Networks and ISDN Systems, vol. 30, no. 1-7, pp. 727-729.

Published version available from:

<http://www7.scu.edu.au/00/index.htm>

# Assessing learners through the WWW

Meg O'Reilly<sup>a</sup> and Karey Patterson<sup>b</sup>

<sup>a</sup>*Teaching and Learning Unit,  
Southern Cross University, Lismore, NSW 2480, Australia*  
Fax: 02 6620 3426  
[moreilly@scu.edu.au](mailto:moreilly@scu.edu.au)

<sup>b</sup>*Graduate College of Management,  
Southern Cross University, Lismore, NSW 2480, Australia*  
Fax: 02 6621 3407  
[kpatters@scu.edu.au](mailto:kpatters@scu.edu.au)

## Abstract

This presentation discusses and demonstrates use of the WWW to enhance assessment and flexibility in learning contexts. Case studies from Australian Universities demonstrate emerging practices and reflections. Adopted changes to interaction and assessment illustrate the shift towards flexible learning through WWW technology. Discussion includes instructional design, staff development and media/technology issues.

## 1. Introduction

The key to learning is assessment. To further the field of course development for flexible learning and to support the adoption of WWW by students through assessment, case studies were collected from Australian universities to illustrate design features, use of tools and techniques of Web based assessment. Lecturers and instructional designers were interviewed and provided pointers to cases. Assessment strategies illustrated in this presentation are sampled from four universities and include online essays, publications, participation in online discussion, role play simulations and quizzes.

Preliminary discussion of these cases cover instructional design, staff development and media /technology issues. Reflections by those interviewed indicate educational design and development practices need to become more team-based and student-centred. To move educational delivery into the computer-mediated arena through WWW and thus enhance flexibility of learning, lecturers also indicate they need to begin considering their student group as both dispersed and diverse.

## 2. Emerging issues

### 2.1. Instructional design issues: Constructive Alignment

Assessment of course does not stand in isolation from other key elements of teaching and learning. Biggs' [2] model of 'Constructive Alignment' was developed as a tool for design, development and evaluation of educational resources. In moving to a new medium for course delivery, questions to be answered include how can we maintain an alignment between assessments, objectives and content when using online methods of teaching and learning? How do we shift away from the provision of comprehensive packages of content to that of assisting learners to construct their own understanding and knowledge? How are distance teaching strategies translated into interactive and possibly asynchronous media?

## 2.2. Assessment styles

Given its central importance to learning, the scope and variety of assessment has generally been disappointingly limited, especially within the distance education context. While assessment options in face-to-face settings have considerable scope — allowing learners to build important skills such as team work, oral communications, debate, peer assessment and collaborative project learning — the distance learner, especially in areas of humanities and arts, has too often become the 'essay processing machine' [3].

Styles of assessment are derived to a significant degree from the discipline area or domain of knowledge. From initial investigations of Australian Universities it is therefore not surprising to find that early adopters of summative assessment through the WWW appear to be predominantly from the fields of computers and education.

## 2.3. Academic staff development issues

In making the move from traditional distance or face to face teaching, academic staff are being required to rethink their roles. Application of the new paradigms of teaching and assessment require academics to see themselves as facilitators of learning (both their own and that of their students). Staff development in online teaching will thus be the key to successful moderation, mediation and facilitation in the WWW environment.

In formative assessment, the use of computer programs to support online feedback for quizzes and self-assessment allows for greater levels of independence where students are self-directed while enabling staff to attend to those students requiring greater assistance. Summative assessment techniques which utilise WWW technologies can enable flexible, self-paced, self-directed learning supported by a 'virtual' cohort of online learners and experts (including intelligent agents). Academic staff development therefore involves not only the upskilling of teaching staff in the use of hardware and software which is required to carry out their tasks, but also in the principles which guide the process of learning through a new medium [4].

## 2.4. Media and technology issues

Access to browsers, hardware and software, technical support and cost-effective ISPs are issues for consideration in providing options for assessment. It is still not possible in most Australian universities to require connection to the Internet as a prerequisite in undergraduate degree programs. Assessment options therefore must remain equitable, if not equivalent across multiple media (post, oral, practical and electronic).

In terms of informing design and development of online courses, Bates [1] also poses a number of useful questions in his ACTIONS model:

- Access: how accessible is a particular technology for learners?
- Costs: what is the cost structure of each technology?
- Teaching functions: what are the best teaching applications for this technology?

- Interactivity and user-friendliness: how easy is it to use?
- Organisational issues: what changes in organisation need to be made?
- Novelty: how new is this technology?
- Speed: how quickly can courses be mounted/conducted with this technology?

## 2.5. Benefits and costs of innovation

The Karpin Report [5] highlighted the benefits where interactive technologies in management training are used in conjunction with on the job implementation of innovative technologies. This brings learning in line with the learner's day-to-day experiences. Implementation of technology in both formative and summative assessment tasks for immediate application is considered of great benefit. This is reinforced by an impression that the subjects already utilising the WWW for assessment are frequently applied technology subjects and thus readily linked to learners' practical experiences. Authentic assessment can be ensured in such applied contexts.

The West Review [6] urges the rationalisation of course development and reduction of costs via innovations in course design and delivery. Incorporating the interactive nature of WWW for the purpose of assessment can cost little but add value in possibilities for collaborative, resource-based and cogenerative learning.

## 3. Case studies

For this presentation we have selected a small proportion of Australian cases. We have attempted to provide examples from a range of discipline areas which demonstrate both formative and summative assessment techniques.

### 3.1. Case studies in summative assessment

(1) Research Seminars 499: Nursing Honours Program, Curtin University of Technology, WA.  
<http://www.curtin.edu.au/learn/unit/NursingHonours/index.html>

Includes 40% of total assessment for participation in online discussion and contributions towards an online refereed professional journal. Off-campus with 3 compulsory residentials.

(2) Computers in Education 505: Science and Mathematics Education Centre, Curtin University of Technology, WA. <http://www.curtin.edu.au/learn/unit/05474/>

Includes 40% of total assessment for students' role in leading discussion, posing relevant questions and suggesting suitable online resources and 20% self-reflection on own learning. Fully off-campus.

(3) Vocational Education and Training ED017: postgraduate program in Social Science, Southern

Cross University, NSW. <http://www.scu.edu.au/schools/sawd/pgonline/ED017>

Includes parallel print and online assessment options. Online version utilises the fast turnaround of electronic medium for smaller and more frequent components of assessment. Fully off-campus.

### 3.2. Case studies in formative assessment

(1) Middle East Politics Simulation: School of History, Philosophy and Politics, Macquarie University, NSW. <http://hardy.ocs.mq.edu.au/~control1/>

An extended role play game conducted by email plus synchronous and asynchronous elements of a Web site whereby students, divided into teams of two or three playing a Middle Eastern role, will respond to a likely scenario in order to further their interests. On-campus simultaneously in 6 universities across 4 countries.

(2) Atmospheric Environment GEOS216: Atmospheric Science Program, Macquarie University, NSW. <http://www.es.mq.edu.au/courses/GEOS216>

Weekly quizzes taken online for small component of final assessment. On-campus.

(3) Business Finance 25314: Bachelor of Business, University of Technology Sydney, NSW. <http://www.webcon.uts.edu.au/business/25314/>

Login username and password are both RUJOKING

Use of TopClass conferencing tool for management of large classes i.e. 1100 students. In order to sit the final exam (65%), students are required to prove their competency in at least three out of six optional Web quizzes. Anonymous login. On-campus.

## References

[1] Bates, A., *Technology, Open Learning and Distance Education*. Routledge, London, 1995.

[2] Biggs, J., Teaching for better learning, *Workshop for Southern Cross University*, March 1996.

[3] Carson, L., Pers. Comm., Southern Cross University, School of Social and Workplace Development, 1997.

[4] Ellis, A., O'Reilly, M., and Debreceeny, R., Teaching using online technologies: a review of approaches to staff training within Australian universities, in: *World Conference EdMedia*, Freiburg, 1998 (in press).

[5] Karpin Report, *Enterprising nation*, Report of the Industry Taskforce on Leadership and Management Skills, AGPS, Canberra, April 1995.

[6] Feature: The West Review: Visions of the university, *Australian Universities Review*, 20(2): 13–41, 1997.