Pedagogy and Technology

Session presenters:
Assistant Professor Shannon Johnston
Ms Jill Benn
Ms Carmel O’Sullivan

Session description:
Technology offers many different channels for us to engage more fully with our learners. This session draws on the collective experience of a number of academics who are using technology for improving teaching and learning. It will also offer an update on the current directions being taken by information services to support learning and teaching.
Introduction

Improving learning is a core characteristic of the use of technology by staff associated with teaching and learning at UWA. The technology per se is less significant than the use of it to improve the conduct and outcome of teaching and learning activity. This places UWA’s use of technology in a positive and contemporary frame regarding quality education for its students.

However, technology is not always and only for improving what we’ve always done. If UWA wishes to be a quality education leader on the world, national, even local stage, then we need to be at the forefront driving improvements in learning for the direction in which society is moving, and be in advance of both future students and the futures of our graduates. These key aims capture this sentiment:

- prepare students for professional futures saturated and fully integrated with technology
- prepare students for the ever-changing, non-predictable nature of technology
- be comprehensive – technology for education/learning (as a learner, integration of technology in life), for the discipline/profession, and for the social networking nature of society and the professions

We thus need to use technology to improve learning, but also to be innovative in the ways technologies change our teaching and learning practice to match even lead the integration of technology in society, and the ways people learn, interact, communicate, network etc outside the university “walls”.

Current UWA Approaches and Strategies

Technology in education at UWA is primarily locally determined and locally supported. There is some growing central technical purchase and support (e.g. WebCT/theLMS, lectopia / Echo360) and a number of staff take advantage of these resources, as well as some growing interest for other centrally purchased, available and supported tools (e.g. a university-wide wiki, ePortfolio, and online conferencing tool). Using technology to improve teaching and learning experiences and the quality of education at UWA is currently done in these ways:

1. **effective management of teaching and learning through the LMS (WebCT)**

   The recent LMS review and recent contributions by UWA staff reveal a significant use of WebCT for organising student groups, managing assessments (online assignment submission, online tests, collating and revealing grades and feedback), providing access to learning content, communicating with learners (email, discussion boards, announcements), providing effective and additional resources.

2. **using available tools to enhance teaching/learning activity**

   For example, using Google Apps for professionally-relevant 360 degree feedback from not only peers but the world at large with MBA students; using a large range of available authentic texts (written, oral/aural) and authentic tasks (writing, communicating, creating) for language learners in European languages; creating podcasts of key concepts in first year physics for student access through WebCT; using Skype for remote/non-local student PhD supervision activity; Web Assign or Wiley Plus for online assignments and marking in physics;
3. **developing software for specific needs/purposes**

For example: the Lectopia lecture recording system (later purchased by a corporate entity) built by the Arts Faculty and used across the University as a central tool; Jellyfish tutorial built for solving tutorial problems in engineering (and later extended to maths); Remote Access Labs in engineering so that students get more time-on-task for laboratory work; CS Marks by Computer Science for faculty online management of student assessments, a comprehensive access to student progress overtime, and student discussions and now extended to Maths and Statistics.

4. **introducing students to contemporary, web 2.0 technologies**

For example, using wikis and blogs as a base for course learning, communication, assessment in Education. 40%+ of respondents to the UWA LMS Review survey also expressed an interest in future uses with a new/future LMS that contains such tools; online cross-cultural collaborations and discussions in Business.

5. **innovating – exploring new technologies**

One significant and globally successful innovation and use of contemporary internet-based technology is around the use of Second Life (a virtual world) – using second life for interstate and international co-teaching of business cases in Marketing; the creation and continued of second life UWA has had a significant role in art to date, and is in a state of readiness for further development.

**What We Have Learnt**

Technologies need to work – to be implemented with full functionality, with appropriate hardware and infrastructure, with support for all users (students and staff) – in solving technical problems, learning how to use the technology and help with use issues, and pedagogical / conceptual assistance and training.

Teachers need time to become users of technology, effective in design, implementation & support for learners, and to evaluate and improve practice with technology. As part of this, they need access to the kinds of technologies they would like to implement, without institutional constraint.

Scholarship is needed, and communities of sharing and collaboration are necessary to understand better effective practices with teaching, learning and assessment with contemporary technologies.

Some staff need others to provide the software and hardware, support and education to enable them to integrate technology in their practice; others need the autonomy to explore and create.

Technology applications do not always work, and can be challenging – staff need to feel enabled to experiment and explore and learn from these experiences; they need technical support to overcome or address problems.
**Our Key challenges**

Our key challenges are:

1. to have a balance between centrally and locally acquired, developed and supported technologies for staff to use in their practice
2. to keep the focus on learners and learning
3. to provide desired technologies, and adequate support in technology and pedagogy
4. to develop a vision and culture of technology integrated teaching practices for quality education at UWA

These challenges will be examined during the Senior Leaders Day breakout session.

**Some Useful Resources**

Curriculum support for New Courses 2012 – Blended and online learning


Consider ways in which the new Course:

a. prepares UWA graduates for technology-rich futures
b. incorporates a Course-wide vision and strategy for blended learning
c. maps blended / online learning across the Course curriculum
d. develops staff capacity to provide quality blended/online learning experiences
e. ensures quality through a comprehensive support plan for technology in the course

**Contributors**

This paper was developed by the enthusiastic and quick contributions of academics across UWA. A search was sent out for academics with ‘stories’ or names to share, these people contributed directly to the stories and perspectives presented here.

Ms Yvonne Button (CATL)
Dr Lisa Cluett (Student Services)
W/Prof Steve McShane (Business School)
Dr Mark Pegrum (Education)
W/Prof James Trevelyan (Engineering)
Dr Nathan Scott (Engineering)
Ms Cherry Randolph (Business)
Mr John Brookes (Physics)
Prof Jamie Murphy (Business)
Dr Wade Halvorson (Business)
Eric Feinblatt
Prof Hélène Jaccomard (European Lang & Studies)
Prof Kevin Judd (Maths & Statistics)
Prof Jane Klobas (Business)
W/Prof Caroline Baillie (Engineering)
Information Services: Supporting Teaching and Learning

We face a number of challenges in the immediate future to provide a high quality student experience. These issues are particularly important in the context of New Courses 2012. This briefing paper highlights a number of initiatives in which Information Services is engaged.

As technology becomes inextricably entwined in student learning, we need to remove barriers to access. These include:

- multiple usernames and passwords,
- student data storage not readily sharable or accessible across campus and remotely,
- hardware with varying levels of age and capacity,
- aging network and inconsistent wired and wireless access,
- lack of collaborative and informal learning spaces enabled with suitable technology,
- limited spaces on campus for after hours use, and
- confusing and inequitable printing services.

The Information Services Business/Investment Strategic Priorities Plan and re-development of library buildings create opportunities to address many of these issues. As barriers are removed, students will experience consistency of service across campus. Students will no longer have to think about how they use technology at UWA.

The next challenge is to address the tension between providing large scale, sustainable services, and high quality, point of need student support. We can no longer expect to work in isolation if we're to achieve the outcomes we desire.

### Flexible Spaces

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<thead>
<tr>
<th>Students want...</th>
<th>We currently have...</th>
<th>We can improve by...</th>
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<tbody>
<tr>
<td>Spaces conducive to learning (collaboratively and individually) supported by solid technology.</td>
<td>Some outstanding examples (Science Library).</td>
<td>Emulating the best design principles in future learning space developments (e.g. EDFAA and Reid Libraries).</td>
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<tr>
<td>To work and collaborate on campus at any hour of the day or night.</td>
<td>Limited spaces with 24 hour access, Five Libraries open for up to 82 hours each per week.</td>
<td>Providing a variety of spaces and facilities open for longer periods, including 24 hour access.</td>
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<td>To print anytime, anywhere.</td>
<td>An inequitable and confusing system due to 6 separate print management systems.</td>
<td>Providing a consistent printing service for all students to print at any student printer.</td>
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<td>Computers that work regardless of location.</td>
<td>Hardware with varying levels of age and capacity.</td>
<td>Ensuring equipment is problem free, fit for purpose and up to date across the campus.</td>
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## Ubiquitous Connectivity

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<th>We currently have...</th>
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<tr>
<td>To locate, access and share their data when moving across the university and remotely.</td>
<td>A faculty dependent model not suited to New Courses 2012.</td>
<td>Providing a centralised data storage system accessible anytime, anywhere.</td>
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<td>To seamlessly connect to the systems they need.</td>
<td>Many systems holding different identity information, and requiring multiple user names and passwords.</td>
<td>Developing a comprehensive and accurate register of identities, and providing a true single user name and password.</td>
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<td>Fast and reliable network access everywhere.</td>
<td>An aging network and inconsistent wired and wireless connectivity.</td>
<td>Upgrading our network to be flexible and extensible, enabling better mobility and collaboration.</td>
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## A Personal and Positive Experience for UWA Students

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<td>To be more than a number.</td>
<td>Varying quality of support services.</td>
<td>Implementing infrastructure for systematic services with a personalised level of support at the point of need.</td>
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<td>To find quality help in convenient and obvious places.</td>
<td>Multiple student help options available in Libraries, including Student Services study skills support and Student Internet Support.</td>
<td>Further developing relationships with relevant areas of the University. Extending and enhancing support provided by multi-skilling staff in libraries to assist students with connectivity. This will enable us to offer the SISO service from more locations with consistency of service levels.</td>
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<tr>
<td>The same opportunities to learn key communication skills, regardless of their degree, forming a platform for discipline specific learning.</td>
<td>An inconsistent and limited approach to teaching communication skills, focused on information literacy.</td>
<td>Working closely with Student Services and Faculties to build on our IRIS (Introductory Research &amp; Information Skills) initiative by providing a consistent online program for each of the new undergraduate degrees which addresses information skills as well as skills in writing, presenting, and group work.</td>
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Discussion Points

1. How do we provide sustainable and equitable services, but also ensure that individuals can find the information or person they need to help them when they need it?
2. How do we balance increasing student demands for high quality IT with ongoing costs of technology?
3. How will the initiatives proposed change teaching and learning at UWA?
About the presenters

Assistant Professor Shannon Johnston is a member of the academic development team for the Centre for the Advancement of Teaching and Learning, with the speciality for eLearning. Her role at the university is to contribute to University decisions around technology for teaching and learning; provide professional development in workshops, seminars, and programs within CATL and beyond; and support teaching and learning through consulting to Faculty level projects involving the design and implementation of technologies. She has been an instructional/learning designer and curriculum developer and an academic in two disciplines, and her PhD investigates the issues and experiences of teaching with communications technology from the perspective of educational context, curriculum, design, the technology and teacher beliefs. Her interests lie in design for integrating technology in teaching, the affordances of technologies in educational contexts, and the implementation experiences.

Jill Benn is the Manager of the Reid Arts and Business Library. In addition to managing staff, services, collections and facilities in the Reid Library building, Jill has strategic responsibility for reference and inquiry services across the Library. Jill is an experienced manager and librarian and has directed a number of projects requiring the implementation of new staffing and service models. In 2009, Jill managed the completion and opening of the new Science Library at UWA. Since opening the Science Library has been a huge success, receiving significant positive acclaim from UWA students, academic staff and visitors from further afield. Jill holds a Graduate Diploma in Library and Information Studies and a Bachelor of Communications (Media Studies). Jill’s professional interests include staff development, particularly management and leadership development, learning space development and the use of new technologies in library services.

Carmel O’Sullivan is Manager of the Science Library and has strategic responsibility for information literacy across the Library, including managing the centralised Information Literacy Unit. She writes and presents on information literacy, both in a corporate and academic context. She has extensive experience in delivering and managing information literacy programs in Universities (UQ, ECU and UWA) and the corporate sector (as National Training Librarian for the top tier law firm, Blake Dawson). Carmel has degrees in Arts, Law, and Librarianship. She has managed libraries in both the University and private sector. As a leader, Carmel has had significant experience in forming new teams and enabling them to excel, including forming and leading a geographically dispersed team at Blake Dawson, and managing the integration of staff from the old science libraries into a new team. Carmel spent two years on the Science Library building project, including facilitating change management and working on all aspects of the learning space design, technology and service provision.