Designing Contemporary e-Supported Professional Development Environments to Enhance Tertiary Teaching and Learning

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Abstract

National and organsational imperatives in Australian higher education are demanding systematic and cost-effective approaches to the professional development of staff in their teaching in order to enhance the quality of student learning. Many universities are geographically distributed, multi-campus, multi-city and multi-modal in nature, and highly dependent for their effective operation on information and communications technologies (ICT). Deakin University is one such university operating in Australian higher education. Consistent with the progressive principles and practices of the learning organisation, new approaches and environments are required to support the professional development of staff for enhanced teaching and learning in higher education. These environments now require substantial use of e-learning for both learning about teaching online and the development of teaching capacities in the world of the modern-day, technologically-supported physical classroom. This article outlines the imperatives to establish and operate cost-effective e-supported environments for professional development for excellence in teaching and learning. The key principles underlying these emergent environments are outlined, along with the major tools, resources and features of such environments. A contemporary online teaching case site is highlighted as indicative of new approaches to supporting professional development of staff for excellence in online teaching and learning.

Introduction

Aspiring to excellence in learning and teaching is essential for universities operating in the Australian higher education sector. Prestige, performance funding, grants and awards are contingent on the demonstration of educational excellence in relation to universities' declared purposes and directions. Many universities in Australia, through the process of mergers, are now large and distributed. Teaching staff may be continuing or sessional, constantly in transit between and from geographically dispersed campuses, and increasingly reliant on information and communication technologies (ICT) to support their teaching, research and administrative work. The new virtually based university is well and truly upon us, and our own organisation, Deakin University, is one such institution with on- and off-campus students, located nationally and internationally. How are staff, and by extension the organisation, to be supported in the development of capacities for excellence in teaching and learning? We argue that greater emphasis must be given to e-supported professional development environments, based on constructivist learning assumptions, and containing an array of media-rich resources and communication and community building tools which enable individual and organisational learning and development.

Such an environment should be designed to allow staff to develop online teaching capacities, student-centred learning approaches and to apply their learning to physical classroom settings as well. Many of the latter settings are increasingly being fortified through the use of ICT. A resource, *Contemporary Online Cases*, to support staff in developing their digital/online teaching capacities is highlighted as being integral to the full-scale development of such environments along with a broader framework for conceptualising the key areas of excellence in tertiary teaching.

National and institutional setting

After several national government reviews of higher education, major changes are occurring in the promotion and enhancement of tertiary learning and teaching in Australia (see most recent review, *Our Universities: Backing Australia's Future,* 2003). The Federal Government, as part of this review, has established The Carrick Institute for Learning and Teaching in Higher Education, 'To promote and advance learning and teaching in Australian higher education' (Mission statement) by: promoting and supporting strategic change in higher education institutions for the enhancement of learning and teaching, including curriculum development and assessment; raising the profile and encouraging recognition of the fundamental importance of teaching in higher education institutions and in the general community; fostering and acknowledging excellent teaching in higher education; developing effective mechanisms for the identification, development, dissemination and embedding of good individual and institutional practice in learning and teaching in Australian higher education; developing and supporting reciprocal national and international arrangements for the purpose of sharing and benchmarking learning and teaching processes; and identifying learning and teaching issues that impact on the Australian higher education system and facilitate national approaches to address these and other emerging issues (Objectives statement) (Carrick website: http://www.carrickinstitute.edu.au/carrick/go/pid/10). Amongst other initiatives, the Carrick Institute is responsible for a much expanded national teaching award scheme, a competitive grants scheme and a new national Teaching Fellowship program. Additionally, the Federal Department of Education, Science and Training oversees quality audits of universities through the Australian Universities Quality Agency (AUQA) and a Teaching and Learning Performance Fund allocating certain funding to universities on the basis of their performance across key teaching and learning indicators (see http://www.dest.gov.au/sectors/higher_education/policy_issues_reviews/key_issues/learning_teaching/ltpf/default.htm). This performance-based funding is targeted at rewarding excellence in teaching and learning. The most productive way for universities to maximise their performance for additional funding is to support the ongoing enhancement of the quality of both teaching and learning in their organisational contexts. New national agendas in higher education in Australia are both recognising and promoting the importance of quality teaching, and setting new benchmarks for judging teaching quality at the individual, team, discipline and institutional levels.

Deakin University is a multi-campus, multi-city and multi-modal university located in the Australian State of Victoria. It has campuses in rural, regional and metropolitan locations, with 32 000 students of whom 12 000 study off-campus nationally and internationally. In addition, it has up to 40 000 students studying through Deakin Prime, the University's entrepreneurial arm, in association with professional bodies, government departments and corporations. The University's student cohort is diverse ranging from full-time school leaver age students (18-21 years) to part-time mature age students (over 21 years) many of whom are in paid full-time employment. The University aspires to offer relevant, innovative, and responsive teaching and learning and wishes to be regarded as Australia's most progressive university (*Taking Deakin University Forward,* 2005). Moreover, its core commitments in making it a distinctive university in Australia cover rural and regional engagement, continuing education and life-long learning, and equity and access for individuals and groups who might not otherwise enjoy the benefits that flow from participation in higher education (*Taking Deakin University Forward,* 2005).

Deakin has over 1000 full-time/fractional full-time academic staff located across its five campuses in the three cities of Warrnambool, Geelong and Melbourne. In response to national developments, the University has mandated from 2004 that all new academic teaching staff must undertake a Graduate Certificate of Higher Education (GCHE) during their probation unless exempted through holding same/equivalent qualification and having at least five years of equivalent full-time tertiary teaching experience demonstrating an appropriate set of teaching capacities. The GCHE is taught through the University's Faculty of Education, with contributions from other faculties and the Institute of Teaching and Learning (ITL). Furthermore, from 2005, casual/sessional staff members new to teaching at the University have had to undertake mandatory professional development undertaken primarily online. In 2005, about 145 casual/sessional staff satisfactorily undertook the program. This program is the responsibility of ITL.

The University is now planning to introduce the concept of a Deakin certification of teaching competence, i.e. the Certified Deakin Educator. This certification may be achieved through one of four major professional development pathways, namely: the satisfactory completion of the GCHE; the recognition of prior learning and practice of effective teaching in higher education via the submission and assessment of a

teaching portfolio covering teaching capabilities, which could be far more advanced and specialised than those developed via GCHE studies, and appropriate teaching experience; the satisfactory completion of a range of generalist and highly specialised online professional development modules and an appropriate length of teaching experience; receipt of a University teaching award based on individual teaching achievements; or appropriate combinations of the above options. Beyond achieving teaching competence through one of the learning pathways, as recognised through the award of the Deakin Educator certification, comes the ongoing responsibility of maintaining and enhancing teaching competence through continuing e-supported professional development in specialist areas. Those staff deemed to demonstrate outstanding competence or mastery in teaching beyond certification of competence will be eligible for consideration for a Distinguished Deakin Educator designation.

Principles underlying contemporary e-supported professional development environments

Constructivist perspectives have been of growing influence in shaping the design of technology supported learning environments. Jonassen, Peck and Wilson (1999) provide a powerful view of the nature and assumptions underpinning constructivist approaches to learning with technology. We believe that the attributes of constructivist learning should shape and be grounded in the design of e-supported professional development environments for teachers in higher education. Briefly, e-supported professional development environments should enable active, constructive, intentional, authentic, cooperative learning amongst teaching staff (see Jonassen et al. 1999, pp.8-11). An e-supported professional development environment should in turn deploy technologies as: tools to support knowledge construction; information vehicles for exploring knowledge to support learning-by-constructing; context to support learning-by-doing; social medium to support learning by conversing; intellectual partner to support learning-by-reflecting (Jonassen et al. 1999, pp.13-14).

A powerful example of e-supported constructivist environments in action for the professional development of leaders and managers has been developed by Morgan (1986). Offered by *NewMindsets*, a learning support company established by Morgan, it is directed at 'delivering high value online learning solutions in the field of leadership and management development'. The company's e-supported professional development system has been developed on the basis of market research revealing that the most powerful forms of learning and development take place when: the learner is in control of the e-learning process and can access relevant content where and when it is needed; the focus is on learning for improved performance, not on linear teaching or test-based compliance; powerful learning experiences can occur in small increments as short as five to ten minutes; practical, relevant online learning becomes part of the fabric of daily work, supporting learners in tackling real job and business issues with immediate impact; learning is both cost- and time-effective and aligned with strategic competency development and operational needs - at individual, team and enterprise levels (*NewMindsets*: http://www.newmindsets.com/). As with Morgan's 'busy managers', busy academic teaching staff, we contend, require a customisable repository of multimedia resource materials and communication channels to support the development and enhancement of their teaching capacities and those of their educational institution.

Online professional development framework and components

The Centre for the Study of Higher Education (CSHE) at The University of Melbourne has undertaken commissioned work for the national Carrick Institute in recommending various aspects of the new national teaching award scheme (see James, Harris, Krause, Howard & Garnett, 2005; Harris, Krause, James, Howard & Garnett, 2005). In undertaking this work, the CSHE examined overseas teaching award programs in Canada, New Zealand, the United Kingdom, the United States and Sweden. These international investigations led to the determination of a set of criteria and key descriptors in judging five different domains of teaching excellence. These domains are in turn well grounded in contemporary tertiary teaching and learning theory and practice. Given the importance to Deakin University of e-supported teaching and learning, a sixth criterion or domain of teaching excellence has been added to a developing framework for conceptualising teaching excellence at our University. The six domains/criteria, their

(capacity developing) descriptors and, in parentheses, possible e-supported generalist and specialist modules follow:

First, **Approaches to teaching that influence, motivate and inspire students to learn:** *Fostering student development by stimulating intellectual curiosity and independence in learning; Contributing to the development of students' critical thinking skills and scholarly values; Encouraging student engagement through the enthusiasm shown for learning and teaching; Inspiring and motivating students through high-level communication, presentation and interpersonal skills* **(Generalist:** Understanding diversity in students and student learning, including teaching effectively for cultural difference; Teaching large classes; Teaching in small groups: **Specialist:** Teaching in laboratory and studio settings; Teaching for problem-based learning; Teaching using the case approach; Effective research supervision; Teaching and learning through work placements; Teaching off-campus students; and Teaching first year students).

Second, **Development of curricula and resources that reflect a command of the field:** *Developing and presenting coherent and imaginative resources for student learning; Implementing research-led approaches to learning and teaching; Demonstrating up-to-date knowledge of the field of study in the design of the curriculum and the creation of resources for learning; Communicating clear objectives and expectations for student learning* (**Generalist:** Designing and developing flexible courses, developing graduate attributes **Specialist:** Designing and developing courses in: Business, Law, Science, Arts, Education, and Health Sciences, Behavioural Sciences).

Third, **Approaches to assessment and feedback that foster independent learning:** *Integrating assessment strategies with the specific aims and objectives for student learning; Providing timely, worthwhile feedback to students on their learning; Using a variety of assessment and feedback strategies; Implementing both formative and summative assessment; Adapting assessment methods to different contexts and diverse student needs* (**Generalist:** Thinking about assessment, Deakin assessment policies, Assessment practices, Dealing with plagiarism in assessment, Marking and moderating assessment **Specialist:** Assessing online, Assessing large classes, Group assessment, Peer and self-assessment, Assessing graduate attributes).

Fourth, **Respect and concern for the development of students as individuals:** *Participating in the effective and empathetic guidance advising of students; Assisting students from equity and other demographic subgroups to participate and achieve success in their courses; Influencing the overall academic, social and cultural experience of higher education* (**Generalist:** Understanding diversity in students and student learning **Specialist:** Assessing students who are unfamiliar with Australian practices, Designing for accessibility online).

Fifth, **Scholarly activities that have influenced and enhanced learning and teaching:** *Showing advanced skills in evaluation and reflective practice; Participating in and contributing to professional activities related to learning and teaching; Conducting and publishing research related to teaching; Demonstrating leadership through activities that have broad influence on the profession* (**Generalist:** Teaching portfolios, Improving student learning through evaluation of teaching and units **Specialist:** Researching teaching practice (for applied research project)).

Sixth, **Effective use of digital media and online technologies dependent on degree of online-ness (Basic, Extended & Wholly):** *Understanding the context and rationale for online teaching and learning developments at Deakin University; Examining both the practical and pedagogical reasons for creating online environments; Developing strategies for using Basic Online and facilitating online discussion; Understanding how online teaching activities are supported; Experiencing aspects of teaching using digital media and online technologies based on need* (**Generalist:** Online teaching and learning overview, Deakin Studies Online (DSO) WebCT Vista training, DSO eLive training, DSO iLecture training **Specialist:** Developing e-simulations, Developing multimedia materials for CD/DVD/DSO, Designing for accessibility online, Using social software tools: Blogs, RSS, Wikis & Podcasting, Assessing online).

The six criteria have been used to organise the initial online professional development offerings of our Institute of Teaching and Learning site at Deakin (http://www.deakin.edu.au/itl/index.php). Moreover, it is

planned that Deakin staff who win University teaching excellence awards and who are shortlisted or win national teaching excellence awards will also be featured on the site as their teaching prowess relates to discipline teaching concerns.

Value of cases of good practice

Chalmers and O'Brien (2005, p.51), amongst others, identify 'maintaining a corporate memory of, and sustained engagement in, the issues and innovations in teaching in higher education' as a key concern of central education development units in universities. More generally, in the corporate world, Peters (1992) highlighted the importance of computer-based knowledge management structures to enable the acquisition, storage and deployment of organisational learning outcomes for future business value. Again, closer to the world of education, the value of cases of good practice as an integral resource in e-supported professional development environments has been argued by Segrave, Holt and Farmer (2005). The value of the case presupposes a clear view of what a case actually is and the benefits it can bring as a key resource in e-supported, constructivist professional learning and development environment. Shulman (1991, pp.250-62)) contends that,' Cases are not simply stories that a teacher might tell. They are crafted into compelling narratives, with a beginning, middle and end, and situated in an event or series of events that unfold over time. They must have a plot that is problem-focussed with some dramatic tension that must be relieved. They are embedded with many problems that can be framed and analysed from various perspectives, and they include the thoughts and feelings of the teacher-writers as they describe the accounts. Some case writers describe problems that remain unresolved and end their stories with a series of questions about what to do. Others include solutions that may or may not have worked. They all include reflective comments about their accounts that examine what they have learned from their experience and/or what they may do differently in another similar situation'. Jonassen et al. (1999), drawing upon the ecological metaphor of learning environments as spaces, identify Cases as a key resource in support of individual and collaborative exploration and problem solving. Cases in such environments provide on-demand advice. 'They supplant the experience that the novice teacher has not had' (Jonassen et al. 1999, p.198).

Holt, Borland, Farmer, Rice and Mulready (2005) have completed an online case resource to support the professional development of staff particularly in the area of digital and online-based teaching and learning (see http://www.deakin.edu.au/teachlearn/cases/). We believe they meet the key attributes of a case as described by Shulman (1991): they convey a sense of problem/opportunity identification over time, they are contextually based, consideration and development of solutions is described, and reflections on outcomes and future proposed actions are outlined.

Future development directions

The case resource is one key component in developing a contemporary e-supported professional development environment to meet the needs and circumstances of academic teaching staff. As Peters (1992, p.383) observes in relation to developing knowledge management structures in dispersed organisations, 'Wise application of information technology is a necessary, but far from sufficient, condition for knowledge management success'. We envisage a site which will be viewable by key domains and skill areas related to excellence in tertiary teaching as described above. Moreover, it should be viewable by a staff member's level of tertiary teaching competence and experience. For example, the environment could be viewed by those new to tertiary teaching, new to teaching at Deakin University, and by more experienced, competent teachers for their ongoing professional development. The environment should be problem and issue centred therefore allowing staff to quickly locate resources and use communication channels to improve their teaching in both virtual and physical settings. It should contain generic advice and support on tertiary teaching and learning principles and practices along with connections into discipline-based educational concerns. It should supply just-in-time/just-sufficient levels of material for a diverse range of users. We believe the site should be open to a broad range of parties who can contribute to enhancing the quality of teaching and student learning, including to visitors who may wish to understand how quality tertiary teaching is conceived, and how its quality can be enhanced in an e-supported, dynamic action oriented environment. In a dispersed institution like Deakin it needs to promote a sense of community involvement across faculties, schools, programs and disciplines.

The resources within the environment should be rich in multimedia and such material should be able to be manipulated by teacher-users for different purposes. Overall, the environment should showcase the integration of the best of a range of e-learning technologies from learning management systems to multimedia content repositories to social software tools like Blogs, Wikis and podcasting. It would represent the wise use of contructivist learning, e-learning technologies and policy incentives in order to engender maximum productive use of the environment for individual and organisational teaching and learning advancement. We believe such a system might be described as *TeacherWise* to best encapsulate its philosophy and operation. It would in turn link to similar national developments being overseen by the Carrick Institute in Australia (see, for example, Carrick Institute proposed Resource Identification Network, 2005).

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