A study reflected on managing technological change in teaching and learning, with particular emphasis on staff development. It drew on two national reports in Australia. One report team interviewed senior management in 50 percent of Australian universities. The other reviewed 104 nationally funded information technology (IT) based teaching projects. These recommendations were made with implications for staff development: staff development opportunities should be provided in the areas of project management, working effectively in teams, evaluation of IT projects, and legal issues related to IT development for current and potential project leaders; staff development opportunities should be provided in good practice in teaching; and opportunities should be provided for all team members who have developed successful projects to share their experiences and products with others. A number of staff development case studies were identified, most practicing what they preach by adopting flexible learning techniques to teach teachers by example about flexible learning. Among them were Project LEAD; Teaching at a Distance; Flexible Delivery Web site and videotape; Multimedia Pathways; First Fleet Online; NCODE Flexible Learning Web site and online workshops; Teleteaching 96; and Interactive Proceedings 94. (YLB)
Crossroads of the New Millennium

Flexible Learning At The Crossroads: Are Our Teachers Ready?

Prepared and Presented

By

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Abstract

This paper reflects on managing technological change in teaching and learning, with particular emphasis on staff development. It draws on two national reports in Australia. One report team interviewed senior management in 50% of Australian universities (Wills and Yetton, 1997). The other reviewed 104 nationally funded IT based teaching projects (Alexander et al, 1998). Both make recommendations that have implications for staff development. A number of staff development case studies are described, most practising what they preach by adopting flexible learning techniques in order to teach teachers by example about flexible learning: Project LEAD, Teaching at a Distance, Flexible Delivery web site and videotape, Multimedia Pathways, First Fleet OnLine, NCODE Flexible Learning web site and online workshops, Teleteaching 96, Interactive Proceedings 94. A more extensive version of this paper is published in Wills and Alexander (1999).
Flexible Learning at the Crossroads: Are our Teachers Ready?

UNIVERSITY MANAGEMENT

In 1996/7 the universities of Wollongong, New South Wales and Melbourne collaborated on a report for the Australian Government titled "Managing the Introduction of Technology in the Delivery and Administration of Higher Education". Their research on twenty Australian universities (i.e., approximately half of the universities in Australia) charts a substantial shift in the importance of IT in teaching and administration, and in how universities therefore position themselves strategically in the market.

Five years ago, IT was viewed by university management as experimental seeding on the edge of mainstream teaching, and as an expensive, albeit necessary, administrative resource. Now, the Vice-Chancellor of The University of Melbourne talks about 'mainstreaming the digital revolution'. Children of the digital revolution selecting their university of first choice may increasingly not see sandstone and status as sufficient.

The interviews with senior management of the twenty universities revealed five main imperatives for reviewing universities' IT strategies as a basis for competition through differentiation in the 'market place':

- the need to improve the quality of teaching
- the need to reduce costs
- the need to service new but small multiple campuses
- the competition for students and
- the changing profile of the student base (greater numbers of part-time mature students).

These imperatives underpin the current drive by universities towards providing more flexible modes of delivery to students, both in teaching and in administration (Wills and Yetton, 1997).

The report also highlights five factors in which organisations must exhibit a 'tight fit' for the introduction of technology to be successful (MIT90s framework):

- strategy
- structure
- management processes
- roles and skills, and
- technology.
This paper focuses on the roles and skills component of the framework.

UNIVERSITY TEACHERS

Another recently released report (Alexander and McKenzie, 1998), a study of 104 IT-related government-funded university teaching projects, surveyed those at the chalkface in the implementation of new technologies in teaching in universities. Many of the staff involved in projects incurred a high cost in terms of time, resulting in loss of research and personal time. In some cases this had a negative impact on their opportunities for promotion and tenure. (p.viii)

Projects that in general were not successful in achieving the desired learning outcomes, fit the following profile:

- were overly ambitious in terms of desired outcomes for the budget and time available;
- utilised particular information technologies for their own sake, without sufficient regard for appropriate learning design;
- did not change the assessment of learning to reflect changed learning outcomes;
- failed to recognise the importance of the project's context of implementation and the need to think through and plan for this;
- commenced software development without adequate planning;
- did not have access to adequate technical advice, expertise and support;
- acted on technical advice provided by people lacking in the necessary knowledge and skills to provide such advice, especially in relation to the selection of hardware and software;
- did not have access to adequate relevant expertise (where projects involved significant software or multimedia development);
- had academic team members who felt they could perform all the technical functions, such as programming, graphic design, etc., but were not able to do so;
- had staff on the project team who did not value the different skills required and available for the successful project completion;
- had project teams which were unable to resolve differing opinions;
- had a project development team which did not include a member with responsibility for project management, and which did not foresee the need for project planning and/or documentation;
- had a project leader who, in view of his or her teaching release to develop the project, was allocated an extra administrative load by the Head of Department;
did not adequately prepare students for participation in learning experiences which they had not encountered before, such as working in groups;

- over-estimated students' willingness to engage in higher level learning activities, especially when they were not related to assessment;

- used resources in the project development for which copyright clearance had not yet been obtained, and could not subsequently be obtained;

- had a project leader who was located in a faculty or school where the Head of Department was not supportive, often because he or she felt the time would be better spent on research, or did not value the project;

- developed a project which was operational on the development computer only, and could not be run on the implementation computers because of inadequate memory, disk space, etc., or because of non-existent CD-ROM drives or for implementation on computers which were expected to become available in the future, but which did not become available;

- conducted evaluation (if at all) only when the project was complete, and discovered that changes were required for which funds were no longer available;

- did not evaluate the project in the anticipated context of use, prior to implementing it;

- conducted limited or poor evaluation of the project because of lack of time and/or budget and/or evaluation expertise.

Although the majority of projects were not implemented beyond the institution in which they were developed, there was also evidence that some projects were not fully implemented within the originating institution. These projects typically ceased to be used when the project leader left the institution, or was allocated a different teaching load. Projects in this category were those which:

- were developed to assist students to learn content which was of interest only to the project leader, and hence was not embedded in the department's normal teaching;

- were developed within departments which did not value scholarship and innovation in teaching;

- had complex implementation requirements, resulting in significant time and risk for the academics choosing to use them. (pp. xi - xiii)

THE NEED FOR UNIVERSITY TEACHER TRAINING

Among other important recommendations on improving the success of technology-based teaching and learning projects, the report recommends that:
1. Staff development opportunities be provided in the areas of project management, working effectively in teams, evaluation of IT projects, and legal issues related to IT development, for current and potential project leaders.

2. Staff development opportunities be provided in good practice in teaching.

3. Opportunities be provided for all team members who have developed successful projects to share their experiences and products with others. (p. xv)

The University of Wollongong Academic Staff Development Committee established a working party to prepare a report on staff development for flexible learning. The working party recognised that: “staff development is not only about provision of workshops and seminars but also about provision of information, resources and rewards. Flexible delivery may provide longer term rewards in terms of reducing the burden of time pressures, but it is important that academics who free up that time via innovations in their teaching, do not loose that time by having to take on other teaching commitments. Departments may need to review the way they calculate ‘teaching contact hours’. Staff who innovate with alternative modes of delivery should also be rewarded by time release, encouragement to attend flexible delivery conferences and by publicity or other forms of recognition of their achievements in this area. Promotion procedures need to openly take more account of teaching innovations and academics need assistance in preparing Teaching Portfolios which demonstrate their achievements in this area. It also recognised that most staff development must be well-integrated with departmental plans rather than operating in isolation from the funding and support of the innovation.” (see full report at http://cedir.uow.edu.au/CEDIR/flexible/staffdev.html)

**ACTION LEARNING AS A STAFF DEVELOPMENT STRATEGY: PROJECT LEAD**

An example of a staff development strategy that goes past the traditional workshop strategy is Project LEAD. Funded in 1998 by a government grant, the University of Wollongong is implementing staff development in the team-based processes that underpin successful introduction of flexible learning. The need for skills in management, leadership and team building was highlighted in the Alexander and McKenzie report above. Titled Project LEAD (for Leading and Evaluating Advancements in Delivery), it is an example of Action Learning as a staff development strategy.
VIRTUAL TEACHER TRAINING

If there is to be a paradigm shift in the way educational institutions deliver education, there will need to be a paradigm shift in staff development - not just personal but also organisational. Delivery should be anywhere, anytime. Staff should be able to put themselves into the learner's shoes and actively experience the learning environments that are advocated for their students. In order to mainstream these experiences for students, they need to be mainstreamed for staff professional development. Only when staff are comfortable with using a variety of delivery methods will they be able to incorporate them successfully in their own teaching.

VIRTUAL RESOURCES: TEACHING AT A DISTANCE

For example, in 1995 the government provided to the PAGE consortium of Distance Education universities funds for workshops for academic and general staff about designing and delivering education at a distance. Funds were also provided to build resources so that staff could learn at their "own time and their own place". The team decided to construct a hybrid CD: the resources were compiled in web format and pressed onto CDROM. The advantages include:

- multiplatform delivery
- speed of video and audio as the resources are being accessed from CDROM rather than across the internet
- capability to easily update and expand the information by providing external links from the CDROM to real web sites
- a familiar navigation interface ie the web browser (Wills et al, 1997).

In addition to standard web navigation and frames, the team designed a graphical user interface to humanise the interaction with the resources. Beginning with a typical scenario in the Dean's Office (the mission assigned), the academic finds out what they need to know about distance education by setting up meetings with the:

- Education Consultant
- Librarian
- Enrolments and Enquiries Officer
- PAGE Liaison person
- Media Services Manager

as well as chatting with a colleague in the Staff Club.
At the University of Wollongong we have recently developed a similar product which is a web site about Flexible Delivery. Instead of delivering the video and audio aspects by CDROM, we provide a videotape to accompany the site. It is available free to any University of Wollongong teacher.

VIRTUAL RESOURCES: MULTIMEDIA PATHWAYS
Academics developing educational multimedia and subjects on-line are usually not experienced project managers and lack understanding of the overall development process. Impart, a government funded Co-operative Multimedia Centre in which the University of Wollongong is a shareholder, has collaborated to produce a development methodology, parts of which are freely available on the web as a staff development resource (http://www.impart.com.au/pathindex.html).

VIRTUAL RESOURCES: FIRST FLEET ONLINE
As a university that offers some of its subjects online, in whole or in part, for students either on- or off-campus, the University of Wollongong recognises that students need opportunities to explore first what it might be like to learn online, before they commit to paying fees for an online university subject. We have designed one free subject, First Fleet Online, to provide that experience, not only for the students but also for their teachers who are often somewhat more tentative than the students (http://cedir.uow.edu.au/programmes/FirstFleet). Because the majority of the content is a searchable database, First Fleet OnLine is a model of interactivity, demonstrating that interactivity is more than mere point and click. (Wills, 1994)

VIRTUAL CONFERENCES - NCODE
A similar example of moving beyond content towards communication is the recent collaboration between universities in NCODE, the National Council on Open and Distance Education. A web site about Flexible Learning was collaboratively developed (http://cedir.uow.edu.au/NCODE). Like the PAGE collaboration described in the section above, its first objective was the provision of information. However it has a second objective to provide opportunities for academics (the "learners") to communicate and discuss at a distance the issues raised by the information in the web site. A series of Virtual Staff Development Workshops are being run nationally to enable academics to experience distance learning at first hand using computer-mediated communication and collaboration, with the web site as the focus.
Evaluation of the online workshops so far indicate that often we teachers do not yet have the discipline to set aside the time for our own professional development. We still seem to find it easier to pack our bags and endure long flights and unfamiliar beds for days away in order to attend an event face to face rather than discipline ourselves to keep our computer desktop free for an afternoon to participate at a distance in a virtual event.

VIRTUAL CONFERENCES – TELETEACHING 96

A similar story emerged at Teleteaching 96 an international conference attracting about 100 delegates to Australia plus 100 online via videoconference or the internet, depending on the event. Evaluation showed that onsite participants in particular were very uncomfortable with the format. In the interests of practising what we preach as Teleteachers, we threw away the traditional conference format of papers delivered in half hour parallel sessions and instead held seven half day interactive events in an Internet Café set up at the Convention Centre. To accommodate the participation of Australian teachers after school hours and international sites across numerous time zones, we held the videoconferences in the evenings however onsite delegates chose not to attend because understandably they preferred to go out to dinner and socialise. And conversely, the virtual conference’s social event, a webcast of a rock band who received requests live via email from their worldwide audience, failed to get onsite delegates rocking and dancing because it was held at 10am in the morning and served coffee rather than the alcohol which often helps social events in Australia swing (Lefoe et al).

Everything in the Land Downunder was turned upside down and participants had no familiar formula to fall back on. We have a lot to learn yet about how to make virtual spaces effective. That’s not to say all physical spaces are always effective – the traditional mode of delivery in universities and conferences is not very effective yet we stick with it because it’s familiar and everyone’s role is well defined over centuries of use. Virtual spaces need the same sort of refining and polishing and we as teachers must certainly put OURSELVES in the learners shoes BEFORE we inflict these new developments on our students. We must become flexible about flexible learning.

REFERENCES

Title: TEND 2000 CONFERENCE PROCEEDINGS

Author(s): Corporate Source: HIGHER COLLEGES OF TECHNOLOGY

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