EVALUATION OF ACHIEVEMENTS FROM COLLABORATION IN A LEARNING TECHNOLOGY MENTORING PROGRAM

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Abstract

Academic staff development that is concerned with how to incorporate online learning into university courses must address two issues: online technology and its educational implications challenge many staff to review their attitudes to their own teaching, and working with online learning technology lends itself to a team-oriented, collegial approach to developing and operating academic programs. One approach to these issues is to embed staff development for online teaching and learning into specific learning resource development projects - where staff can share the experience of introducing technological change into their courses, where they can support each other to put new tools, skills and strategies into practice, and where they can get continuous feedback on the effectiveness of online learning in an applied setting. This paper reports on the processes and outcomes in a Learning Technology Mentor (LTM) program employed to advance online learning at RMIT University in this way during 1999 and 2000, through a case study of the implementation of this combined staff development and resource development program in the University's Faculty of Life Sciences.

Keywords

mentoring, online teaching and learning, staff development, courseware development

Staff Development to Support Change

We should not underestimate the difficulties involved in innovation and change. Marris (1986) parallels the sense of loss during bereavement to the resistance one can feel when letting go of known ways of doing things and embarking on new strategies. For many academics the increasing emphasis on the use of information and communication technology for administration, research and teaching is highly threatening. We need to recognise these fears and devise plans that build staff confidence and motivation, and provide adequate support and training opportunities.

Staff development can no longer be a pleasant 'cottage industry' on the fringes of academe or the enthusiastic enterprise of a few individuals supported by 'soft' money. Capable staff who can work productively with new Knowledge Economy technologies are central to the sustainability of the modern university. Effective staff development must be positioned both at the centre of university

operations and at the same time in close proximity to the work context, needs and perceptions of teaching staff. This is a demanding challenge. Staff development programs that are successful in meeting the needs of complex modern Australian universities need to be supported strategically (and financially) by their own universities.

In a recent investigation into the factors supporting the adoption of computer-facilitated learning (CFL) at Australian universities (McNaught, Phillips, Rossiter & Winn, 2000), six key issues in staff development were strongly voiced:

- The appropriate balance point between centrally provided and local staff development services needs to be determined in each university. Central services can be more clearly linked to university priorities; faculty or department services can be more in touch with local needs.

- As technology becomes more mainstream, support services need to be scaled up. This involves deciding on the level of support that can be afforded and the model of support that is most apposite. The educational design and evaluation, technical, and media production support services that universities currently have are under strain. It is unlikely that the existing examples of good practice in courseware at each university will be sufficient in themselves as models for other staff to use in developing new subjects or renewing their existing subjects. However, by modelling good practice themselves, mentors can assist colleagues to make optimal use of resources.

- A follow-on issue is determining the optimal relationship between staff development and production support services. Again, this needs to be decided in each university context.

- Even if an integrated model of professional development is adopted, there are still many professional development providers at most universities. Mapping the services of each provider and ensuring reasonable coordination is increasingly important as the need for support services scales up.

- Academic and general staff work load is a key issue. Careful work planning to ensure that staff have time to learn new skills and manage new processes is essential.

- We are in a time of rapid change. It is important that professional development support be flexible, appropriate and adaptable. It should make sense to staff, be linked to practice and be appropriately timed.

Over the past few years, RMIT has made a substantial investment into the use of online learning technology (e.g. Fallshaw, 2000), aimed at improving the quality of programs by reviewing their educational design and adding greater flexibility to modes of studying them. This initiative, called the IT Alignment Program (ITAP), has involved investment in infrastructure, enterprise computer-based systems, Library resources, staff development, and program and course[1] renewal (RMIT. Learning Technology Services, Online). RMIT has sought to move on several fronts at once, and many of the policies and processes that have been developed are still being refined.

The Distributed Learning System (DLS), one part of the ITAP initiative, offers staff a set of online tools to assist staff in renewing their programs and courses. An earlier report on RMIT's work (McNaught, Kenny, Kennedy & Lord, 1999) describes the toolset, early implementation experiences and early evaluations. As the name of this system suggests, ownership of such an approach must become distributed across the organisation. Therefore the shared role of centrally-based and faculty-based support for staff development and for the development of online learning materials and strategies is critical to achieving change in academic practices and program design. The following case study describes one project that sought to combine the benefits of both the central and distributed approaches to support (Hughes, Hewson & Nightingale, 1997).

The Learning Technology Mentor Program

A Learning Technology Mentor (LTM) program at RMIT ran from mid-1999 to the early part of 2001. It was conceptualised as part of the IT Alignment Program, and was jointly supported by the University's central Learning Technology Services group and the seven faculties of the University. The case of implementation in the Faculty of Life Sciences is described here.

The LTM program provided for academic staff in the Faculty of Life Sciences to have one day per week time release over one semester, in order to:

- learn how to use the University's recently established online education system,
- design and implement online learning in the Faculty's education programs, and
- promote and support similar activities among colleagues in the Faculty.

The aim of making a significant investment in learning technology mentoring by academic staff—rather than establishing a specialist online design and production unit to service them, for example—was to achieve widespread adoption of online learning as part of effecting a change in the culture of academic work. The intention of mentoring was to develop approaches to online education that originated within, and had close affinity with, academics' knowledge and experience of education in disciplinary areas and professional fields of study, and thus could influence not only new learning experiences but also new teaching practices.

The staff selected were a mix of learning technology enthusiasts who volunteered, and candidates identified for this type of professional development by senior staff in the Faculty and its Departments. Altogether 18 staff (out of a total of around 150 staff in the Faculty) were offered the opportunity to participate in the program, with at least two from each of the Departments in the Faculty. Eight staff took on the role of a Learning Technology Mentor in semester 2 1999, 12 in semester 1 2000, and 15 staff between semester 2 2000 and summer 2001. Time release of more than one semester was required to achieve useful outcomes in some cases, so by the end of the program, six staff had six months' experience as learning technology mentors, six staff had one year's experience, and five staff had 18 months' experience.

The work of Learning Technology Mentors was scaffolded by means of:

- contracts mapping out the work planned for the semester, as agreed among the mentor, the mentor's supervisor, the Faculty's Directors of Information Technology and Teaching Quality, and the University's Learning Technology Services group;

- a program of formal staff development for mentors on planning online education design and using learning technology software, run by the University's Learning Technology Services group; and

- ongoing management and coordination of selection, contracting and progress reporting, in alignment with University and Faculty strategic priorities for teaching and learning.

The contract that was agreed upon had elements of a personal learning contract, elements of a courseware production contract, and elements of a contract to provide training services. The transfer of funds to support time release for mentoring work was conditional upon each mentor's periodic evaluation of progress towards these different kinds of outcomes.

The formal staff development that LTMs undertook was about a week long, in both three-day workshops and in shorter sessions. Some of the key topics related to RMIT's vision with respect to the university's position as a major international technological university. The Boyer (1990) Scholarship model has been used for some time as an integrating model for all RMIT work; within this framework, the evolution of the University's Teaching and Learning Strategy over the last few years, and the structure and function of the IT Alignment Program, were discussed. The program

and course and renewal guidelines framed at Faculty level were discussed with a particular emphasis on the concept of graduate capabilities. The principles of course design were then enacted through training in the DLS toolset and consideration of how the use of the DLS tools related to the renewal of courses. Additional sessions covered a range of practical 'hands-on' sessions, as well as workshops in areas such as assessment and evaluation strategies for online learning, student induction methods, finding and managing digital resources, project management and copyright.

Management of the LTM program entailed stage-by-stage negotiation of the program 'on the fly', in a dynamic and occasionally dysfunctional institutional environment, among managers of the University's central service units, academic administrators at Department and Faculty level, and the individual academics.

Evaluation here of what was achieved from this highly collaborative process is based on reflections by the University LTM manager and the Faculty of Life Sciences LTM coordinator on the process of managing this staff development and courseware development program. These reflections in turn are based partly on formal reports filed in early 2001 by ten of the Faculty of Life Sciences mentors, and partly on observation of other changes that occurred over the period of the LTM program.

Framing Mentors' Understanding of Online Learning

The first six months of the LTM program in 1999 produced diffuse and uneven outcomes, with little clear evidence of the benefit of the LTM program to the core teaching activities of the Faculty overall, although there was very encouraging personal-professional development among a few of the academics involved. The Faculty responded by engaging more closely with the University's general ITAP strategy and policy statements, in order to extrapolate from them some objectives to sharpen the focus of mentoring work in implementing change in the culture of teaching and learning in the Faculty.

From the start of 2000, the activities of Life Sciences Learning Technology Mentors were expected to reflect an understanding that the project's objective was to advance online learning in ways that strengthened the viability of program operations, contributed to internationalising the curriculum, helped to integrate learning in workplace settings, and achieved other strategic outcomes for programs, such as:

- improving the management and presentation of experts' subject knowledge,
- extending the range and power of learning experiences in a field of study, and
- innovating educational program designs complementary to new fields of knowledge.

Focusing on Quality and Strategy

Outcomes from the second six months of the LTM program were noticeable in terms of broadly based advances in mentors' own skills development and in the online education awareness and skills of their colleagues. But there was not yet a significant presence of online learning environments available for student use, and among those that were, a number did not address the University's online education design guidelines or online publishing standards, even though formal training sessions for mentors had covered these. The importance of getting returns from mentoring increased the need for greater accountabilities among the stakeholders.

The Faculty convened a meeting of all its mentors to get consensus on appropriate messages about 'quality' that they could communicate to their colleagues, and also some messages that the Faculty needed to communicate to the central service units, related to operating system performance and the efficacy of training sessions.

In another measure, the University advised Faculties to short-list strategically important education programs and direct mentoring efforts more intensively towards developing online learning in courses in these programs. Accordingly, eight of the 15 Life Sciences mentors were selected for

their capability to work on programs that the Faculty had designated as having special strategic importance, in this phase of the LTM program.

Moving Beyond Mentoring

During the third semester of the LTM program it became increasingly obvious that this approach to advancing online learning was reaching the end of its life cycle in the Faculty of Life Sciences. Time release for mentors and their colleagues, always a somewhat fluid concept, was being taken up more and more to resolve underlying issues of quality and strategy in Faculty programs. Indeed, some of these issues were brought to the surface by the impetus to renew these programs for online learning.

It was also clear that a mentoring approach was not going to be effective in influencing every academic's learning technology skills and practices, and the Faculty's limited resources might need to be redirected away from this LTM program to other approaches, in order to shift the remaining staff.

The University LTM program manager and the Faculty LTM coordinator convened a meeting of all Life Sciences LTMs to determine how to sum up the outcomes in a way that could best inform future staff development and program development initiatives. Five major outcome areas were identified:

1. *Content development*. At the outset of the LTM project, approximately 25% of all Life Sciences courses had been developed for online learning to any significant extent. By the end of the LTM project, approximately 50% of Life Sciences courses were represented in the Distributed Learning System, either developed sufficiently for student use, or at some preliminary level of development. One outcome of the course-by-course approach to renewal for online learning was that the Faculty decided to undertake a major review of online learning in all its online courses, on a program-by-program basis, so that discussions about the quality and strategic dimensions of online learning could be better integrated with other whole-of-program management issues.

2. *Student learning experiences*. The LTMs reported increased student use of their course sites (as monitored with DLS course administration tools, and through student feedback mechanisms). Several explanations were advanced: they themselves had become more effective online teachers; their students had become more appreciative of online learning as an enhancement of other modes of learning; the student population as a whole was a more sophisticated Internet user group than ever before. The general level of student feedback was positive, but it also indicated a need for some carefully planned evaluation studies that the LTM project itself was never designed to conduct.

3. *Staff interest in learning technologies*. LTMs estimated that between 50% and 80% of staff in their departments were now engaged in teaching online to some extent or developing a site for online learning. This was borne out by the increase in courses with a presence in the DLS. While an increased take-up of online teaching and learning cannot be attributed just to the work of LTMs, this project must be regarded as the most significant factor by far in this outcome. The Faculty laid plans for a Learning Technology Leadership group to continue the momentum of online learning development that was initiated by the LTM project.

4. *Personal and professional outcomes*. All LTM reports acknowledged elements of personal growth and enjoyment, despite an increased work load. As well as acquiring capability with learning technology, these academic staff valued the opportunity to learn and hone general mentoring skills. Four LTMs reported publication of their work at conferences. Several reported increased collegial contact within the Faculty and two reported making collaborative contacts with other universities as an outcome of participating as an LTM. Being an LTM did

not lead to worthwhile outcomes in all cases, however. In some instances, placing a high value on other competing claims on work time, or placing a low value on accountability and teamwork, were factors that diminished a staff member's achievements as a mentor. The recognition and rewards of teaching and learning with technology were sufficient motivation for some but not all participants in the LTM program.

5. *System and program performance*. During the period of the LTM initiative, the stability and reliability of the DLS infrastructure improved significantly off a low base, and the work of the LTMs made a major contribution to debugging the system and monitoring its performance on behalf of other teaching staff during this time. The support structures at both Faculty and central levels were generally rated well. However, within the Faculty the upgrading of IT infrastructure was not well coordinated with the selection of mentors in every case; this resulted in a few staff entering into LTM contracts without being provided with adequate computing resources, and pointed up areas for improvement in IT service planning.

Learning the Lessons of the LTM Project

It is now two years since this staff development approach began and we have begun to formulate our experience as a series of questions that need continuing attention. These questions are offered here to assist others in planning and evaluation of their own staff development schemes.

Did we get the balance between central support and local action right? Forming and managing relationships of trust and shared purpose is not easy, but is essential if productive work is to be achieved. The IT Alignment Program was a central university initiative, but Learning Technology Services tried to emphasise the pivotal role of Faculties in the design of the LTM program. The Faculty of Life Sciences perceived benefits for its staff development and course development, and thus was willing to collaborate in the broad processes, and to commit a significant level of specific coordination effort, to achieve the outcomes described. Not all Faculties sought these outcomes nor chose this same degree of engagement; implementation of the LTM program was not uniform.

How practical is time release to replace part of the work of an academic in a meaningful way? The LTM program was premised on funded time release for academic staff to be mentors. A few of them held quite senior positions, and all of them had other important teaching, research and / or academic administration duties. Some of them ended up doing their LTM work on top of their normal activities, or redistributing duties to equally busy colleagues, because of the difficulty of finding and briefing suitable replacement staff for short-term, part-time appointments of this nature. The dedication of LTM participants in working flexibly to change their academic practices was impressive, but this aspect of the program was just not sustainable in every situation. Being successful in implementing online education became associated with redefining priorities, becoming very skilled at time and task management, and building synergies in teaching teams.

What is the optimal scope of a mentoring program? The legacy of this project was two or three academics (about 10% of academic staff) in each Department who had actively taken part, whose academic practices were influenced by the experience, and who remained as models and a point of reference for their colleagues. In retrospect, this seems to have been a reasonable proportion of staff. The term of the LTM program was not fixed from the outset; an answer to the question of who would be able to work effectively in this way and for how long, only became clear as time went on. As noted, support for mentoring did not become an entrenched process. LTMs, the Faculty and Learning Technology Services itself were required to renegotiate roles and initiate other approaches to meet the expectations the project had raised, when it finished.

What rewards are there for a mentor? Those staff who participated certainly added substance to their teaching portfolios, and thus enhanced their prospects for academic promotion on this ground; but they had to evaluate the efficacy of investing their effort in this area at the same time as the University's expectation remained constant that they produce research outputs in their discipline area

also. Most participants weren't likely to find time to pursue qualifications in staff development or courseware production, and so could not take advantage of accreditation programs that would formally recognise their expertise as LTMs. Participants had to have a desire to move themselves professionally into an area of continuous change and challenge; if so, they were able to derive considerable personal satisfaction from the opportunity to redefine productive and satisfying academic work.

How feasible is the concept of building up staff capability across a whole institution? How patient is the modern large university about investing in the future of its academic staff capability when there are real immediate needs for education program restructuring and renewal? We face pressures to increase the amount of 'quality' 'marketable' online courseware, but is it inevitable that our response is to short-circuit academic staff development and emphasise courseware production by specialist media production staff instead? Can we get this balance of short-term and long-term goals right? This is a particularly difficult issue in many universities at present, where national government funding is dwindling and the opening of global markets is a strengthening prospect. Putting content online is faster and easier to achieve than thoughtful and innovative renewal of courses and programs. Learning Technology Mentoring is not a quick fix. Building a culture of excellent process and practice in online teaching and learning takes longer, but may lead ultimately to greater competitive advantage.

We have no definitive answers to these questions. We seek to reflect on all of them, and work continuously towards more refined and sophisticated approaches to staff development and program development. What is our advice to other universities thinking of mentoring programs for online learning? Moving at once on several fronts—policy, infrastructure and support—is absolutely essential. Working across the university in all faculties and departments is also essential, so as to develop local ownership, build generalised capability and maintain productivity in a shared context. Without the substantial investment in time, money and relationship management that large-scale staff development programs demand, there is unlikely to be significant change in effective use of online learning on a Faculty- or University-wide scale.

The LTM program has left a large legacy, above and beyond the quantum of courseware that is now online, and the concomitant improvements that online learning has brought to student learning experiences, new curriculum development and program operating efficiencies. The academics who have given time to being mentors have an expanded network of colleagues, and they are now competent-to-advanced users of learning technology. The Faculty of Life Sciences has established a cohort of academic staff who are important human resources in its continuing implementation of online education for strategic advantage, and has also built its expertise in managing the related professional development and program development processes. The University has had hard-won, hands-on input into the continuous improvement of its system for managing online learning, and an opportunity to extend the scholarship of teaching and learning online.

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Endnotes

1. RMIT, like several other Australian universities, has adopted the nomenclature of programs and courses: 'program' for the university's provision of an entire student educational experience leading to a formal qualification, and 'course' for the component subject, unit or module.

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