DEVELOPING A FACULTY PLAN FOR FLEXIBLE DELIVERY FOR THE NEXT FIVE YEARS – AND HOW TO GET THERE

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ABSTRACT

In the pervasive move to flexible delivery in tertiary education, there is much talk about the ways in which information technologies can be enlisted to serve the needs of particular client groups. What is less often articulated is a vision of what a faculty's total program might look like in, say, five years time. And less often again is there explicit consideration of the theories and assumptions of organisational action which underpin approaches to implementing such fundamental change in universities. This paper is a case study of the Faculty of the Constructed Environment at RMIT University.

The first thing to call into question when we contemplate flexible delivery is the timetable, and many of the structures and infrastructures which attend it. The proposed model relates to a different way of approaching teaching and learning, but also to space holdings, facilities planning, and other infrastructure. The prime model of subject delivery will be through problem-solving cores, and socially interactive events (like mini-conferences), delivered in three modes:

- *workshops (real time/ real space; the most directly interactional of the modes);*
- *paperless (the most purely IT option); and*
- *bricoleur (which takes a multimedia approach and may contain elements of the other two modes).*

All students will sample all three modes during their studies. The model assumes that all subjects offered in the faculty must be delivered in common course architecture, with subjects being developed in agreed modes, and resources devoted to each mode defined in the budget process.

The second part of the paper details the steps taken so far in implementing the vision, and particularly the strategies adopted to introduce staff to flexible delivery options and challenges within each of the modes. All staff will need to engage with issues of flexible learning, but they will be able, to a large extent, to choose the prime mode for their practice, as well as having the option of moving between or across the modes over time. The paper concludes with a scan of some of the learning materials beginning to be developed within the model.

KEY WORDS

Policy, flexible delivery, multiple mode approach, constructivism, project-based learning, organisational development, learning spaces.

1. INTRODUCTION

RMIT University is, like all universities in Australia at present, engaged in a rapid process of change, where terms like 'niche market' and 'productivity' jostle alongside concerns about 'generic graduate attributes' and 'professional competence'. Quantity and quality are both important considerations in the universities of the 21st century as they seek to maintain important intellectual and physical spaces for their staff to pursue creative research and development, while at the same time needing to provide teaching for escalating numbers of students in all courses in order to shore up funding. These student cohorts have become increasingly diverse (McInnis, James & McNaught, 1995) with more part-time students, and students from a greater variety of backgrounds. The Faculty of the Constructed Environment, with a nominal 2500 EFTSU, has 3500 students on-shore and 500 off-shore.

Flexible modes of delivery have been widely viewed as the prime way of meeting the challenges posed by this diversity. There has been a fair amount of naive equating of flexible delivery with production of online materials ('Plug them into the Web') and insufficient attention to the relationship between flexible modes of operation for students, the use of communication and information technologies, and the design of educationally sound learning environments (Kennedy & McNaught, 1997; Reeves & Reeves, 1997). This is true of all levels in the system. There is pressure on universities to become more 'efficient', often to the exclusion of educational effectiveness, and this has translated in too many cases to the placing of text-based materials on the Web and a reduction in face-to-face teaching. However, there is no doubt that communication and information technologies will be a major part of future university planning, as several recent reports make clear (e.g. Yetton, 1997).

In seeking to develop a policy relating to flexibility in the Faculty of the Constructed Environment at RMIT University, we sought to escape from this 'horseless buggy' approach. We have conceptualised the process as follows (Figure 1):

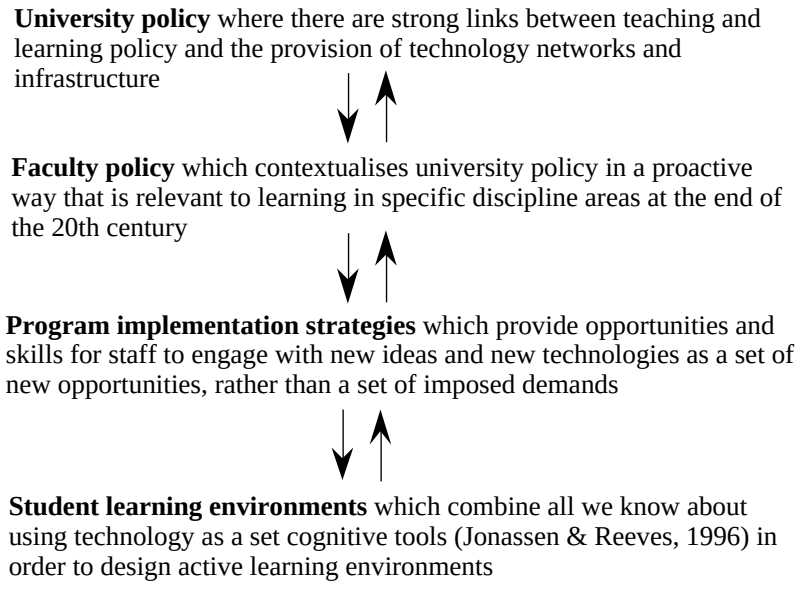

Figure 1: Effective policy stages for the development of flexible learning environments

2. RMIT UNIVERSITY POLICY

There are two key policy documents which are currently guiding the direction RMIT takes for the next three to five years. The first is the Teaching and Learning Strategy (T&LS). The latest version provides goals and plans for the period 1998-2000. The documents list six goals, each of which have clearly articulated operational priorities, sub-strategies and performance information/ indicators. A couple of examples are given in Table 1.

Table 1

Excepts from the TMIT Teaching and Learning Strategy

Goal	Operational	Sub-strategy priority	Performance information/indicator
2 To maximise learning for all students by creating student-centred environments in all subjects and courses.	2.2 (one of four) To introduce cost-effective flexible learning modes using a range of educational technologies which expand students' learning opportunities and encourage staff to become facilitators of learning.	E (one of three for 2.2) Faculty plans to implement staff development programs to enable the introduction of student-centred, flexible learning environments.	viii (one of three for E) Increased numbers of quality assured modules and subjects. Delivery modes fully evaluated and results disseminated.
5 To enable all staff to contribute to the development of teaching and learning at RMIT and to recognise these contributions.	5.1 (one of three) To create an environment which recognises achievement in teaching and learning activities, supports teamwork and models and shares good practice.	A (one of three for 5.1) Equitable, negotiated work plans which support reflective teaching practice using teaching portfolios, implemented effectively with all staff as part of the annual comprehensive work plan.	i (one of three for A) Work plans in place and evaluated.

These should not be seen as empty policy statements. There are resources allocated to implement the T&LS both in human and financial terms. Each faculty has a (level D) Director of Teaching Quality position established by secondment of an academic staff member from within the faculty. Over the last couple of years each faculty has received $2-300,000 from the University's Strategic Investment Fund for curriculum and courseware development, and for staff development. An interactive Web site is being developed to support this suite of innovative projects.

The other relevant policy document is the Education and Training IT Alignment Project (ITAP). The ITAP report was released in June 1998. ITAP is about a university system of communication and management. It has produced a report with 111 recommendations concerning three main areas:

1. a student management record system for the university which will interface with;
2. a learning management system for the organisation and delivery of online learning materials; and
3. project strategies for continuous improvement in RMIT's use of IT.

A comprehensive ITAP Web site has been established. These two documents have only recently been released but, obviously, there has been a great deal of discussion over the last year in all areas of the university. There are, obviously, clear links between these documents. The ITAP report has implications for the implementation of the T&LS policy about student-centred flexible learning and the T&LS feeds into the interpretations and development of a flexible student learning management system.

3. FACULTY POLICY

The Faculty of the Constructed Environment was formed in 1996, and includes, under the rubric of the 'constructed' environment, a School of Architecture and Design (housing courses in architecture, landscape architecture, interior design and industrial design), a School of Social Science and Planning (housing courses in social science, social work, environment, and social and urban planning), a Department of Building and Construction Economics (with courses in building and construction management and project management), and a VET Department of the Built Environment (with courses in interior decoration and design, drafting, and furniture design and technology).

This mix of disciplines and cultures may at first seem somewhat eclectic, but they share a number of orientations:

- They are all, in one way or another, concerned with our understanding of the constructed nature of the social and physical environment, involving elements of design, planning, building, and procurement.
- They all have a tradition of learning based around the capacity to develop real-world projects, and a constructivist approach to learning. There is a pervasive emphasis on the primacy of learner's intentions, experiences, and cognitive strategies (Wilson, 1997).

The latter point is a crucial one, because this fundamental understanding about the nature of learning and knowledge creation in our disciplines underpins the Faculty's approach to the development of learning environments, and its formulations of the appropriate role of IT as a set of tools to enhance particular approaches to learning.

Constructivists assume that learners construct different cognitive structures based on both their previous knowledge, and what they experience in different learning environments (Reeves & Reeves, 1997). It is therefore crucial that learning environments be as rich and diverse as possible. Projects must have personal relevance for learners, who have 'pre-existing knowledge, aptitudes, motivations and other characteristics that are difficult to assess, much less accommodate' (Reeves & Reeves, 1997, p. 60). Because of this foundational assumption that knowledge is individually and socially constructed, the development of 'a rich educational environment for a community of learners' (van Schaik, 1996) has become central to the development of the Faculty's Teaching and Learning Strategy. It has also underpinned the development of a faculty-specific model for flexible learning. This model departs from models of IT development elsewhere which often seem to enshrine an *instructivist* approach to learning.

Moreover, the University-wide planning documents seem sometimes to predicate particular modes of organising for flexible delivery. The distinctive ways in which the faculty proposes enlisting IT to support student learning, are based on the recognition that the application of new technology does not necessarily dictate a particular pattern of organisation; there is no single information society any more than there is *an* industrial society (Hough, 1996). There may be many information societies, and IT can foster both centralisation or decentralisation; training or education, teacher-led or student-initiated learning, and instructivist or constructivist approaches to learning.

3.1 THE 3-PEAKS MODEL

Like all other faculties and universities in the present environment, we face a series of dilemmas about the resourcing of teaching, ranging from staffing, lecture and workshop space, library resources, and general student management systems. We have recognised the necessity to comprehensively re-configure our operations. For us, this has meant breaking free of the set of assumptions built around the traditional timetable.

The fundamental aim of the '3-peaks' model is to put an end to crisis management and to rethink how the faculty works. The faculty's task is to support student learning (not to pump out information) and to inculcate a culture in which investigation and research are the accepted norm.

Characteristics of the model are (Figure 2):

1. Formal teaching, where possible, should be carried out through 'mini-conferences' taking place in a block during the first four weeks of the semester. The remaining nine weeks will be given over to projects, derived (at least in part) from the conferences.
2. The faculty should pattern its courses as much as possible, so that, beyond coherent 'professional' course cores, students can build their courses around wide a range of electives.
3. The faculty should recognise that it uses three main modes of investigation: *Paperless* (computing and IT); *Hands-on* (full-scale, real-world, real-time); and *Bricoleur* (scavenging or mixed-media).
4. Resources should be organised in peak formation (hence the '3-peaks model'). There should be a satisfactory level of facility in each of the three modes. Each peak will, over time, contain projects built by researchers, post-graduate students, staff and undergraduate students.

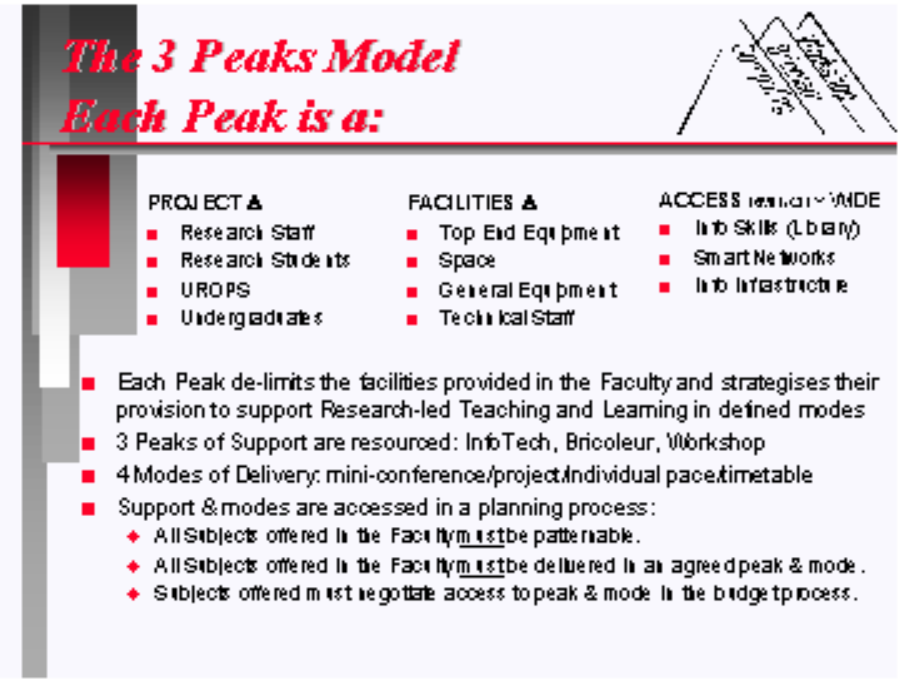

Figure 2: The 3-peaks model

This model is clearly built on a constructivist approach to learning, and assumes the integration of appropriate forms of *IT* use *into* a faculty-specific model of flexible delivery. The core features of this model can be stated concisely:

- the need for the faculty to articulate its philosophy of learning;
- for modes of engagement of learners to be the beginning point;
- IT should be seen as an *additional* tool to aid learning; it is instructive to look at the extensive use of CAD in the design disciplines over the last few years; and
- the alignment of physical with learning/social space planning.

4. ASSUMPTIONS ABOUT POLICY/ PROGRAM IMPLEMENTATION

Both the RMIT Teaching and Learning Strategy and the University's IT Alignment Project embody certain assumptions about the nature of the contemporary university (as a corporate entity), and of the essential nature of organisational action within it. In the era of business and performance plans, of the re-engineering of core processes, of the enshrining of market-based relationships, and of the codification of prescribed workflow processes accompanying the Quality agenda, many academics are becoming increasingly resistant to change.

Conventional texts on management often define organisations as groups of people united by a common goal, but our common experience (and our common sense) would tell us that organisations are only rarely so united and so rational. There is a strong body of literature on program implementation (Rogers & Hough, 1995, pp. 322-4) which recognises that central units have essentially fragmented and dispersed power over service delivery units. It is scarcely surprising that professional or quasi-professional workers will systematically resist attempts to alter their routines, and their control over specific tasks. Because of this, (large public-sector) organisations are said to be 'dynamically conservative'; parts of them will fight (more often than not, covertly) to remain the same.

Planning for flexible delivery in the Faculty has been built around the recognition that many staff are, to say the very least, ambivalent, about the macro change agendas. At the same time, we, as a faculty, need to embrace change; there are many reasons why we could not continue to operate in the ways we currently do.

Reflecting the assumptions of the constructivist approach to knowledge, we have sought to adopt an 'Organisation Development' model of program implementation, where the need of individuals for autonomy, participation and commitment are seen as paramount. In the OD approach, implementers are encouraged to exercise independent judgement using workgroups for support and problem-solving. The starting point for implementation becomes the social, intellectual, and psychological needs of people (as workers) rather than structures, technology or outputs. Corollary assumptions are that the capacity to implement resides at the bottom of organisations, not the top; and that program models are developed during implementation; not simply 'planned' and then 'implemented'.

4.1 FIRST STAGE IMPLEMENTATION OF THE '3-PEAKS' MODEL

We have built direction by putting staff at the centre of program choices. The process has begun with department-based meetings/ workshops for staff on the Faculty Strategic Plan for the next three years, and on the development of the '3-peaks' model. These forums have aimed to inform *all* staff of the broad policy contexts, of RMIT's policy imperatives and performance targets, the broad outline of the '3-peaks' model, and some experience of examples (developed within the Faculty) of flexible delivery approaches within the different learning modes.

We have sought to involve *all* academic (and many administrative) staff, rather than develop initiatives around self-selecting enthusiasts. Staff have responded well to the expectation that they should all engage with some type of innovative project to develop their teaching within the model. This is principally because they have been able to choose their own form of engagement with the broader project. The university has recently introduced an annual workplanning process for academic staff, and we are attempting to rethink this to cast the planning over three years, so that we can recognise the altering of emphases in activity at different times, rather than have academics trying to harmonise all of the competing pressures into a continually unfolding present. The '3-peaks' model becomes a major framing force for academics' conceptualisation and construction of their work.

Alongside these developments we have scheduled both centrally provided and local staff development initiatives on, for instance, the '3-peaks' model and the Boyer (1990) model of integrated scholarship, as well as re-organising the faculty planning processes to integrate policy and program development in teaching and learning with IT and facilities planning.

So, we are imagining a convergence of space and resources planning with professional and teaching activity, but this is built on explicit choices flowing from our disciplines, and congruent with the professional projects of staff; rather than a simplistic injunction to put 'everything online'. Over the next twelve months we expect to learn a lot more as we progressively develop 'courseware' within and across the modes of engagement and learning.

5. STUDENT LEARNING ENVIRONMENTS

At the student level there has been development of new student learning environments including the use of new communication and information tools.

Example 1
Several mini-conferences have been scheduled this year, and they have ranged from smaller 'in-house' conferences (in Landscape Architecture) to the organisation of a major conference on the Asia-Pacific region ("Asia-Pacific: Political Economy and Public Policy"), which was offered as a conference mode subject, (with student learning taking place over the whole semester through the completion of a project structured by task and learning contracts). The conference also involved a linked Public Forum ("After the Crash: Australia and Asia in a time of economic crisis") which was offered as a separate fee-paying event and involved the participation of eminent external speakers. Students attended this initial conference on a face-to-face basis; however, the proceedings have been captured, by a combination of video tapes, audio tapes and printed material, and this material can be moved into an electronic format and form the basis of a 'virtual conference' in succeeding years.

Example 2
Staff have developed both (paper-based) simulation games and case studies (in areas like program evaluation and public policy) which have been developed with students in classroom formats, but are now being modified for IT-based use. In developing this approach we are assuming that knowledge is constituted in action (not simply in information enshrined as knowledge), and the simulations and case studies will allow students to actively experiment. Interaction, in this context, is predicated on students being able to interact with the material in ways that no-one could have necessarily predicted, rather than being constituted by students accessing multiple choices in a determined universe of choice.

Example 3
Staff are building a research database on the development of Melbourne, which will recreate the built environment of the city during different eras, and provide CAD skills in a history/ research context. Students will research aspects of the built environment of the inner city, beginning in 1854, and then develop their CAD and rendering skills in entering a collection of buildings/ streetscapes into the developing virtual city. Students will work on this project for one semester, and different cohorts of students will, over time, contribute to the development of a virtual city-centre, which will be able to be 'walked through', in 1854, 1864, 1874, etc. The virtual city data base will become both the process and the product of this on-going learning project.

At a later stage, design students could fully illustrate the buildings, and even experiment with the auralisation of this virtual environment (through the use of IT for acoustic modelling).

6. SUMMARY

In this paper we have told a story which emphasises the relationships between:

- the importance of explicit assumptions about the nature of contemporary discipline-based learning;
- rethinking assumptions about education enshrined in the timetable;
- building new models of curriculum delivery that recognise the need to address both social and physical spaces;

- the place of local contexts (faculties) within institutional frameworks, and the need to proactively interpret these positions;
- a model of program integration and implementation that supports change at faculty level, including staff development and support, and space and infrastructure planning; and
- role of information technologies in the provision of tools to assist the implementation of faculty vision and policy.

7. ACKNOWLEDGEMENTS

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