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# 5 Policy issues

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## 5.1 Overview

In this chapter, we examine some policy directions and issues at the case study institutions. We will look at the individual university cases first, and then look at commonalities and differences between institutions. In this way we hope to emphasise similarity and diversity.

All five case study institutions have the use of information technology as a key policy driver. Indeed, the application of communication and information technology is a key policy issue at all Australian universities (AVCC 1996), but in the two case studies where online technologies were the primary institutional focus, it seems that policy making has become a more challenging, at times contentious, issue. This may well have been related to the more radical nature of the changes in teaching, learning and administration, induced by system-wide online learning environments.

The case study institutions adopt different positions with respect to centralised vs. devolved determination of policy in this area. Striking a balance between top-down and bottom-up policy determination is a key issue.

The faculties studied within the Established University and the Multi-campus University of Technology both claimed their institutional policy directions were essentially bottom-up, but, in both cases, a broad policy direction had been set by the top.

The Regional Distance Education University has adopted a top-down, centralised approach to policy direction, but, despite some initial teething problems and approximately eighteen months down the track, the general direction seems to have been accepted by most staff. There were, however, concerns raised by some staff, for example innovators, about these policies, and although management had some empathy towards their situation, it seems that policy making will continue to focus on mainstream, rather than minority issues.

The Urban Distance Education University has also adopted a top-down, centralised approach to policy direction, but more recently; so there had been little time to fully implement it or assess its impact. Once again, however, this policy seems to have alienated some staff who felt that the new regime might impose untimely restrictions on academics who had just embarked on new online projects. These staff, particularly the entrepreneurs, were concerned

that the new university direction showed insufficient support for individuality and in the long run could stifle innovation.

The Single-campus University of Technology seemed to have had a completely bottom-up policy direction, with apparently little central or school-based policy direction.

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## 5.2 Individual institutions

### 5.2.1 Established University

Within the faculty studied at the Established University, policy, particularly at the institutional level, was perceived as having had a relatively low influence on the take-up of CFL. This perspective was also shared by staff outside the faculty. Senior management, for example, reported that policy has had 'no particular effect' on take-up. One Head of School described the general direction of policy formulation as very much a top-down, meeting bottom-up, approach. The top-down aspect came from the Vice-Chancellor, who was seen as devoting significant financial support to CFL because he saw this as a key factor in the future of the university. The bottom-up approach came from a range of people who are producing high quality materials.

There was, nevertheless, an acknowledgment that there were very broad university policies, such as those which support the use of computers in teaching and learning, which set the scene for more specific initiatives within the faculty. Overall the consensus was that the university adopts an 'arms length' position in relation to stipulating what must or should be done, preferring instead to offer incentives.

When prompted, a number of staff highlighted the following policy areas as impacting on the future role of CFL use:

- intellectual property and copyright
- staff promotion
- evaluation of interactive multimedia
- collaboration

Two recent examples where the interests of some areas of the faculty had aligned less well with university directions were specific web technology development, and online delivery for off-campus students. For example, there was growing unease about existing policies and support given by the

university and the faculty to pursue distance education opportunities, by those who perceived the potential for an expanding external market.

In general, however, the point was made convincingly by several senior members of staff that the direction the faculty was taking with respect to being at the forefront of multimedia development aligned well with the policies and mission of the university, and with the policy and funding framework the Vice-Chancellor had put in place.

### 5.2.2 Multi-campus University of Technology

In this university faculty, policy, at either the institutional or faculty level, proved not to be a major factor in the uptake of CFL. It was generally felt that there were few university or faculty policies which facilitated (or hindered) the uptake or use of CFL. Some staff acknowledged that some fairly generic statements existed, but they basically only set up a structure from which 'one had to extrapolate' in writing a grant proposal or justifying an initiative. Many staff had difficulty naming specific policies that related to the use of CFL.

Staff from one school within the faculty reported that while they had not been overly constrained by university policy when developing flexible learning packages for external students, policy provided little encouragement to do so. Current policy did offer some guidelines and a degree of latitude that did not exist in previous years with respect to external students, but there was a sense that further policy clarification was needed, especially in relation to online provision for offshore students.

Overall, there was a strong feeling that what had happened to date had been very much from the bottom-up rather than from the top-down. In fact several junior staff members saw it as positive that management did not always understand what they were doing in developing CFL resources. Nevertheless, management, while not necessarily having a detailed grasp of CFL development issues, was generally favourably disposed towards such initiatives, and the Dean, in particular, was perceived as being 'very supportive of what we are doing'.

An alternate perspective was given by one respondent, who felt that while there was a broad vision for CFL at the university level, at the faculty level the lack of vision and a lack of resources had prohibited development and adoption of CFL.

In general, however, staff and management reported a close alignment between institutional and faculty direction. Even in a marketing context, one senior academic believed the faculty's positioning fitted well with the image of the university, citing a collaborative project with an outside organisation as

a good example of a CFL initiative that aligned well with faculty goals to strengthen ties with the profession.

The faculty has developed a new strategic plan for the next five years which seeks to achieve greater integration of CFL approaches across all faculty programs and to promote the use of CFL as a strategy to improve learning outcomes and flexibility. Furthermore, the plan will facilitate the administration of the use of technology in a teaching context and also in a pedagogical sense, because any planned initiative must go through the faculty Teaching and Learning Committee. Overall, management is supportive of the new strategic plan, which identifies specific targets and objectives and aligns well with the university Teaching and Learning Strategic Plan. Also, importantly, continuing progress in regard to CFL had been embedded in the performance agreements of senior faculty management.

A number of senior staff still believed however that there remains significant work to be done at an institutional level about policy, while the majority of staff interviewed believed there was no clear policy framework for:

- academic promotion based on the use of CFL;
- commercialisation of products;
- encouraging collaboration;
- catering for external students, particularly online delivery for offshore students;
- flexible learning; and
- dissemination externally about CFL.

### 5.2.3 Regional Distance Education University

The Regional Distance Education University has adopted policies to promote the systematic use of communication and information technologies, in particular online technologies for teaching and learning. Senior management committees have formulated system-wide policies which resulted in an IT infrastructure designed to facilitate a universal online capability.

While this university has clearly adopted a top-down approach to policy formulation, the direction of policy is achieving acceptance by most staff. One senior manager felt that the direction from above had provided an institutional focus for decisions rather than a focus at faculty or school level and that recent policy had ensured that individual schools did not strike out on their own to their own specifications. The institution-wide system is seen by many as a very clear statement that the university was moving away from a small one-off operation, which would prove unsustainable in the long run and on a larger scale. Several staff from different faculties reported that their

schools were very much in tune with the university online initiative—focused on online delivery and student support.

A number of principles underpinned the institutional policies which were seen as crucial to the success of the online initiative. These included:

- using online technologies to increase the communicative capability of teaching and learning, not just information delivery capacity;
- ensuring access considerations were fully appreciated when devising technical systems; and
- the use of a universal, across-the-board online system which provided a minimum basic standard for all subjects in relation to online support for students.

A senior manager emphasised the importance of institutional policies, but, at the same time, acknowledged the tensions which inevitably occur during this phase—for example, highlighting issues about who is driving the agenda, and the impact such policies might have on various stakeholders within the institution. This view was supported by a member of academic staff, an early adopter who also has an advisory role in the faculty:

*I think this university has in one sense got in right in developing an online or technology policy which is top-down—I mean there are plenty of examples all over the world where there are lone rangers doing all sorts of interesting things—it is all very well—and it is not going anywhere. If you are serious about all this then you probably do need a top-down system, but at some point you have to come back up the other way.*

It was argued by one manager that the university was clearly looking to the future by putting forward universal policies to ‘kick start’ the whole system, but that at the same time the university would not stymie innovative offshoots from the centralised system. However, some staff, who were early adopters or who had supported the innovators in a professional sense, pointed out that institutional resources, processes and services to support cutting edge development would be curtailed or no longer exist.

Ongoing staff development was seen as a very important issue by all. Some staff had been resisting moving into online teaching, and a real challenge to the university was in convincing academic staff to embrace online teaching. At one stage, staff in one school had dropped out of the online teaching mode, when they were given the choice of participating in online teaching, but this situation has now been reversed. The current message from the university, underpinned by policy, is that effective communication between the students and academic staff, and between students and the university is essential and that online services enable that interaction for all students

irrespective of their location. The online facility is therefore a resource for staff to use to facilitate interaction and exchange of information, in the same way that other resources of the university are available for teaching and learning.

Other concerns were emerging, as policy directions were beginning to diffuse across the university. One member of academic staff reported that while the policy framework of the university was very supportive for online delivery, he did feel that in the past 18 months the standards approach had made it less flexible (particularly in the context of offering fully online subjects).

This view was reiterated by a number of staff working at the grassroots level, where there was some worry that teaching practices were being constrained by the online policies and procedures. For example, this related to some of the materials people wanted to put online which were in non-standard formats, links to school homepages, and so forth. In addition, there was a view, though not widespread, that what individuals had done off their own bat was now being 'institutionalised', perhaps without due recognition. Another comment was that staff who had come from a 'print distribution' model were trying to impose a quality and standards system that limited the inherent flexibility of online technologies.

Other concerns included:

- a need for a more holistic approach—academics are 'tearing their hair out trying to keep up with what they already have to do, and the University keeps thinking up new schemes to do more';
- a need to move forward in a more concerted and coordinated fashion;
- a danger of overwhelming students if online teaching techniques are not introduced gradually over the life of the course, rather than all at once by one enthusiastic academic; and
- a lack of a common understanding of the direction the university is taking.

Notwithstanding these issues, many of which related to the 'bedding' down of new policies, the majority of interviewees (both academic and support staff) believed that the policy was working well, and that it was enticing staff to use the online teaching mode, and that the university was increasingly supportive of online developments.

#### 5.2.4 Urban Distance Education University

The primary focus of the case study at this university was on two significant CFL (online) projects, each of which demonstrated a strong innovative and entrepreneurial bent. However, it is significant that the university has recently also embarked on a systematic, centralised online initiative to serve the whole

university. This central initiative appeared to align with the university's current strategic directions and plans, particularly with respect to providing a reliable and standardised online learning system to serve expanding off-campus markets.

This university has traditionally had a strong reliance on good policy. At the time of the study, the university was moving from a less structured online policy environment to a strong top-down approach. This nexus was placing especially difficult pressures on policy-making processes at the time of the study, with respect to the nature and rate of uptake of online and offshore programs.

The earlier policy environment, described by one member of senior management as 'laissez faire', enabled many pioneering projects to follow their own, often successful, pathway. For example, the lack of a university online service provision policy and central coordinated infrastructure in the early days resulted in individuals and schools doing their own thing—one program described adopted Lotus Notes for group communication, another used the services of an external provider, and yet other subjects set up a range of other forums or chat groups. A number of these early, innovative initiatives had developed their own 'intuitive' level of policy making. For example, one project has a 'same day email reply policy' for students which, while it broadly aligns with the institutional goal of being student focused, may not be appropriate or practical to mandate in other subjects.

In some respects, both the case study projects sat well within the broad institutional directions and policies. One project fitted well with the entrepreneurial culture of its home Division and the leader of the other project commented that their program furthered the university's entire offshore learning initiative and was building on the very strong institutional flexible learning policy. One of the academic managers interviewed supported the above assessment of the second project, but made a general comment that flexible learning policies had to accommodate particular features of individual programs and student needs.

As indicated, the university is moving towards a widespread, standardised system to support online learning, and in this transition period there is pressure on policy makers to clarify matters related to current practice. For example, a number of interviewees queried whether, and if so over what time period, the pioneering projects would be required to adopt the new, centralised system in order to provide students a common environment for all subjects.

Timeliness, scale and quality control were important considerations, as evidenced in the comment of one senior member of staff who emphasised

that university online policies were not encouraging everyone to ‘rush in’, because it was important to maintain a certain level of quality as subjects are introduced into the centralised model. Additional advantages of a system-wide approach were argued by another senior staff member, who felt that the use of standard formats and ways of operating offered real benefits to students in that they did not have to learn a new system for each subject. This person supported the need for standards, but also recognised the need to foster some innovation within the policy framework.

In many respects, however, this case illustrated the growing tensions between the policies being developed to ‘mainstream’ online and offshore programs across the university and the practices, processes and aspirations of the innovators. A number of the early adopters interviewed perceived a widening gap between their initiatives and the institutional policy framework. One person suggested that ‘the horse has bolted’ and it is too late to enforce processes which may undermine or limit the potential of successful programs. In particular, the inherent time lag in all policy formulation, pointed out by one senior administrator, was seen to conflict with the entrepreneurial goals of the division and the new, groundbreaking ‘best practice’ work being done within their program.

Some academic innovators feared that the current standardised approach was too basic, and ultimately this approach might prove to be too limiting, affecting quality by downplaying the particular requirements of different subjects and different contexts. They felt that decisions about online teaching and learning should be able to be geared to meeting the needs of those students who, for instance, had increasingly sophisticated expectations about online education. Furthermore, while there were technical considerations in establishing university-wide guidelines—for example, in enabling lecturers to edit their own web pages—it was felt that there was also an underlying concern by policy makers that, without such rules, people would publish material that did not meet the university’s requirements.

While a general policy framework has been developed, it seemed that a number of specific administrative problems introduced by computer-based approaches, particularly online ones, have emerged. These, administrators and academic managers acknowledged, will require ongoing monitoring and modification of policy.

Collaboration on projects is an example—with an increasing number of entrepreneurial initiatives blooming across the university. Officially all such projects, whether delivered locally or offshore, need to be approved by Academic Board, even if the course already existed in another form. But it appears that, often with the best intentions, a number of new collaborative

initiatives had not been developed, or at least only partially developed, within policy guidelines. This again highlights the tensions that can arise between rapidly rising and potentially rewarding opportunities, and the policy-making processes necessary to ensure long term sustainability of innovative programs and the protection of university standards.

One senior administrator highlighted a number of policy implications when working with offshore agents, where the agent acts as an intermediary between university administrative requirements and students. In such cases, policies are needed to ensure the host of university information system requirements are met, and, for example, to cover plagiarism from online sources. Copyright, discussed later in this chapter, was also looming as an increasingly complex and grey area.

The difficulty and complexity of developing a policy framework to support new approaches right across the institution was acknowledged. It was felt that the university was about half-way through this initial process, and had learnt some valuable lessons upon which it could build. It was to this end that the university was investing considerable energy in ways to support and encourage academic staff, particularly 'mainstream' staff, in their transition to an online learning environment.

### 5.2.5 Single-campus University of Technology

In the view of case study participants, the Single-campus University of Technology had placed little importance on policies about adoption of CFL. Unlike the other four case universities, there was no direction from the top about the adoption of CFL.

The innovations developed in the school studied at this university arose almost entirely from the bottom-up. The view of a senior manager was that CFL was not an area which had been strongly pushed. Rather, developments were the result of motivated people making it happen. Other respondents had the view that CFL adoption was a result of people making the time themselves to develop materials for their own use. There did not appear to be a school policy, as such.

It was felt that there was a lack of alignment between university policy and policy at the school level. However, staff interviewed seemed to be unclear about the details of the university strategic plan. The only area in which university policy impacted on CFL was in targets for numbers of computers per student.

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## 5.3 Common concerns across all institutions

While the five case-study universities had their individual profiles in terms of their policy approaches to CFL, there were a number of issues which were common to most or all of the institutions. These will be discussed in the remainder of this chapter. The issues are:

- administrative processes
- equity issues
- funding
- staff recognition and rewards
- intellectual property

### 5.3.1 Administrative processes

There are a number of policy issues associated with online delivery, both locally and offshore, which need to be resolved by new administrative procedures. These problems are pressing for universities which offered online courses internationally. The online approach introduces a range of specific administrative problems, for example with respect to plagiarism and electronic information, and these require modification of policy which, unfortunately, is often subject to an inevitable time lag as appropriate expertise and input is sought.

A related issue for several universities is the policy implications of working with offshore agents, who act as intermediaries between the university administration and the students, but did not necessarily understand the administrative requirements of the university. An alternative, but in many ways a less attractive solution, is to avoid problems with intermediaries by asking academic staff to take on those administrative processes when they visit their offshore students. The third option is to develop information systems that will handle administrative needs for students at a distance. One university was currently using combinations of all three methods, depending on nature of the program and where it is being delivered. Lack of coordination seemed to be an issue, with two different areas within one school choosing different modes in the one offshore location.

A number of staff felt that the distinctions between teaching methodologies for on-campus, distance and international students will gradually disappear, and that online developments simply add to the existing suite of distance education provision, instead of replacing them. Staff also had the belief that the divisions between on- and off-campus students and full-time and part-time subjects were artificial, and that there was a need for more flexibility. However, the blurring of distinctions between modes of study will require

significant changes in administrative support, and that under these arrangements, new IT support systems would be very important in accommodating these changes.

### 5.3.2 Equity issues

Equity of access to computing facilities by students arose as an issue of concern at most case-study universities, particularly at one university which has equity written into its enabling Act of Parliament.

There are a significant number of students who do not have computers and who therefore may not be able to access online courses. Even if students do have computers, they may not be sufficiently advanced to access online materials, and may not be equipped with a modem. Many universities feel unable to take full advantage of online technologies until the issue of access to computing facilities has been solved. For example, those institutions at the forefront of online delivery argue strongly for government intervention and leadership in this matter. They claim that the current situation, which prohibits universities from requiring students to have access to a computer, is a major impediment to uptake. Instead, they believe safety net measures should be in place to assist financially disadvantaged students, rather than 'withholding' the potential advantages of CFL approaches from the majority of students, because of the needs of a minority. The current unsatisfactory situation, one senior manager suggested, raised considerable uncertainties about the strategic advantage of online programs at present because of the issues associated with equity of access to students.

Currently, most case-study universities treat online course material as an additional option, instead of replacing existing modes of delivery. Many staff argued that the online approaches in their subjects are used in conjunction with other tried and true methods to ensure that students have a choice about how to receive materials. Ultimately, however, one or two entrepreneurial staff reasoned that it always comes down to a choice, that students will 'vote with their feet', and that one cannot always be constrained by policies developed for the minority. These staff supported the view that safety net policies should be implemented to address the specific needs of the minority.

The major issue, therefore seemed to be that universities could not legally require students to have access through an online system. There are existing anomalies to the access and equity requirements, however. For example, one faculty has a rule requiring students to have access to its specialist library, but cannot mandate the same with respect to computers. The only exception was for students enrolled in full-fee paying courses.

For universities where students undertake CFL work in an on-campus mode, access to laboratories is also a barrier. The pragmatic view expressed was that some pressure could be removed from laboratory facilities if students could be required to purchase a modem.

Respondents from several universities requested policy guidance from their institution or from the government about requiring students to have computer access before undertaking online courses. Faculties were cautious about committing completely to CFL developments until equity issues were addressed by either the university and/or government. It was strongly felt that the power of the communications technology would not come to fruition until institutions can make the assumption that all students are online.

*It is something the government needs to address—if we are going to be global or international in our time, competitive as a nation which is the rhetoric that comes out all the time—that we must have all our students use computing technology as a tool of trade. No graduate should come out without those skills—otherwise it is false equity to say ‘we won’t introduce it because it will be disadvantaging a proportion’.*

The situation will need to be constantly monitored to provide an accurate indication for planning and policy purposes. The work of the ‘borderless education’ research team (Cunningham et al. 1998) described in chapter 1 is important in this regard.

### 5.3.3 Funding

Funding, particularly grant-funding, was seen as an important issue. Institutions funded CFL innovations in differing ways and to different extents.

The Established University had expanded its grants scheme significantly, covering undergraduate and postgraduate coursework. There are strategic grants at a faculty level of \$100 000 or more; project grants of \$50 000; pilot grants consisting of mainly time relief to explore new ideas; and priming grants, for people with no experience at CFL. The current priority is related to a substantial commitment to piloting and priming.

An academic manager at the Multi-campus University of Technology felt that there were too many similar applications, too many examples of people proposing similar initiatives. This person felt that it would be preferable to simply allocate \$200 000 to the Dean, with the instruction to ‘use it to the best of your ability’.

The Single-campus University of Technology had a more restrictive attitude to funding CFL developments. It was viewed as encouraging developments, but not with significant funding: ‘I think they occasionally throw \$10 000 out and

say: 'If you've got any good ideas, let us know'. The same university, however, is actively looking at mechanisms whereby each student can obtain computer access.

A particular issue with respect to centrally funding CFL developments is that funds have to be clawed back from other areas of the university, especially teaching areas.

One case study university had established an agreement with another university which specifically allowed funding for collaborative inter-institutional projects. This is discussed further in chapter 8, Adoption and Collaboration.

Many interviewees felt that current grants schemes are very 'outcome'-oriented. Grantees are funded to produce a product, and have to guarantee that the product will be integrated into the course. However, it may turn out that the project does not achieve its objectives, and that the teaching problem may be solved better in another way. Currently, it is not acceptable to admit failure, but it was felt that it would be beneficial to be able to do so, in a formal way, so that others do not attempt to do the same approach.

A particular difficulty with funding of CFL developments was that there was no provision for ongoing development and maintenance. Some respondents felt that universities needed to make provision for the need to upgrade and maintain existing resources, but that this does not occur at present. It is unlikely that this issue will be resolved until the funding model evolves from the current emphasis on one-off project grants.

#### 5.3.4 Staff recognition and rewards

Staff recognition and rewards arose as a major issue by case study participants. This issue is discussed in more detail in chapter 6, Culture, but some aspects are relevant in a policy sense.

There was a very strong view expressed that academics developing CFL materials craved recognition for their extra efforts and innovation. While promotion was not the only way suggested in which recognition may be given, it was a major consideration.

Most universities include teaching performance in their criteria for promotion. However, while teaching performance was nominally equal on paper, there was a broad perception that, in practice, research performance counted much more highly. One staff member received the Vice-Chancellor's award for excellence in teaching, but was not convinced, and did not believe that the

majority of staff were convinced, that teaching counts sufficiently for promotion.

A major contributing factor to the perception that teaching is not valued is that there are no clearly articulated criteria or recognised benchmarks for good teaching practice. It was felt that evidence of teaching was not presented as clearly as research evidence, and that this was a staff development issue. It was recognised that some staff used 'teaching portfolios', but it was felt that more effort should be invested in recording genuine outcomes of teaching performance through evidence of evaluation.

One case study university is considering allocating recurrent funding based on teaching outcomes as well as research outcomes. This is already the case at Murdoch University, where a proportion of annual EFTSU funding allocations are based on teaching performance.

The lack of clearly identified criteria for teaching excellence clearly hinders the appropriate recognition of staff involved in CFL developments. This is an international issue and substantial work is being done on in the UK on benchmarking teaching qualifications and accrediting university teaching (Staff and Educational Development Association (SEDA) <<http://www.seda.demon.co.uk/pdhe.html>>). Once criteria have been developed and are being used, then peer pressure will be more effective as an incentive to adopt CFL materials.

### 5.3.5 Intellectual property issues

Intellectual property (IP) was a significant factor influencing development and adoption of CFL at universities in Australia. Issues of concern derived from this study were:

- Policy regarding the ownership of CFL has been a definite barrier to adoption at some universities.
- There is a range of levels of policy at different universities.
- There appeared to be a lack of understanding of IP issues by many staff.
- Administrative matters with respect to IP and CFL caused difficulties to staff.
- Some broader, legislative issues need to be addressed.

The rapid development of online technologies has outstripped the ability of the legal system to keep up with the changes. This view was reflected by many case study participants in a number of ways, as described in the rest of this chapter. Expert advice on the current state of play with respect to copyright and intellectual property as they relate to CFL was sought from an

acknowledged authority, Fiona MacMillan of the Asia Pacific Intellectual Property Law Institute at Murdoch University. Her report is presented in full in Appendix A, and relevant parts of it are referred to when analysing the perceptions of staff and managers in the rest of this section.

There are two main aspects of intellectual property which affect universities and their staff: the intellectual property rights of university staff and their employers with respect to CFL materials which had been developed at the university (who 'owns' the materials); and the intellectual property rights (copyright) of people who own CFL materials of interest to university staff (how are people who 'own' materials protected from others unlawfully and unethically copying them). These will be discussed separately in the next two sections. The final section raises issues which need to be addressed or are being addressed at the level of government.

#### 5.3.5.1 IP developed as part of employment

The purpose of copyright law should be regarded as the encouragement of creative endeavour, and the main method of encouragement is to give an economic right to the creator to prevent others using the work in certain ways (see Section 1 of Appendix A). In an academic environment there may be other motivators for the creation of IP, such as publication records. It was the view of several contributors that an IP policy which motivated staff should address the issue of rewards (in whatever form) for creators.

Under the Copyright Act, the first owner of copyright is the author of the work, except if the work was created in pursuance of the terms of employment (paragraph 3.1.3 of Appendix A). Paragraph 3.1.4 of Appendix A questions whether academic authors are employed to create copyright works and posits that, apart from explicit contractual provisions, academics retain the copyright in the material that they create. However, if a copyright policy is part of the normal conditions of employment of an institution, then this overrides the staff member's right to own copyright.

Of the 25 universities who responded to the appropriate part of the survey, only 14 reported that they had an IP policy for CFL materials produced by staff at the university. Of those 14, only five reported that they had a policy encouraging collaboration with other institutions. Similarly, 14 institutions supported commercialisation of CFL products, whether through IP policy or otherwise, and 12 had guidelines on quality assurance of existing CFL materials being used at the university. It should be noted that there was a range of responses to these questions. In other words, there was not a uniform response from the 14 universities. Some examples are:

At Sunshine Coast University, there is a university-wide policy for IP. CFL materials are not specifically mentioned though the word multimedia is used within the policy. There is a section on agreements with third parties whereby the University may enter an agreement with another party which provides for control, ownership and exploitation of IP.

At Monash University, the IP policy was not drafted to specifically encourage collaboration. However, specific policy has been drafted to support collaborative courseware development (including IP matters) between Monash and Melbourne Universities.

At the University of Ballarat, quality assurance of curriculum design and resources is undertaken at University level and is required to meet policies on: 1. Curriculum models and guidelines 2. Academic handbook 3. Flexible Learning and Teaching Statement 4. University Council Strategic Focus on Flexible Delivery.

There is also a wide range of approaches to IP policy. Some universities, particularly those with a strong distance education background, such as the Regional Distance Education University and the Urban Distance Education University, had well-established policies. It was quite clear at these institutions that teaching and learning materials created in university time belong to the university. In the main, at these two universities, institutional policy does not seem to be questioned and largely does not seem to hamper the development process between academic staff and educational designers.

There was a larger variation in opinion at the other three case study universities about IP policy. While each institution had an IP policy, there was varying awareness of the content of these policies, even by senior managers. There were also varying views about the ownership of IP and who would receive the rewards associated with the copyright of CFL materials. Despite the lack of knowledge about policy, IP up until now was generally not felt to be a barrier to the development of CFL.

A feeling was expressed that, in the past, universities have not been particularly interested in copyright as a revenue raising form of IP. Universities have been interested in patents, but now they can see potential sources of revenue from the copyright on online products, and have increased their interest in copyright.

Three of the five case study universities have recently reviewed, or are in the process of reviewing their IP policies, but details were not available in all cases.

The Established University had found that its previous IP policy had acted as a barrier to the development of CFL resources, and had recently taken an innovative approach to finding workable solutions to copyright at the institutional level. The essence of the new policy was based on recognising the relative input of all contributors, either as an 'originator' or a 'contributor' to a project. Originators are members of academic staff; typically they come up with the idea, are responsible for the intellectual content and drive the project. Contributors are professional people who have the expertise to make the program happen (e.g. programmers) and add value through design (graphic, instructional), etc. The new policy is a way of negotiating the recognition and rewards which might accrue to all stakeholders (individuals and institutions). It also provides some options to address the previously thorny issue of commercialisation, by asking individuals to recompense the university for its outlays (grant monies, etc.) if individuals commercialise the product. Individuals wishing to commercialise a product may either licence it out (so that the IP still belongs largely to the university), or negotiate with the university to have the IP deeded back to themselves, either through license or sale. Carter (1997) discusses factors that need to be considered when entering into a commercialisation arrangement. These include: ownership of product, copyright clearance, venture risk, negotiating position, capital input, the relationship with the publisher, and profits.

In the main, those who had detailed knowledge of the new policy were very encouraged by it, in one instance believing that IP would no longer be a barrier for development. Others, however, felt the new policy still did not adequately address the complexities which arise with respect to collaborative grants and commercialisation. However, these complexities are arguably beyond the scope of IP policies, per se.

#### 5.3.5.2 Barriers caused by IP policy

Respondents at several universities felt that policies which assigned IP to the university acted as a disincentive to development of CFL materials:

*The new copyright policy will actively discourage a lot of people from doing anything within the university parameters. It is not in keeping with the spirit of the Copyright Act—it's a blatant attempt by the university to secure the rights for itself which it is not otherwise legally entitled to.*

In a similar vein, it was reported that some products have never been disseminated as they should have been because of the line the university took on copyright and royalties. Further evidence of this is presented in the vignettes on StatPlay and Services Marketing. In other cases, staff have not taken part in developments because they could not gain a share of the proceeds.

In many cases, it was not the IP policy, per se, which was a barrier to the adoption of CFL. Instead it was the institutional processes, which were either not sufficiently developed, or acted as disincentives to adoption. Several criticisms about IP processes were expressed at the Established University before its new IP policy was adopted. While these particular issues may have been resolved, they point to potential difficulties at other institutions, and are worthy of note here.

Many individuals faced with IP issues arising from their projects have found solutions to their particular problems, but that the process has been messy, inefficient and time-consuming. The time required to resolve IP issues was seen as a particularly important issue which acted as a deterrent to becoming involved in CFL developments. In one instance, the IP owners had reached agreement about their relative contributions, but it was reported that the university took eight months to approve the agreement. Processes surrounding IP clearances were perceived as so inefficient by several individuals that it led to them 'reinventing the wheel'.

There was a widespread view that bureaucrats and university lawyers were reluctant to make decisions about intellectual property:

*Bureaucracy, rather than lack of clarity was holding people back I think —the red tape at the layer of lawyers. It certainly made us think a few times —is it worth it?*

One impression was that IP had acted as a barrier because of uncertainties as to who owns the IP and how some incentive might be derived from sharing in IP.

There were general feelings of frustration, uncertainty and concern about IP issues:

*If somebody says 'you're not handling IP right', I'll say 'forget it!' I'm not going to go in for more grant money and more creativity until this university gets it totally sorted out.*

There was a strong feeling that individuals were not able to get timely and appropriate guidance on managing copyright issues, particularly in relation to collaborative projects. Individuals reported frequently that when they tried to use existing university guidelines or when they contacted the appropriate people in the university, they ended up in a discussion rather than getting a definitive answer. One respondent viewed it as a 'minefield'. A view was expressed that intellectual property need not necessarily become a problem as long as issues are resolved at the outset. These issues are contextualised in the following vignette. It includes a good summary of IP issues at the end.

**IP issues affecting the development** of StatPlay—a joint project of Neil Thomason, Department of History and Philosophy of Science, University of Melbourne, and Geoff Cumming, School of Psychological Science, La Trobe University (Les, Cumming, Thomason & Finch 1997; Cumming, Thomason & Les 1997).

The first major phase of clarifying IP issues took 18 months and culminated in the signing in July 1997 of agreements with each of our two universities. In each case the university assigned ownership of IP in StatPlay to the two academic principals (Cumming at La Trobe, Thomason at Melbourne). The agreements differed on detail, but in both we agreed that the university should have a royalty-free licence to use StatPlay for its own educational purposes. Some repayments would need to be made, notably of university funds allocated specifically for development of StatPlay; such repayments would be due if there were any commercialisation profits.

These agreements seemed very fair and reasonable. The crucial point was that assignment to the principals meant that investigation of commercialisation could proceed with confidence that the IP situation was clear, and contract negotiations did not have to involve all parties (i.e. universities as well as principals), with the great danger that IP decision-making delays could sink commercialisation prospects.

Achieving these agreements took so long (18 months) because policy development and/or IP managerial rearrangements were going on at the time in each university, to some extent prompted by our case. There was good will and cooperation by the key university staff members involved, and recognition that commercialisation (which everyone states they support) will not happen unless clear and reasonable IP agreements can be finalised in reasonable time. Of course, future cases are now expected to be handled more promptly and easily!

A recent complication is that a colleague from Monash (Kevin Korb) has joined us for part of StatPlay development, and a joint Melbourne-Monash grant has been obtained, subject to IP agreement. It has been tricky to decide on a basis for such an IP agreement, for what is only a small part of the whole of StatPlay, yet cannot sensibly be separated from the whole. The main decisions about shares and licences and assignments were made quite easily, within a couple of weeks, with good cooperation of all parties. It then, however, took a further four full months to finalise drafting of the agreements. This involved numerous emails and phone calls and, for the university that has outsourced its legal work, references downtown of successive drafts. The serious overwork of everyone in universities was a factor, as was the size and complexity of the whole project. This IP effort was way out of proportion for a \$50 000 grant.

Recently a serious IP issue has surfaced, relating to CAUT and CUTSD grants. In the CAUT years the agreements signed by academics and institutions accepting grants made no mention of IP being retained by the Commonwealth. There were obligations to make the results of the work available, but the IP was assumed to be a matter for the grantee and the receiving university.

More recently, however, the guidelines for CUTSD 1999 grants stated that 'ownership of IP resides with the Commonwealth which may on request transfer copyright to the institution(s)'. This is in stark contrast to the situation with other Commonwealth competitive grants schemes, ARC for example, where IP is assigned to the receiving university, which is expected to encourage commercial exploitation where appropriate, and to strike the right balance between incentive to researchers and protecting the public interest, given the use of public funds.

The conditions of offer for the 1999 CUTSD grants did not follow what had been stated in the guidelines, but included:

- 8.1 A request to commercialise a product which has been developed as a result of grant funding must be referred to DETYA for consideration.
- 8.2 In approving a request under clause 8.1, DETYA may impose such conditions as it considers reasonable.

Further, we know of a case in which DETYA has claimed IP ownership in relation to an early CAUT grant, and has taken a very long time to negotiate a licence for commercialisation. After many representations to DETYA, and work on a standard licence proforma, DETYA has responded to further legal advice by changing its policy. It no longer claims IP generated with CAUT/CUTSD funding. This is an enormous advance.

Some matters for consideration in relation to IP are:

- It is a big and important issue. Try to sew it up early. Expect to have to put in time and effort.
- The IP policies of granting bodies and universities need to recognise the reality that commercialisation is unlikely unless authors and researchers have good incentives, and bureaucratic hurdles can be minimised.
- All sorts of complexities can emerge, especially when more than one funding source and/or more than one university are involved.
- Commercialisation is hard enough; if IP negotiations become mixed up with commercialisation negotiations, the chances of success are reduced and may disappear. Achieving clear IP agreements in advance is important for commercialisation.
- The recent policy change by DETYA means that DETYA no longer claims IP ownership. This is a very welcome development and should ease the route to commercialisation.

While the issues in StatPlay have been solved along the way, albeit with considerable effort and time, there are many situations when the difficulties have meant lost opportunities that have not been revisited. This is illustrated in the following vignette. It is important that the lessons of these earlier missed opportunities be learnt.

**Stewart Adam teaches Services Marketing online**

In mid-1996, OLA advised that a Services Marketing unit was required. RMIT's now School of Marketing decided to carry the development costs for an online version. The project proceeded. The unit would be offered through the OLA marketing channel only and not to RMIT students. It was decided that recognised external services marketing authors would be contracted and these academics and practitioners would be supplemented with RMIT teaching staff where possible.

Owing to issues concerning the low payments and authors' intended use of their own materials for refereed articles and textbooks, authors agreed that a two-year non-exclusive license would be offered to RMIT. This was in line with commercial practice where the use of assets and not necessarily ownership gains revenue, profit and cashflow.

In 1997 a colleague at another university expressed the desire to license the materials from RMIT over a single semester in 1998, for the sum of \$5 000. A brief was prepared and forwarded through the Head of Department and Faculty of Business for RMIT to prepare a legal contract. The university lawyers were briefed, and after some four months failed to produce a contract. No explanation was ever provided to the academics involved for this failure to enable the project to earn income that might have been used to further develop the online materials involved. This door has never been re-opened.

### 5.3.5.3 IP belonging to others

The access to and use of intellectual property developed by other people and other institutions was an issue. Partly, this has been covered in Chapter 9, under Dissemination. However, some particular issues were raised in the case study which relate directly to IP.

One issue was that many academic staff did not see copyright as a concern for them. They felt that they could simply use copyrighted material in their teaching. While this is legally the case for print-based materials based on the fair dealing exemption for research and study (see section 4.4 of Appendix A), it is currently not the case for online materials, particularly when they are re-published online. There appears to be fairly widespread ignorance of the

legal position outlined in Appendix A. A summary of legal issues relating to copying work of other people is shown in Table 5.1. The vignette on the Atmospheric Science Program at Macquarie University shows a common situation—reasonable care about not infringing copyright, but not, at this stage, a clear planning process for how future IP agreements might evolve.

Table 5.1 Summary of legal issues relating to copying work

Section of Appendix A	Legal issue
2.1.2	Online publishing
2.9	Adaptations
3.1.8	Assignment
4.3	Linking
4.4	Fair dealing

**Andy Pitman and others teach Atmospheric Science at Macquarie University.**

This is one of the largest programs of its type in Australia. Currently, most of the Atmospheric Science Program is delivered via the Internet. The main aim has been to enhance the quality of the existing program and maintain the number of units being offered. A secondary aim was the recognition that specific teaching applications could be offered better using Information Technology than in traditional ways (animation of atmospheric phenomena, transitory change in climate warming, etc).

Some components remain taught traditionally (e.g. fieldwork) and will continue to be so for educational reasons. All course notes are available electronically. We found a massive suite of information on the Internet to offer to our students. We had to be very careful over how we sourced material to avoid considerations of copyright when using internet material.

We have implemented approximately 50 per cent of formal practicals electronically (these include, for example, sophisticated simulation exercises) and we provide our students with electronic library access, internet access, email and bulletin boards. These have been integrated into the teaching program and are not simply additional resources which may or may not be used by the students. The simulations have been developed in-house. At present they are not being used elsewhere but there are possibilities and general discussions are taking place. IP issues have not been investigated thoroughly. There is a preference to make the materials available on a collaborative basis.

Clearances could be obtained to use copyrighted material online, but this is a very time-consuming process. Some larger projects had dedicated copyright

officers, but this is not a viable option in the majority of cases, for funding reasons. There was a common consensus that copyright issues were restricting the adoption of CFL. One view was that even if people were aware of appropriate CFL material, they would not use it because of the difficulty of obtaining permission.

A particular barrier was the inability to digitise print-based works for online use, because copyright law does not allow the electronic duplication of print resources. It is hoped that the forthcoming Copyright Amendment (Digital Agenda) Bill (1999) will resolve this issue in the near future.

At one case university, the protection of staff members' own work was an issue. Evidence was presented of staff from other institutions taking course material from the web and using it without acknowledgment. In addition to the illegality (section 2.9 of Appendix A), the ethics of this practice was a concern to some respondents, as was the possibility of such 'pirated' software being modified and then disseminated as the pirate's own work. It was felt that pirating was not necessarily done out of malice, but because of a lack of time and support to seek proper acknowledgment. A related feeling was that if such material was acknowledged then it would provide a reward for the originator of the material.

The model being developed by AEShareNet (the Australian Education ShareNet) <<http://www.aesharenet.edu.au/>> will be of value to the higher sector as well. AEShareNet is aiming to establish, through national co-operation, an online system for transacting copyright licences in VET materials.

AEShareNet has two fundamental purposes. First, to create efficiencies in the exchange of copyright VET materials similar to the economies of scale offered by a stock exchange, where members can extend copyright licences and transact related business without preparing a fresh set of legal documentation in every case. Second, AEShareNet aims to contribute to the effectiveness of the national VET system by facilitating a more open market for the sharing and trading of VET materials.

#### 5.3.5.4 Ability to customise

The inability to customise CFL materials from other sources to the local environment due to copyright restrictions poses a significant barrier to adoption of CFL. A view was expressed that it would be very useful if mechanisms could be established so that materials belonging to publishers could be customised. 'That would save us having to do all the work from

scratch.’ Intellectual property was also a problem in collaborative projects, exemplified by the StatPlay vignette above.

Librarians and owners of resource sites also have IP difficulties with metadata (see Chapter 9, Dissemination and Databases) in that if a CFL resource had used a different metadata schema then it could not be easily legally changed to suit the schema of the resource site.

#### 5.3.5.5 Legislative issues

Some staff from one of the case study faculties felt that the Copyright Act itself was a major problem. The whole issue of copyright was ‘up in the air’ at the moment. There was a general feeling that it is easier to develop one’s own resources ‘in house’ than to use or adapt someone else’s, exemplified by the vignette from Central Queensland University. Of course, there are significant resource implications if all staff wishing to use CFL find it necessary to create their own resources themselves.

Universities offering offshore courses are unsure of the legal situation with respect to IP, particularly, which country’s copyright laws and exemptions apply to course materials (including CFL) used in offshore courses. Section 6 of Appendix A points out that there is a high degree of international uniformity about copyright law, but the general position is that it is the country in which the infringement occurs whose law applies.

It was felt that the passing of moral rights legislation might facilitate the sharing of CFL materials (see section 5 of Appendix A). Moral rights will provide some insurance to the owners of CFL materials, that any amendments made by other adopters of the CFL will not detrimentally affect the reputation of the original owner. It was felt that moral rights legislation may provide a release to the tension between universities and academics about the ownership of IP developed in the course of employment. One suggestion was that moral rights should always follow the individual and that economic rights reside with the person who pays. Moral rights legislation is currently before the Parliament.

The vignette which follows illustrates how one academic has approached copyright issues in a pragmatic way. The costs involved in time and effort have been very high, but remain hidden. Avoiding copyright issues by redoing the same work is not efficient or cost-effective. It is a ‘band-aid’ solution to the problem of copyright for digital resources.

Lynn Zelmer from Faculty of Informatics and Communication (Infocom) at Central Queensland University (CQU) teaches the core first year multimedia unit, 00101 Introduction to Multimedia Systems, which introduces students to the broad spectrum of multimedia technologies so that they become enthused about the discipline and aware of its potential. The multimedia degree is an applied, rather than theoretical, program.

Infocom decided on a strategy of providing generic skills, rather than using the most current industry-standard tools. Thus, the only absolute software requirements for 00101 are a word processor, PowerPoint or 'an equivalent presentation' package, an image manipulation package capable of manipulating the supplied JPEG stock image files, a file editor and a web browser. On-campus students have access to a digital camera and a flatbed scanner and distance students receive a mail-in 'coupon' entitling them to a limited number of image scans through the Faculty.

One of the main components of the 00101 package is a stock image and sound library. Comprising of over 1000 low resolution images and 100 short sounds, this stock library enables students to experiment with multimedia and complete their assignments without copyright difficulties. When first planning the unit it was argued that students should be able to use 'clip art' and other image files freely available from the web or through low cost CD-Roms. Investigation revealed, however, that many of these materials were of doubtful provenance and had restrictive copyright provisions. It proved easier, and far less expensive, to utilise photographic images from the author's collection than it was to obtain clearance to duplicate and use an existing commercial collection. Sound and music collections are even more restrictive. The collection on the student CD was digitised from sounds collected by a student and the author.

CAL, the Copyright Agency Limited, has procedures for academic institutions to duplicate relevant topical magazine and journal articles in print form. Regrettably, these procedures do not extend to materials to be distributed on disk, CD-Rom or via the web. To overcome this the author wrote a series of precis, reviews and short articles to accomplish the same purpose or, in some cases, to bring the same material to the attention of the students. The result is a collection of over 30 short articles which contextualise multimedia for the Australian student.

There is little awareness of the amount of time and resources actually required to develop and deliver units utilising new media. The Faculty's official records, for example, would suggest that the development of 00101's learning resources 'cost' approximately \$5 000 plus a workload allocation of three to four hours per week. Instead, the resources cost over \$10 000 in direct expenses, over 1 500 hours of academic staff time and over 250 hours of unpaid student time, and a multimedia development infrastructure (the author's facility, Educational Media Services, etc.) worth several hundred thousand dollars.

In the following vignette, the use of 'free' resources has meant that the resultant unit cannot be freely made available and cannot be used for profit. This may restrict possible future directions.

Damien Gore teaches Natural Hazards at Macquarie University. This is a second-year multi-disciplinary unit that incorporates aspects of Geology, Geomorphology, Atmospheric Science, Risk Analysis and Social Science. During 1998, Natural Hazards was taught for the first time completely through WebCT and offered flexibly for on- and off-campus students. Student feedback indicates that the large majority are strongly in favour of computer-facilitated learning, and Damien believes that Natural Hazards is more vibrant and relevant as a result, e.g. JavaScript calculators are used for fire risk calculation that are the same as those used by professional bush fire fighters.

Existing resource materials were sought out. Where found, copyright was often an issue and it appeared easier and cheaper to develop material anew. In several cases colleagues were very helpful and friendly, donating JavaScript calculators and images for the unit. In one case, a professional photographer donated more than 100 photographs of hazards for the unit. Of course, all of the 'free' resources were provided on the basis that they were to be used for non-profit purposes. Because the University Library holds copyrighted materials, much of the searching was online and through colleagues known to us or identified from the Web.

The unit is password-protected, because material has been built in that has been obtained free of royalty, and there are problems with open access to this material.

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## 5.4 Summary and recommendations

Under the policy theme we have examined specific institutional policies, such as equity and intellectual property, the alignment of policy throughout the organisation, the direction of policy change (bottom-up or top-down) and a number of strategic processes which flowed on from policies such as grant schemes.

There were common policy concerns across all institutions. These were:

- administrative processes;
- equity issues;
- funding;
- staff recognition and rewards; and

- intellectual property issues, including IP developed as part of employment, barriers caused by IP policy, IP belonging to others, IP considerations in customisation of CFL resources, and legislative issues.

Some recommendations, especially with respect to intellectual property issues, are:

- Safety-net policies need to be continued, and maybe increased, in order to address the specific needs of the minority who cannot gain access to computing equipment for equity reasons.
- Funding schemes need to learn from earlier initiatives; mechanisms for monitoring initiatives and capturing experience are needed.
- Funding schemes need to explicitly take account of the need for ongoing maintenance of CFL developments.
- Appropriate development of criteria for teaching performance could be an effective incentive for staff to adopt CFL materials and practices. The emphasis must be on educational excellence, not on technology per se.
- University staff need access to a centralised service which provides practical support to staff on IP and licensing issues.
- There needs to be widespread dissemination of the legal situation with respect to online IP.
- Mechanisms are needed to facilitate copyright clearance of CFL materials (if it is allowed to be shared) so that due recognition is given to the originator.
- Legislation relating to the use of online resources in education, the ownership of copyright on materials used in offshore courses, and moral rights is in train. Appropriate legislation should be supported.

## 6 Culture

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### 6.1 Introduction

Culture emerged as a major theme from the case studies and analyses. Some of the issues relevant to it include: institutional strategic vision and leadership, attitudes to CFL and innovation, level of risk taking, allocation of resources, recognition and reward, and staff motivation. These will be addressed below taking the case studies, members' survey, literature and climate into consideration while developing a set of factors that motivate staff to adopt CFL.

Universities were traditionally thought to be very different from other organisations. However, in recent times, the changes brought about by funding cuts leading to a policy of competition; increased student numbers, diversity and expectations; globalisation of courses and the use of communications technology have forced them to restructure and look at new ways of operating and providing effective teaching and learning.

It has long been noted (Denison 1990; Ramsden 1998) that the culture of any organisation has a direct impact on its performance and effectiveness; the internalised values and staff attitudes in an organisation shape the way individuals and groups operate. Culture is about values and attitudes held by the organisation and are created and fostered by the leaders and managers over time. Schein (1985) described leadership and culture as being like two sides of a coin and must go hand in hand. Leadership in the changing university setting approaching the 21st century, is an extremely difficult task and requires investigation into ways in which administration, teaching and learning, and research can be enhanced and streamlined with the help of technology. A good leader must also provide a vision, empower staff, allow intellectual stimulation and individual consideration, and communicate well with staff—quite a task in the current climate.

Ramsden (1998) wrote about the effectiveness of universities and noted the outcomes of current issues, including the changing nature of academic work, on teaching and learning. He noted that most academics were relatively satisfied with their work but were 'increasingly dispirited, demoralised, and alienated from their organisations' (p. 29). He then asks how the environment can be improved for better outcomes. The answers appear to lie within the institutional culture and the need for a supportive climate that values collaboration, consultation, feedback and creativity. Effective academic

leadership is about having a positive vision, coupled with appropriate infrastructure and development opportunities, enabling staff to continue to learn and overcome the hurdles that constant change creates.

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## 6.2 The case studies, surveys and culture

The case studies showed a great difference in the organisational cultures of the universities studied and of the infrastructures set up to nurture, develop, deliver and support CFL. The culture of the universities tended to follow the type of university selected as method of operation, size, location and history were all important influences. The climate of the organisation is made up factors such as:

- strategic vision and leadership;
- attitudes to risk taking and innovation in teaching and learning;
- attitudes to adopting CFL;
- allocation of resources; and
- staff recognition and reward.

Each of these factors is important in determining the success of a university's staff in the use of technology for teaching and learning. This report is focused on how best to make information about CFL resources available to the higher education sector, but we need to stress that university staff will only search for new resources to use in their teaching when the institutional climate they are in supports the use of new ideas and technologies.

### 6.2.1 Strategic vision and leadership

Strong leadership and articulation of a vision for effective teaching and learning was regarded as crucial by all institutions studied. The effective implementation of this vision to include appropriate policies, infrastructure and ongoing support was also imperative to meet long term goals. The more advanced universities in adoption of CFL felt that a quality approach could incorporate the best of traditional teaching and learning practices and the best that technology could offer. These universities were at the stage of embedding online teaching as core business. These were often the universities that had a strong distance education foundation and thus the adoption of a new system was not seen as difficult. Here effective innovations by early adopters at the coalface had moved beyond the bottom-up approach and had triggered the top-down approach supported by the institution. However, one factor which emerged in all cases was the acknowledgment by staff at the coalface that

innovation should continue to be supported so that the institution would not lag behind in further creative development.

In the large Established University and the large Multi-campus University of Technology it was felt that the bottom-up innovations were still separate from the newly adopted top-down approach. There was a need to spread the vision more widely and more thoroughly, particularly at the Dean and Head of School levels. The culture change should embrace all levels of management so that staff within academic units feel supported by committed leaders.

### 6.2.2 Attitudes to risk taking and innovation

Institutions which had supported risk taking and innovation and were prepared to move strategically in directions that showed effective learning outcomes had more positive staff attitudes than those which did not support innovation. Institutions with a large distance education culture and infrastructure were able to move directly to a well-supported, top-down approach. Staff at these universities immediately saw the benefits of giving external students access to the same resources as internal students and actively encouraged interaction between the two groups—something that had been almost impossible to achieve without technology.

*Technology is demonstrating that divisions between on/off campus students, and full-time/ part-time subjects are artificial...*

One university with an enterprise culture had allowed innovators to engage in new, even risky projects where it had seen it as ‘informed risk taking’, and where leadership had a pro-innovation stance. This alignment between bottom-up and top-down approaches towards innovation seems to have struck the right balance in this instance.

Another generic issue that arose was that academics seem reluctant to admit failures (or to pursue unexpected outcomes) in teaching and learning even though they are trying to make improvements all the time. This hesitation was at odds with the willingness of researchers to admit failure and still publish the results. Grant recipients were reticent about admitting problems and felt that this worked against informal collaboration in improving teaching and learning. An excellent scheme of formal mentoring in the Established University enabled recipients of institutional grants to feel strongly supported. Informal mentoring was also acknowledged as an important part of any move towards systematic adoption of CFL. A culture that acknowledged successes and failures would encourage staff to publish and learn from each other.

The ASCILITE members’ survey showed interesting data about the perceptions innovators or early adopters have about their colleagues. Most of the

73 members surveyed regarded themselves as innovators or early adopters (figure 6.1) and many had developed significant projects single-handedly with little support from faculties or their university. These members were able to see the need for a well-supported environment for development. They were asked to categorise themselves on the scale:

- innovators
- early adopters
- users when technology is mainstream
- very reluctant users

We also asked them to consider where the majority of staff in each category of department/ faculty/ university were on this scale. The results are shown in Figure 6.2. The data from the survey was in four categories; the data has been collapsed into two categories—innovators/ adopters and users/ reluctant users in order to see trends more clearly. It is striking how isolated in many ways these innovator/ early adopters are. The majority of respondent ASCILITE members considered themselves to be innovators or early adopters while they perceived that the majority of staff at their institutions only used technology when it was mainstream or were very reluctant users.

Figure 6.1 Schematic diagram of phases of technology take-up (after Rogers 1995)

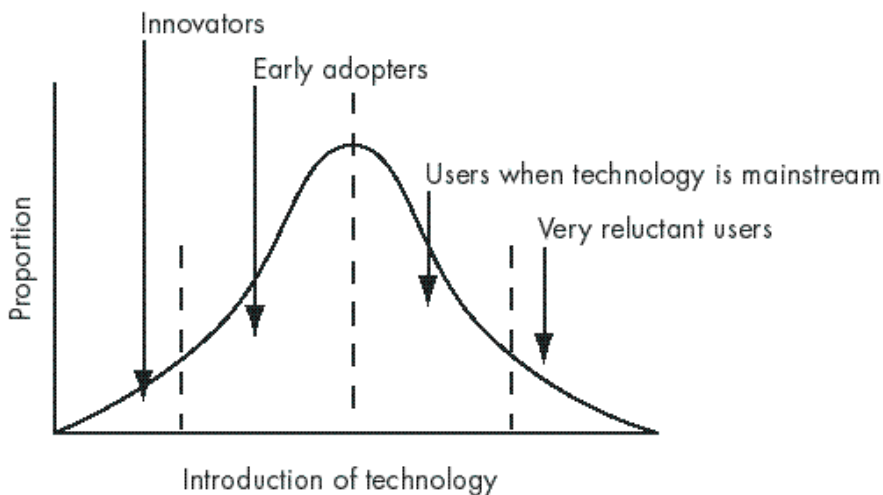
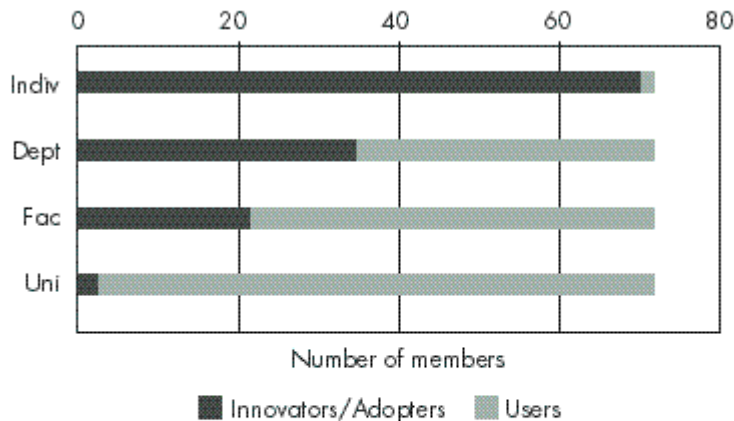


Figure 6.2 ASCILITE members' perceptions of CFL adoption patterns at their Universities (Q 5.1)



### 6.2.3 Attitudes to adopting CFL

Universities using distance education were keen to add value to existing student provisions and were already familiar with the long development times for distance materials, and so were more resigned to them than staff teaching internally who saw production deadlines as inflexible. However online teaching itself was seen as offering greater flexibility and quality for class management and communication. One distance education provider noted that online teaching allowed students to manage their learning more effectively with resources and systematic information at their fingertips.

Staff from areas without this insight tended to hold negative attitudes towards online teaching and felt that they needed more support and evidence of its worth. Recent evaluations of CFL approaches can provide the evidence necessary to convince late adopters and staff opposing take-up, but pressure from other staff and students to adopt CFL was seen as a negative factor in take-up. Many late adopters were not comfortable with the technology and required well thought out support and development to make the change.

Housego (1998, p. 355) has reported that the use of multiple strategies to support staff adopting CFL in their teaching at the University of Technology Sydney has allowed barriers to adoption to be overcome. These included one-to-one exploratory sessions through to faculty forums. Here staff feel comfortable undergoing development at levels appropriate to their understanding of CFL, especially when the sessions are set within the context of the university promoting the successful use of flexible learning.

### 6.2.4 Staff recognition and reward

All interviewed staff at the universities studied felt that the nexus between teaching and research was unresolved that this required immediate attention at university executive level. Many staff feel that research is still more highly valued than teaching and so feel a conflict when asked or expected to spend considerable time in learning to use technology in teaching. Also, most staff did not feel confident that effective and workable solutions to resolve this conflict could be achieved in the short term.

The following suggestions were made as to how this could be resolved:

- use of teaching portfolios for promotion;
- clearly articulated criteria for promotion on teaching;
- an explicit reward structure for CFL implementation;
- effective evaluation strategies for staff using CFL; and
- encouragement for writing papers on the use of CFL.

All of these strategies are used at Australian universities. But the overall balance point is still in favour of classical research. Clearly this is an important issue which cannot be ignored. Suitable resolution will pave the way for active staff involvement.

### 6.2.5 Allocation of resources

Some universities studied had internal grant schemes which had contributed to a culture of support for innovation and excellence in teaching and learning. These schemes had initially rewarded the early adopters and innovators and were seen as an excellent starting point for change. However, the grants were often seen as short term and did not fund the embedding and maintenance of the innovation. Management argued that ongoing maintenance was the role of central infrastructure predetermined by the strategic planning process. But it seems that until these plans recognised such needs, a long term commitment did not eventuate. Strategic plans also needed to incorporate major changes to teaching and learning approaches and it seems that here the large distance education providers were at an advantage because these universities already had a culture and suitable infrastructure for supporting staff and students in effective learning practices. Underwood, Gamble and Jones (1997) has stressed that the distance education model with central support is an excellent one for universities moving to a systems approach of CFL.

An issue that arose within one case study faculty where the use of technology has increased as a result of grants, was the division between the 'haves and

havenots'. This growing division between the two groups was mitigating against an inclusive culture encouraging acceptance of CFL to improve the quality of learning outcomes. Grants have been seen as a facilitator for the take-up of learning with technology but other methods to promote general mainstreaming effectively are also required it seems.

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### 6.3 Summary of motivation factors

Factors that motivated staff to adopt CFL did not vary greatly in the case study institutions studied. Institutions with large numbers of early adopters had often made changes to their policies, had well-supported infrastructure, and this resulted in a culture with a higher level of acceptance of CFL to the extent that some of the issues were less relevant to them.

Notwithstanding this, across all the case study institutions, participants reported that the main barriers to take-up were:

- lack of knowledge about CFL;
- lack of academic time release;
- pressure to keep up the research quantum;
- non-recognition of teaching;
- lack of funding to maintain programs, staff and technical infrastructure; and
- lack of student acceptance of the new approaches.

One university reported that despite perceptions that the use of CFL was being driven by bureaucracy, CFL was, in fact, revolutionising teaching. Brick, d'Ardon and Robson (1998, p. 95) reported that development of CFL has the capacity to 'stimulate more individualised teaching and learning by the staff and students... and ... to spawn new ways of learning previously unobtainable'.

The study found that the factors that would motivate staff to use CFL included the following:

- a university culture to support the new approaches;
- good leadership from academic managers;
- recognition of teaching on an equal basis as research;
- appropriate support infrastructures for staff and students;
- workload adjustments to develop materials and become computer literate;
- the opportunity to think about learning and not teaching;
- evaluation studies showing improvements in student learning;
- improving learning opportunities and outcomes for distance students;

- adding value to existing courses;
- providing a means to offer courses offshore;
- the chance to interact more with students;
- positive feedback from students;
- solutions to problems of large classes and funding cuts;
- support and sponsorship from mentors; and
- peer pressure.

This list offers very useful insights about staff motivation, within the premise that supportive cultures and infrastructures are essential for successful use of CFL.

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## 6.4 Conclusion and recommendations

Changing educational practices and styles can produce many negative reactions and this negativity needs to be acknowledged and managed effectively. Change should be introduced and implemented within a supportive environment. The culture of the organisation needs to be able to embrace change while offering staff opportunities to manage their own levels of comfort with the change.

Within the university environment, leaders need to develop vision statements that are clear and well articulated to the staff. Appropriate levels of infrastructure and support should be part of the policy formulation to match the vision.

From this chapter the following recommendations are made:

- Universities need to have a clearly articulated vision about the desired approaches to the teaching and learning environment that CFL approaches can facilitate.
- This vision should have ownership and commitment from all levels of management.
- The Dean or Head of Department/School should lead and support the academic unit moves into CFL.
- Policies developed from the vision should include positive values and well funded infrastructure to support staff and students.
- Issues of staff workloads in the changeover to use of CFL should be clarified. Agreements about workload need to be explicit and specific.
- The nexus between teaching and research needs to be resolved so that staff gain appropriate recognition and opportunities for career advancement through innovative work in CFL.