

**'FALLING BEHIND': A GROUNDED THEORY  
OF UNCRITICAL DECISION MAKING**

**By**

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Degree of Doctor of Philosophy**

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## **CERTIFICATE OF AUTHORSHIP/ORIGINALITY**

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

Signature of candidate

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## ABSTRACT

This study investigated how selected Australian universities evaluated and adopted various learning management systems in their teaching and learning programs, given claims of uncritical evaluation, problems and cautions in the Australian (1998: 13; Brabazon, 2002; Yetton, Forster, Hewson, Hughes, Johnston, Nightingale, Page-Hanify, Vitale and Wills, 1997) and North American (Berg, 2002; Noble, 1998b) higher education literatures. Ironically, universities charge large amounts of money teaching their students to develop competence in critical analysis, yet some studies have claimed that they were deficient in critically analysing their own decisions (Brabazon, 2002; Yetton et al., 1997). This important question has received little attention in the higher education literature, despite the high visibility and costs of these decisions. Although limited theoretical explanations have been proposed by various researchers, such as Yetton et al. (1997) and Brabazon (2002), these matters have not been the subject of published empirical research to date.

A grounded theory methodological framework, validated by the insights of institutional theory, was employed throughout to promote broader sociological explanations than other studies constrained by functionalist theoretical frameworks (Yetton et al., 1997). Qualitative case studies utilising semi-structured interviews and document analysis were conducted at three Australian universities. The findings of this analysis were written up in three case study narratives and an analytic cross-case analysis. Semi-structured interviews and document analysis at the field level were undertaken as an additional source of data to verify emergent grounded theory.

A grounded theory of uncritical decision making (Figure 57) was ultimately developed in response to this study's research problem. The core category around which this model was developed ('falling behind') appeared in all three cases, in interviews with experts from the Australian higher education sector, and was also found in both the Australian and overseas higher education literatures. This grounded theory also represents a minor contribution to the institutional theory literature as a new institutional change process model which links the activities of key individuals with broader field developments, and integrates the constructive and reproductive assumptions of old and new institutional theory.

# **CHAPTER ONE: LITERATURE REVIEW AND RESEARCH PROBLEM**

## **Australian Higher Education**

The Australian higher education sector in 2004 was comprised of 37 public universities, three private universities, and four other self-accrediting higher education providers (Nelson, 2005b). These institutions employed 87,658 full time equivalent staff (Nelson, 2005b) and enrolled 944,977 students, made up of approximately 76 percent domestic students and 24 percent full fee paying international students (Nelson, 2005b). Undergraduate students accounted for 70 percent of total enrolments, postgraduate 27 percent, and the remainder were enrolled in enabling and non-award courses (Nelson, 2005b).

It has been claimed that Australia's higher education system is distinctive among the world's higher education systems because of its national character; it is primarily public and without formal stratification of institutions or streaming of students (Nelson, 2002a). Marginson and Considine (2001) claimed that while most Australian universities were of similar size with multiple campuses, there was an informal segmentation among universities, based on inherited status and competition.

Australian universities can be described as 'Sandstones', 'Redbricks', 'Unitechs', 'Gumtrees' and 'New Universities' (Marginson and Considine, 2001). These authors argued that the stronger universities tended to become stronger over time, unless the Australian Federal Government intervened. Sandstones are the oldest and most established universities, and tend to have the brightest students and staff. Redbricks were described as similar yet more modernist and traditional, and attempted to emulate and surpass the Sandstones. Unitech focused on graduate employment, industry links and were fast moving. They were described as more centralised and management-dependent in line-of-command relations. Gumtrees were aggressively modern however, and have experienced public funding challenges and lack 'positional advantage' (Marginson and Considine, 2001). New Universities invest heavily in their teaching and marketing. They are also free to reinvent themselves, not having a long history of their own, particularly those with a background in distance education. Marginson and Considine claimed that all Australian universities aim to be comprehensive, yet the Sandstones have the greatest capacity to do so.

The Federal Government has emerged as a key player in the sector after State and Territory governments ceded full responsibility for funding to the Australian Government in 1974 (Nelson, 2002a). Despite the key influence of the Australian Government in allocating funds and determining market frameworks however, universities bear responsibility for their own governance and management through their academic senate or council, established through State enabling legislation.

Various public sectors in Australia were transformed during the 1980s with the introduction of economically rationalist ideologies, intended to 'do more with less' government funding (Marginson and Considine, 2001). These New Public Management policies were pursued by both the Coalition (the Liberal and National parties) and Labor Governments under the belief that the state had to act like a market player, maximising returns from market forces in an international setting (Welch, 1996: 5). In 1989, the then Federal Minister for Education, Dawkins instituted radical changes to the Australian higher education system, including the creation of a unitary system of higher university education and amalgamation of old universities with colleges of advanced education and institutes of technology formerly positioned in a binary system at second tier. These reforms set in train the creation of a quasi-market system for higher education, with competition among universities for students, industry and public funding (Marginson, 1997). These reforms also led to the centralisation of distance education into eight Distance Education Centres on the basis that this would reduce duplication, foster cooperation between institutions, and improve the quality and efficiency of external courses (Johnson, Lundin and Chippendale, 1992).

These changes were mirrored in other countries such as Canada, the US, UK and New Zealand (Slaughter and Leslie, 1997). However, in Australia their introduction and the associated drop in fiscal support from government was relatively faster (Marginson and Considine, 2001: 28). In 1983, 90 percent of university funding came from government; in 1999 it was less than 50 percent (Manne, 2002), and in 2003 it was 41 percent (Nelson, 2005b). It has been alleged that since the election of the Coalition Government under Prime Minister Howard in 1996, over \$3 billion has been taken out of the system (Carr, 2002), based on cuts to the forward estimates of university operating grants (Carr, 2002). Total Federal Government funding for the sector increased (in constant dollars) from \$3.1 billion in 1983 to \$5.1 billion in 1995, representing an increase of 64 percent in real terms (Senate Employment Workplace Relations Small Business and Education References Committee, 2001: 47). Over the period 1996 to 2001, there was no real increase in funding for the sector (Senate Employment Workplace Relations Small Business and Education References Committee, 2001: 47).

Students are expected to contribute towards the cost of their education, through either deferred student loans from the Australian Federal Government (for domestic students), or through full-fee tuition payments. Since 1996, student contributions towards their university costs have increased by 85 percent, making up one third of universities' income (Contractor, 2003), among the highest in the developed world (Productivity Commission, 2003).

As demands on universities outran their capacity to respond (Clark, 1998), universities adopted more corporate approaches to university governance (Marginson and Considine, 2001). Across the sector, institutions cut their costs and doubled the number of fee-paying undergraduate and postgraduate students (Academe should come clean, 2003). These shortages have led to a rise in student-staff ratios across the sector from an average of 13 students to one staff member in 1991 to 19 in 2001 (Anderson, Johnson and Saha, 2002: 3). In some disciplines the ratio was far higher. For example, the ratio in Business faculties in 2000 was 39 (Cecez-Kecmanovic, Juchau, Kay and Wright, 2002: x). These levels were higher than the US and Canada at that time (Productivity Commission, 2003). Some academics have claimed that these changes have led to a lowering of academic standards, overflowing lecture halls, deteriorating physical infrastructure, overworked staff (Academe should come clean, 2003), low morale and a reduction in the quality of supervision to PhD students (Harman, 2002). A survey of 2000 academics across twelve representative universities (Anderson et al., 2002: 45-46) found that:

- One in two academics thought the intellectual quality of incoming students had declined, and this was a change for the worse;
- 40 percent thought that the giving of high grades had increased;
- Over half claimed the academic standards for graduation had decreased and many reported pressures against failing too many students; and
- Half thought quality assurance procedures had increased but 40 percent thought it a change for the worse.

Responding to persistent claims that Australian universities were in financial crisis, the Senate Employment Workplace Relations Small Business and Education References Committee (2001) investigated these assertions, taking submissions from over 300 respondents. The Committee concluded that "government funding is inadequate to sustain the quality and diversity of core teaching and research functions". It recommended that Federal funding be increased to the sector. Despite the perception of crisis alleged in the report and held by many other stakeholders, the Australian Government denied that such a crisis existed (Koutsoukis, 2002).



## Adoption of Learning Management Systems

During this same period of change in the Australian higher education sector in the mid to late 1990s, a number of alternative strategies for delivering higher education utilising new educational technologies became more accessible to universities. At the same time, full time students were becoming more committed to paid employment, while full time employees were enrolling in increasing numbers in university courses, generating a push for greater flexibility in course delivery (Bell, Bush, Nicholson, O'Brien and Tran, 2002).

In March 2002, the first national attempt to assess the extent of online learning among Australian universities was published, based on a survey of 40 out of 43 Australian universities between August and September 2001 (Bell et al., 2002). Online learning, according to these authors, comprised

Subjects or course components, in which at least some of the content is delivered and/or some of the interaction is conducted via the Internet. This may be optional or compulsory (Bell et al., 2002: x).

In this study, the authors found that there were 207 fully online university award courses (comprising of multiple subjects or units) with no face-to-face component offered by 23 (58 percent) out of 40 responding Australian universities (Bell et al., 2002: ix-x). Of those fully online courses, 90 percent were offered at a postgraduate level, with the largest number of courses from Management and Commerce (55 courses), Education (35) and Health (32) (Bell et al., 2002: ix). It was suggested that the majority of these students would be 'earner-learners' who would combine full-time work with their study.

These fully online course offerings were not, however, the most common form of course delivery among Australian higher education providers. The prevalent form of online delivery involved optional student participation on the World Wide Web (herein referred to as the web) in 46 percent of units (whole subjects or course components), with all universities employing the web to some extent for teaching and learning purposes (Bell et al., 2002: ix-x).

Assisting this online delivery of teaching and learning were a number of commercial and in-house learning management systems, of which there were sometimes several systems within the same institution. The most popular of these learning management systems were WebCT (29 universities),

in-house systems (20 universities), and Blackboard (17 universities), with institutions preferring WebCT and then Blackboard as institution-wide systems (Bell et al., 2002: 22-23).

In attempting to explain the pattern of adoption of online learning across Australian universities, Bell et al. sought to examine the influence of a range of factors, including the type of institution (Australian Technology Network ('Unitechs'), Group of Eight ('Sandstones' and 'Redbricks'), Metropolitan/Regional location), part-time students and external (off campus) students as a percentage of total students, and students older than 24 years as a share of total students. The authors concluded that "statistically, there is no particular type of university involved in online provision of education" (Bell et al., 2002: 20).

Bell et al. noted that there was little information currently available on the extent of online course delivery in other parts of the world (Bell et al., 2002: 3). The exception was Canada where in 1999/2000, 57 percent of the 134 higher education institutions that participated in this research project claimed that they ran subjects that were delivered with no traditional face-to-face teaching component, not unlike Australia (Cuneo, Campbell, Bastedo and Foye, 2000: 9). These authors also found that online learning was more likely to be offered in business, health and medicine, and engineering programs. Online learning was also less likely to be offered in cooperative (combined work and study programs) and applied programs that required face-to-face training and work experience (Cuneo et al., 2000: 10), as might be expected.

Subsequently, Allen and Seaman (2004) found that over 1.9 million students across 1,100 higher education institutions in the US were studying online (the authors defined online as no face-to-face meetings) in 2003, with 24.8 percent growth expected in 2004 (Allen and Seaman, 2004: 1). Of this sample, they claimed that 54 percent of the institutions believed that online learning was critical to their long term strategy, with the fastest uptake among for-profit institutions. When these authors repeated their research a year later in 2005, they found that there were 2.35 million students in 2004 (representing growth of 18.2 percent), with 56 percent of institutions believing online learning was critical to their long term strategy (Allen and Seaman, 2005: 2-3).

There have been a number of highly publicised higher education institutions supporting the case for the adoption of online learning technologies, both overseas and in Australia. In 2000, an investigative report into the activities of various overseas education providers was commissioned by the Department of Education, Training and Youth Affairs: *The Business of Borderless Education*

(Cunningham, Ryan, Stedman, Tapsall, Bagdon, Flew and Coaldrake, 2000). This report investigated the educational activities of a number of US institutions, including corporate universities such as Microsoft, Ford and McDonalds; for-profit universities such as the University of Phoenix, as well as various virtual universities such as Western Governors University and NYUOnline. In Australia, the University of Southern Queensland was cited as an Australian example of a commercial arm of a traditional university (*USQOnline*) that had entered a contractual arrangement with a commercial provider NextEd (Cunningham et al., 2000: 16; Taylor, 2001).

## **Uncritical Examination<sup>1</sup> of the Merit of Learning Management Systems?**

The literature on online learning technology, much of which was disseminated through the Federal Government's Department of Education, Science and Training, was the subject of growing interest across the sector, and may have supported much of this adoption. Research from this literature promised:

- Increased competitiveness in overseas markets (Baldwin, 1991; Johnson et al., 1992; Lundin, 1993; Senate Employment Education and Training References Committee, 1994; Tinkler, Smith, Ellyard and Cohen, 1994; James and Beattie, 1995; Hesketh, Gosper, Andrews and Sabaz, 1996; Taylor, Lopez and Quadrelli, 1996; Yetton et al., 1997; McCann, Christmass, Nicholson and Stuparich, 1998; McNaught, Phillips, Rossiter and Winn, 2000);
- Improved efficiency of government and university spending (Baldwin, 1991; Johnson et al., 1992; Hamer, 1993; Jevons and Northcott, 1994; Taylor, 1992; Cochrane, Ellis and Johnston, 1993; Lundin, 1993; Taylor, Kemp and Burgess, 1993; Alexander and McKenzie, 1998; McNaught et al., 2000);
- Enhanced quality of education (Baldwin, 1991; Johnson et al., 1992; Cochrane et al., 1993; Lundin, 1993; McNaught et al., 2000; Tinkler et al., 1994); as well as
- Access to an international market in web-based training estimated to rise to \$5.5 billion in 2002 (Scott and Alexander, 2000).

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<sup>1</sup> This term is defined later in this chapter.

Many of these reports and papers however, encouraged a cautious attitude towards much of this early research, especially in relation to claims of educational and cost effectiveness (Alexander, 1995; Caladine, 1993; Cochrane et al., 1993; Taylor et al., 1993; Tinkler et al., 1994; Jevons and Northcott, 1994; Phipps and Merisotis, 1999; James and Beattie, 1995; Scott and Alexander, 2000; Brabazon, 2002). In 1998, Alexander and McKenzie found empirical support for these early cautions and concluded that across 104 projects in 33 Australian universities, the use of a particular information technology did not, in itself, lead to improved quality or productivity of learning (Alexander and McKenzie, 1998: 59). Rather, a range of other factors were required, the most important of which was the design of the students' learning experiences (Alexander and McKenzie, 1998: x).

Although some of the above cited literature was discerning in its assessment of key assertions of educational and cost effectiveness, the great majority of this publicly funded and disseminated research in Australia was of doubtful quality. For example, although some Australian research acknowledged the historical development of online learning out of a long tradition of distance education in Australia (Johnson et al., 1992; Taylor, 2001; Taylor and White, 1991; Bell et al., 2002), particularly among Australian universities designated historically as Distance Education Centres following the Dawkins Reforms (Johnson et al., 1992; Senate Employment Education and Training References Committee, 1994, 1995; Taylor and White, 1991), the vast majority of studies failed to reference the established literature of this field, developed around the use of various tools facilitating student learning in non face-to-face teaching contexts. Further, of the 27 publicly disseminated Australian research studies completed between 1991 and 2002, only three articulated a theoretical framework that guided their evaluations (Brabazon, 2002; Taylor, 2001; Yetton et al., 1997). This body of public research was supported predominantly by the Australian Government through their Evaluations and Investigations program, and was preoccupied mostly with the adoption experiences of Australian and international universities. Where literature reviews were undertaken, there was a strong tendency among some researchers for enthusiastic support of this new technology (for example, see Lundin, 1993; Hamer, 1993). However, one Australian researcher was bold enough to make the following observation about the quality of this literature at the time:

Most of the literature reviewed claimed that educational aims and objectives were met or bettered through the use of technology. Only one article suggested that although educational aims and objectives were met, students preferred on-campus face-to-face education to the distance alternative. It is perhaps worth considering however, that the majority of the literature surveyed concerned 'Success Stories' and hence may not be a valid indicator of the full extent of educational limitations (Caladine, 1993, p.17).

Despite explicit warnings in much of the previously cited supporting research, including some research of doubtful quality, many Australian universities adopted new educational technologies without formally evaluating their merit to their institutions, particularly before adoption took place (Yetton et al., 1997). Yetton et al. (1997) investigated the management and introduction of information technology in 20 Australian universities and found a widespread lack of formal evaluation of these technologies.

The project revealed relatively little formal evaluation of any kind, either before investments were made or afterward. Except for the most straightforward investments, which are analysed on the basis of discounted cash flow, the universities tended to rely on informal and intuitive approaches to the review and evaluation of current and proposed investments in information technology. Across the group of universities, academic and administrative staff alike are nevertheless confident that spending on IT has, overall, led to improved quality of teaching and learning and increased efficiency of operation. (Yetton et al., 1997, p.81).

In relation to the adoption of various IT systems used specifically in teaching and learning contexts, it was claimed that universities used even less formal methods of evaluation.

It was difficult to find an example of cost/benefit analysis being applied to a proposed investment in academic IT, although in principle the cost/benefit approach could be used effectively if care were taken to identify all the stakeholders that might be affected (Yetton et al., 1997, p.85).

Yetton et al (1997: 82) noted that the challenge for universities in an era of increasing use of IT and growing financial constraints was to select an evaluation framework most appropriate for their mission, strategy and resources. Concluding their analysis of Australian universities' experience, Yetton et al. argued that a business plan should be prepared at the outset, requiring a careful and widespread analysis of the costs and impacts of the proposed project. Furthermore, evaluation criteria should be announced in advance and be applied consistently among proposed investments, improving the credibility of the evaluation process (Yetton et al., 1997: 99). Conducting an evaluation of whether or not the promised benefits were achieved in practice could then assist the university to learn and improve (Yetton et al., 1997: 90); something which could not occur in many cases.

Alexander and McKenzie (1998) also reviewed the evaluation decisions of various CAUT-funded projects (a teaching and learning scheme of the Australian Federal Government) that used IT in the classroom, predominantly CD-ROMs and Multimedia, but also email and the web. These authors found that most technologies were evaluated by an individual academic on the basis of their proposed learning benefits. In a quarter of these cases that they reviewed however, the evaluators failed to look beyond their own institutions, contributing to a lack of dissemination and possibly inappropriate choices (Alexander and McKenzie, 1998: 238). Brabazon (2002) argued some years

later that many university decisions to put university courses on the web or to use distance education technologies, such as learning management systems, were made by the administration without academic input, while further burdening academics with more work that was not recognised as work.

This experience among Australian universities may not be atypical of universities elsewhere. A lack of formal evaluation in relation to particular online learning technologies, such as learning management systems, also appears to correlate with the experiences of some US and Canadian higher education providers. For example, in his quantitative study of 176 US higher education institutions, Berg (2002: 123) found that 72 percent of these institutions had not carried out a basic cost-benefit analysis of distance/flexible learning initiatives. Noble similarly observed this same lack of evaluation around the adoption of new online learning platforms among US and Canadian universities, particularly when they involved establishing new virtual universities.

An inflated assessment of the market for online distance education has been matched by an abandonment of financial common sense, as officials recklessly allocated millions of (typically taxpayer) dollars toward untested virtual ventures. Suckered by the siren-songs and scare-tactics of the silicon snake-oil salesmen, university and college officials have thrown caution to the wind and failed to fully cost their pet projects (Noble, 1998b)..

## **Consequences of Uncritical Examination**

The consequences of universities not evaluating these technologies formally before adoption were associated with, in some cases, wasted resources, unfulfilled expectations, and even organisational failure. Universities in the United States and Europe established virtual universities on the web, offering fully online courses (without traditional face-to-face teaching), chasing promises of extraordinary student enrolment growth in an expanding market for worldwide online education and training. What these universities did not consider however, were student preferences for face-to-face teaching, ultimately confirmed in their subsequent enrolment behaviour.

In the United States, Columbia University spent \$25 million on online learning technologies but was later forced to offer these courses for free as samples. The University of Carolina shut down its online divisions and NYUOnline closed after receiving \$25 million and enrolling only 500 students at its peak. The University of Maryland College ceased its online curriculum and went back to a conventional curriculum, and Temple University closed its Virtual Temple in 2001 (Hafner, 2002).

US \$483 million was spent on companies building online materials for the education market in 2000 (Brabazon, 2002: 32). In 2002, this figure was reduced to US\$17million (Brabazon, 2002: 32).

In Europe, The London School of Economics no longer charges students for use of its E-Learning program, but now uses it to promote the traditional university environment (Hafner, 2002). E-University start-ups, Scottish Knowledge and Fathom have also both shut down (The Observatory on Borderless Higher Education, 2004). On April 22, 2004, the Board of the Higher Education Funding Council for England announced that the future of U.K. eUniversities Worldwide (UKeU), the UK's national commercial online university, was unviable in its current guise as it had failed to meet its student recruitment targets.

In Australia, the University of Melbourne invested \$AUD 5 million of public funds into a private for-profit speculative online venture, Universitas 21 Global (Senate Employment Workplace Relations Small Business and Education References Committee, 2001), however early negotiations with potential partner News Ltd failed (Centre for Studies in Higher Education, 2001), six universities dropped out of the network, including founding member the University of Toronto (Young, 2001), and many issues of intellectual property, governance and the speed of planning have frustrated the project (Centre for Studies in Higher Education, 2001). The Global University Alliance has suffered similar setbacks with four institutions pulling out of the grouping, including Deakin University (Maslen, 2000). Deakin has since begun a new partnership, the World Alliance of Distance Education with the UK's Open University, The Open University of Hong Kong and Canada's Athabasca University (Madden, 2002). It was argued by some commentators that there was little evidence to suggest that the fate of Universitas 21 Global and the Global University Alliance would be any different from the fate of other online learning ventures in the US and Europe (The Observatory on Borderless Higher Education, 2004).

Along with NYU Online, Scottish Knowledge and Fathom, UKeU is now a fourth major online university product of the dotcom boom to fall over. Others such as Universitas 21 Global and Global University Alliance stumble on, but with no evidence of particular success. Meanwhile, universities across the world are gradually moving online - both on and off-campus - to varying extents, building slowly and learning all the time (The Observatory on Borderless Higher Education, 2004).

## Shortcomings in Explaining Uncritical Examination

Yetton et al. attempted to explain why so many Australian universities had failed to evaluate their investments in educational technology systems through a strategic management theoretical framework. Among the reasons they proposed for a lack of formal evaluation were:

- A lack of skill at preparing business cases;
- General lack of focus, across the university, on evaluating any proposed investment, not just IT investments;
- Carry-over of proposal technique from that used when applying for external funds (e.g. quality money), which tend not to require the proposer to do an evaluation or a review;
- Lack of support at the Vice-Chancellor level; and
- Reliance on student satisfaction ratings as the most important or only measure of success in teaching and learning (Yetton et al., 1997: 89).

At first glance, these reasons might appear to explain a lack of evaluation among Australian universities across proposed investments in academic IT systems, especially at an organisational level of analysis. However, when the findings of Yetton et al. (1997), Alexander and McKenzie (1998) and Brabazon (2002), are read together with the previously discussed North American findings of Berg (2002) and Noble (1998b), it is argued that Yetton et al.'s (1997) functionalist theoretical framework (explained in further detail in a review of institutional theory in the appendices) may have limited their capacity to "see" (Clegg, 1990: 20) the impact of a number of broader factors in the national and international higher education sector at that time. Therefore, whatever factors were at work in individual universities that led to a lack of evaluation could have been shared among universities in Australia and North America alike, regardless of their institutional type or student profiles (Bell et al., 2002).

Some of the explanations proposed by Yetton et al., particularly those relating to poor business case skills, carry-over techniques from other types of proposals, and a reliance on student satisfaction feedback may have been a result of universities coming to grips with a shift in the higher education landscape. Slaughter and Leslie (1997) and Marginson and Considine (2001) have both explored this shift at length, arguing that universities in the US, UK and Australia have transitioned from formerly public institutions to 'enterprise universities'.

The Enterprise University joins a mixed public-private economy to a quasi-business culture and to academic traditions partly reconstituted, partly republican, and partly broken. This is not so much of a genuine private business culture, as a public sector variant in which certain of the conditions and techniques of business (such as competition, scarcity, marketing, goals defined in money terms) have been grafted onto existing bureaucracies now opened up to external pressures (Marginson and Considine, 2001: 236).



If universities had been more discerning concerning the shortcomings in the online learning literature, however doubtful its quality might have been, they would have confronted the many problems and cautions raised in relation to key assertions of the educational and cost effectiveness of learning management systems, leading to further examination of these core promises. Such evaluation would not have required skills in business case formation or financial analysis, but would have presumed upon the exercise of a more fundamental core academic skill: the capacity for critical analysis. An 'uncritical' analysis in this context, involves failing to analyse and question proposals in the face of public criticism and doubt (within the higher education sector), drawing on the same use of the term as Preston (2001: 354) in his discussion of the adoption of managerialism in British universities. A similar use of the phrase uncritical was also employed in Tasker and Packham (1990), where they argued that British universities had not acknowledged the risks of accepting large scale industrial funds that would, over time, lead to a detrimental value shift in universities.

Brabazon (2002), instead argued for the utility of a critical theory framework, and proposed that such an approach was required to intervene in these evaluations by questioning how information was formed and why, in order to separate the interests of specific social groups.

The greatest difficulty emerging from theorists of the Internet is that scholars focus overtly on the technology 'itself' rather than maintaining a critical approach about its use and application (Brabazon, 2002: 61).

## **Contribution to the Higher Education Literature**

These facts raise the important empirical question of how Australian universities came to adopt new learning management systems in their institutions, given claims of uncritical evaluation, problems and cautions in the literature. Ironically, universities charge large amounts of money teaching their students to develop competence in critical analysis, yet some studies have claimed that they were somewhat deficient in analysing their own decisions critically (Yetton et al., 1997; Brabazon, 2002).

This important question has received little attention in the higher education literature, despite the high visibility and costs of these decisions. Although limited theoretical explanations have been proposed by various researchers, such as those previously suggested by Yetton et al. (1997), Brabazon (2002) and Noble (1997), these matters have not been the subject of published empirical research to date. This thesis therefore addresses an overlooked gap in the literature and attempts to

make an important contribution to higher education by directing empirical research to the following research problem:

## **RESEARCH PROBLEM**

*How did selected Australian universities evaluate and adopt various learning management systems in their teaching and learning programs, given claims of uncritical evaluation, problems and cautions in the higher education literature?*

While the implications of these decisions are both interesting and important to university students, academics, decision makers, public policy makers, and even the Australian tax payer, they are not as fundamental as discovering the underlying causes or ‘logics’ that give these events significance (Pettigrew, 1990). To assist with the examination of this research problem, four questions have been formulated to guide field research in this area.

## **RESEARCH QUESTIONS**

- 1) *Which parties were involved in the evaluation and adoption of various learning management systems in selected Australian universities?*
- 2) *What was the process of evaluation and adoption of these systems?*
- 3) *How did the evaluation and adoption of these systems impact upon various university outcomes?*
- 4) *How did various internal and external factors influence these parties, processes and outcomes?*

Earlier in this section, it was argued that this research will contribute to higher education research in so far as the nature of this problem has been insufficiently addressed in the current literature. The next section of this chapter explores how each of the above research questions will contribute to the higher education literature.

## **CONTRIBUTION TO THE HIGHER EDUCATION LITERATURE**

Question one seeks to identify which parties were responsible for these evaluation and adoption decisions in selected universities. Given the break-up of many universities into faculties, departments and schools, and the different loci of decision making power ranging from senior

management to the deans of faculties or even lower positions, this is not an insignificant exercise. Once these parties are identified, their part in the broader processes of evaluation and adoption can then be researched and analysed.

Question two addresses the path of decision making and adoption around this issue in selected universities. It seeks specifically to investigate the nature and extent of evaluation of various learning management systems, as well as the processes and strategies associated with their adoption across the university. Uncritical examination of these systems, if it existed, would be identified under this question through various the particular qualitative case methodology adopted in this study (explained further in chapter two). This issue has received only partial attention by Yetton and Associates (1997).

Question three attempts to determine the impact of the evaluation and adoption of various learning management systems in different universities. Given earlier claims in relation to the educational and cost effectiveness of these learning management systems, this question will assist in validating various warnings highlighted in the higher education literature, and the significance of these issues on broader university outcomes. These outcomes include the impact on organisational resources and teaching and learning in particular, as well as other relevant categories that 'emerge' out of the data, following the particular methodology adopted in this thesis, discussed further in chapter two.

The last empirical research question seeks to identify the various internal and external factors that may have affected selected Australian universities in their adoption of different learning management systems. This question attempts, therefore, to determine the possible influence of broader factors upon many university decisions over and above the rather limiting strategic management framework used by Yetton et al. (1997). Further, given that the same claimed phenomenon of a lack of critical evaluation of online learning technologies was observed in the US and Canada, there could well be broader factors not currently accounted for that are common to both regions, such as reduced public funding and increasing competition in the US, Canadian, UK New Zealand and Australian higher education sectors.

Addressing this last question will encourage the development of frameworks and models that explore the relationships between these factors as part of a broader investigation of the context of examination. Building explanations upwards from the experiences of selected Australian universities will promote opportunities to theorise on the likely processes that led many Australian

universities to adopt learning management systems, perhaps uncritically. This question will therefore provide an opportunity to investigate the broader research problem raised earlier.

Chapter two builds on this foundation and develops a methodological framework argued to be appropriate for this particular study, given the research problem and questions identified in this chapter. The relationship between grounded theory and institutional theory in this thesis is also discussed in this chapter.

Chapters three to five are case studies of institutional change around the evaluation and adoption of various learning management systems at three selected Australian universities, each of which is written up in narrative form. Chapter six contains detailed responses to each of the research questions, based on cross-case analysis and a review of the higher education literature. A grounded theory addressing this study's research problem is also developed in that same chapter and discussed in light of relevant insights from the institutional theory literature. The concluding chapter (seven) then draws together this work, noting this study's major and minor contributions to theory, as well as implications for public policy and management.

The appendices contain a number of other items not included in the body of this work, primarily due to space. The appendices include an overview of field-level interviews in relation to core elements of the grounded theory developed in chapter six, a review of the institutional theory literature, identification of major coding protocols and computer software used in this project, as well as details of refereed publications developed during this project.

## CHAPTER TWO: METHODOLOGY

The first chapter of this thesis reviewed the higher education literature and identified the research problem for this study. This chapter explains and defends the methodological framework applied in this research project, drawing on recommendations from a range of methodology literatures. It also articulates the relationship between grounded theory and institutional theory in this thesis. The structure of this chapter begins with the research framework, followed by data collection strategies, data analysis, and quality criteria.

### Research Framework

#### JUSTIFICATION FOR A CRITICAL THEORY FRAMEWORK

Guba & Lincoln (1994) contend that preceding the question of research method (e.g. quantitative or qualitative methodologies) is the determination and influence of a researcher's paradigm (Kuhn, 1970), or "basic belief system or worldview that guides the investigator" (Guba and Lincoln, 1994: 105). This question is so important because different research methods are ultimately tied to different epistemological positions (Bryman, 1989: 248). Such a paradigm deals with "ultimates or first principles" and "defines, for the holder, the nature of the 'world', the individual's place in it, ... the range of possible relationships to that world and its parts" (Guba and Lincoln, 1994: 107) and the intrinsic value of this knowledge to the inquirer (Herron and Reason, 1997). These "basic beliefs" are at best statements of faith; there is no way to prove each one. They are philosophical debates, rooted in basic assumptions about the world. They are starting points that dictate the use of any methodological instrument.

Five basic beliefs may be illustrated with reference to four fundamental questions. The first three of these questions are reproduced in Figure 1.

1. **Ontology.** "What is the form or nature of reality and, therefore, what is there that can be known about it?"
2. **Epistemology.** "What is the nature of the relationship between the knower or would-be knower and what can be known?"
3. **Methodology.** "How can the inquirer (would-be knower) go about finding out whatever he or she believes can be known?" (Guba and Lincoln, 1994: 108).

4. **Axiology.** “What is intrinsically worthwhile about this knowledge?” (Herron and Reason, 1997: 7). That is, does the inquiry paradigm regard knowing the truth in propositional form, or concepts expressed in statements and theories (Herron and Reason, 1997), as valuable in its own right, or as a means to another end?

**Figure 1: Basic Beliefs of Alternative Paradigms**

Issue	Positivism	Postpositivism	Critical Theory et al.	Constructivism	Participatory
Ontology	Naïve realism- “real” reality but apprehendable	Critical realism- “real” reality but only imperfectly and probabilistically apprehendable	Historical realism- virtual reality shaped by social, political, cultural, economic, ethnic, and gender values crystalised over time	Relativism-local and specific constructed realities	Participative reality- subjective-objective reality, co-created by mind and given cosmos
Epistemology	Dualist/ objectionist; findings true	Modified dualist/objectionist; critical tradition/community; findings probably true	Transactional subjectivist; valued- mediated findings	Transactional subjectivist; created findings	Critical subjectivity in participatory transaction with cosmos; extended epistemology of experiential, propositional, and practical knowing; co-created findings
Methodology	Experimental/ manipulative; verification of hypotheses; chiefly quantitative methods	Modified experimental/ manipulative; critical multiplism; falsification of hypotheses; may include qualitative methods	Dialogic/dialectic	Hermeneutic/ dialectic	Political participation in collaborative action inquiry; primacy of the practical; use of language grounded in shared experiential context.

*Source: Lincoln and Guba (2000: 168)*

The starting place for paradigm discussion begins usually with positivism, as it is generally associated with the classical “science” disciplines that assume reality exists in natural laws and mechanisms (Guba and Lincoln, 1994: 108-110). Positivist science grew out of the Enlightenment era that sought to progress human knowledge through reason, separating knowledge from faith, values and belief (Christians, 2000: 134). It has been argued that this view of neutrality regarding what is ethical and worthwhile has since been discredited in the light of many appalling medical experiments since World War 1, and for the way that it ignores the role of power relations (Christians, 2000: 142). Positivism also holds that there is only one logic of science to which any intellectual activity must conform, and is associated with functionalism, rational choice and exchange theory frameworks (Neuman, 2003: 71). Knowledge is held to be time and context free, usually bound up in cause-effect relationships. The investigator is assumed to be independent of the research object, without influencing or being influenced by it. Methodologies are typically

experimental and manipulative, with attention given to verified hypothesis testing and control conditions for verification. Positivism thus views social science as an

organized method for combining deductive logic with precise empirical observations of individual behaviour in order to discover and confirm a set of probabilistic causal laws that can be used to predict general patterns of human activity (Neuman, 2003: 71).

Post-positivism is an attempt to respond to some of the criticisms of positivism (e.g. theory verification substituted for theory falsification) whilst retaining many of the same beliefs (Guba and Lincoln, 1994: 109). Here, reality is assumed to exist, but is never perfectly apprehendable. Critical traditions and the critical community are consulted to develop findings that are probably true through a process of falsifying, rather than proving, initial hypotheses (Guba and Lincoln, 1994: 110). For both positivist and postpositivist philosophies, knowledge expressed in propositional form is held to be intrinsically valuable and is an end in itself (Herron and Reason, 1997). It is often used for prediction and control (Guba and Lincoln, 1994: 113), with much attention paid to issues of internal and external validity, objectivity and realism. Both these paradigms are supposedly also “value-free”, with an assumption made that the ‘expert’ scientist is external to the inquiry process. These closely related paradigms continue to be a dominant view in research thinking.

The constructivist approach, a derivative of interpretive social science along with ethnomethodology and phenomenology (Neuman, 2003), does not assume that there is a single “real” position to be found. “Realities” are

apprehendable in the form of multiple, intangible mental constructions, socially and experientially based, local and specific in nature...dependent ... (in) form and content on the individual persons or groups holding the constructions (Guba and Lincoln, 1994: 110-111).

Interpretive social science more broadly, is associated with the symbolic interaction perspective, or the 1920s-1930s Chicago school in sociology, often called the qualitative method of research (Neuman, 2003: 76). This broader interpretive approach, under which constructivism belongs, has been defined as

the systematic analysis of socially meaningful action through the direct detailed observation of people in natural settings in order to arrive at understandings and interpretations of how people create and maintain their social worlds (Neuman, 2003: 76).

Constructions in this view are alterable, as are their “associated realities” (Guba and Lincoln, 1994: 111). The investigator and investigated object are interactively linked as ‘findings’ are created as the investigation proceeds. Constructions are formed and refined through interaction, and interpreted through hermeneutic techniques, and “are compared and contrasted through a dialectical interchange” (Guba and Lincoln, 1994: 111). The constructivist aims to formulate more informed

and sophisticated constructions over time and to become aware of competing constructions aiming towards consensus constructions. Where competing constructions are raised, continuous revision results where the quality of such revisions is usually judged on the grounds of trustworthiness (credibility, transferability, dependability and conformity) and authenticity (fairness and constructions that lead to enlarged personal constructions, improved understanding of other's constructions and empowered action) (Guba and Lincoln, 1994: 114).

Critical theory is used as a collective term to denote a number of "alternative paradigms" (Guba and Lincoln, 1994: 109), including marxist, feminist, materialist and queer perspectives, that differ from positivism and post positivism on epistemological grounds. The origins of this framework were developed by the Frankfurt school, a group of writers connected to the Institute of Social Research at the University of Frankfurt, however it was claimed that there was never a uniform approach to this perspective (Kincheloe and McLaren, 2000: 279). Critical theory rejects economic determinism and functionalist arguments, recognising the capacity of power to determine and shape consciousness, produce ideology, and construct language and discourse (Kincheloe and McLaren, 2000).

A critical social theory is concerned in particular ways with issues of power and justice and the ways that the economy, matters of race, class, and gender, ideologies, discourses, education, religion and other social institutions, and cultural dynamics interact to construct a social system (Kincheloe and McLaren, 2000: 281).

Critical theory assumes that reality was once apprehendable, but was shaped into a series of real structures over time by various social, political, cultural, economic, ethnic and gender factors. Like the constructivist approach, the investigator and object are interactively linked with the values of the inquirer influencing the inquiry itself. Findings are said, therefore, to be "value-mediated" (Guba and Lincoln, 1994: 110). Yet, unlike the constructivist approach, critical theory does not treat people's ideas as more important than the broader long-term context (Neuman, 2003: 81). In this paradigm, the investigator argues for restitution to occur, understanding *a priori* what transformations are required, based on a dialectical process of historical revision bringing more enlightened insights (Guba and Lincoln, 1994: 113-114). Values drive the shaping of inquiry outcomes under this worldview. Heron and Reason (1997) argued that both the critical theories and constructivist approaches value propositional and transactional knowing as instrumentally important to social emancipation, which is an end in itself and thus intrinsically valuable.

The participative/cooperative paradigm is a newly recognised position, proposed by Heron and Reason (1997), in response to Guba and Lincoln (1994). This paradigm is in many ways a response



to limiting constructivist assumptions that fail to include knowledge attained by acquaintance, meeting, or by felt participation, and inconsistencies regarding the acknowledgement of “tangible realities” in a world of purely mental constructs.

The participatory paradigm holds that truth is a co-created recognition of the subjective and objective at the same time. It is subjective because it is known only through the form the mind gives it, and it is objective because the mind interpenetrates the given cosmos which it shapes (Herron, 1996: 11). A knower can interpret and articulate a world (an epistemological construct or form of understanding) through experiential knowledge (feeling and imagining the presence of some energy, entity, person, place, process or thing), presentational knowing (intuitive grasp of the significance of our imagining of the world), prepositional knowing and practical knowing (knowing how to do something, demonstrated in a skill or competence) (Herron and Reason, 1997: 4-5). Claims to validity are made through a congruence among all four epistemological aspects. Methodologies flowing from this paradigm will therefore adopt a collaborative nature (involving both researcher and research subject in research design and method) with a bent towards action-orientated inquiry. The primary axiological purpose of participative inquiry is

action in the service of human flourishing (Herron and Reason, 1997: 8).

A number of criticisms have been noted in the literature for many of the paradigms, however most researchers tend to adopt their stance “simply on faith” (Guba and Lincoln, 1994: 107), without an attempt to establish the paradigm’s ultimate truthfulness. Further, Lincoln and Guba (2000) claim that it is possible for researchers to combine or blend elements from one paradigm into another.

There is great potential for interweaving of viewpoints, for the incorporation of multiple perspectives, and for borrowing or bricolage, where borrowing seems useful, richness enhancing, or theoretically heuristic (Lincoln and Guba, 2000: 167).

Lincoln and Guba therefore urge the reader to recognise the boundaries between the paradigms as shifting and fluid (Lincoln and Guba, 2000: 167). They argue further that blending perspectives depends on the axiomatic elements being similar (Lincoln and Guba, 2000: 174). For example, they claimed it would be possible to combine interpretive social theory with critical theory, but not with positivism as they have contradictory and mutually exclusive assumptions (Lincoln and Guba, 2000: 174).

As with the constructivist perspective, the critical theory perspective allows for the discovery and study of different constructed realities and perceptions of a variety of actors involved in decisions to adopt learning management systems in selected Australian universities. Yet unlike the

constructionist perspective, this frame promotes the consideration of broader field and historical factors and their possible relationship with, and influence upon, individual decisions. The research problem in this study requires that the activities of individuals be linked to broader field-level forces at a more general level, something which the Yetton et al. (1997) study failed to do and which the critical theory framework is more than capable of achieving (Kincheloe and McLaren, 2000: 286-287). This capacity of the critical theory framework also satisfies recommendations made in the higher education literature to investigate the roles of different social groups as part of a critical framework (2002).

Constructions and theory will therefore be formed through hermeneutic interaction and analysis with specified data sources (discussed later in this chapter) until valuable knowledge about the nature of critical evaluation within selected Australian universities is identified. This approach will therefore necessitate the explicit identification of this researcher's own assumptions and limitations, and the possible impact that they could have on the hermeneutical analysis of key data sources (also discussed later in this chapter).

Thus critical researchers enter into an investigation with their assumptions on the table, so no one is confused concerning the epistemological and political baggage they bring with them to the research site (Kincheloe and McLaren, 2000: 292).

The other relevant implications of this critical theory framework, including research design, data analysis and quality evaluation, will be traced through the remainder of this methodology chapter.

## **JUSTIFICATION FOR QUALITATIVE RESEARCH**

A number of relevant arguments have been advocated in the methodology literature in support of qualitative research methodologies. Yin (1994: 6) and Merriam (1990: 9) both argued that qualitative studies are well suited to research that seeks to determine the answers to *what* and *how* questions, the substance of this study's exploratory research problem, already outlined in chapter one.

Strauss and Corbin also made a strong argument for qualitative research methodologies, particularly where little is known about the area of study, such as the evaluation and adoption of learning management systems.

Qualitative methods can be used to uncover and understand what lies behind any phenomena about which little is known...Also, qualitative methods can give the intricate details of phenomena (Strauss and Corbin, 1990: 19).

Qualitative research is also particularly strong in understanding the processes and perceptions involved in a particular empirical context. Again, this research is interested in both of these aspects.

Qualitative research is best for understanding the processes that go on in a situation and the beliefs and perceptions of those in it...Qualitative methods should not be avoided because of the fear that their claims for broad relevance are especially weak. That is not the case (Firestone, 1993: 22).

Bogdan and Biklen (1982) claimed that qualitative researchers are concerned with process rather than simply with outcomes or products. For example, “How do certain notions come to be taken as part of what we know as ‘Common Sense’? What is the natural history of the activity or events under study?” (Bogdan and Biklen, 1982: 28). Ticehurst and Veal (2000: 95) noted that qualitative studies are useful in examining personal changes over time. Ticehurst and Veal (2000: 95) also claimed that qualitative research focuses on people’s understanding and interpretations, rather than finding external causes or ‘laws’ for behaviour, as do the positivist and post-positivist paradigms. Firestone argued for this same focus on describing the setting of the research and the definitions of those settings held by those in the setting (Firestone, 1993: 17). This approach is particularly commensurable with a critical theory paradigm that focuses on a range of individual perceptions within the context of a broader field.

Qualitative research methodologies are also compatible with historical analysis (Bryman, 1989). For example, Tuchman (1998) argued that qualitative data is more likely to

let the researcher see how a social world seemed and felt to a variety of its members. They are more likely [than quantitative-based approaches] to reveal process (Tuchman, 1998: 38).

It is difficult to argue persuasively for qualitative methodology however, without also defending the particular approach to be adopted. There are multiple approaches to study available within a qualitative framework. One approach to qualitative studies, the use of multiple case studies, will now be discussed in relation to the methodology literature.

## **JUSTIFICATION FOR QUALITATIVE CASE STUDIES**

Case study research is concerned primarily with the selection of a bounded system or object to be studied, not a particular method *per se* (Yin, 1994; Stake, 1994). Within the case study approach, it is possible to select from a range of different methods that can be applied to the specified and predetermined research object. These methods are discussed later under the data collection and analysis strategies sections of this chapter.

There are a number of reasons why case studies are an appropriate research strategy in this qualitative study. First, case research can assist in the process of constructing knowledge. Stake noted that the qualitative approach is particularly appropriate for operation within a framework that is complementary with a constructivist paradigm (Stake, 1994: 242), such as the critical theory framework to be adopted in this study. Kincheloe and McLaren (2000: 283) similarly noted the need to understand the operation of relevant processes within a critical theory framework on a case by case basis.

Second, case studies seek holistic description and explanation, and are particularly suited to situations where it is impossible to separate the phenomenon's variables from their context (Yin, 1994; Merriam, 1990: 10). The adoption of a case study approach would assist the development of a contextual and historical landscape (Dunkerley, 1988).

Third, case studies are preferred when examining contemporary events, and when the relevant behaviour cannot be manipulated (Yin, 1994: 8). Yin claimed that case studies are very effective in explaining the reasons for a problem, the background of a situation, what happened and why. They can also explain why an innovation worked or failed to work, and they can discuss and evaluate alternatives not chosen. They can even assist evaluation, summarisation, and conclusions, and thus increase the potential applicability of the case study (Yin, 1994: 14).

Fourth, case studies are particularly helpful in capturing processes over time within a critical theory framework (Kincheloe and McLaren, 2000: 283).

...one of the strengths of qualitative research which is based on case studies is that it is able to capture processes over time (Bryman, 1989: 242).

Fifth, multiple case studies can actually strengthen theory (Merriam, 1990: 154). A researcher attempts to

build a general explanation that fits each of the individual cases, even though the individual cases will vary in their details (Yin, 1994: 108).

Finally, Eisenhardt claimed that case study approaches are of great assistance in generating novel theory through the analysis of opposed viewpoints (Eisenhardt, 1989). Such theory, she claims, is also likely to be empirically valid and testable because it is so intimately tied to the evidence (Eisenhardt, 1989; Miles and Huberman, 1994).

## **Data Collection**

This next section outlines the various decisions made during this research that relate to the unit of analysis, selection of university case studies and field level experts, as well as further details relating to interviews conducted and documents collected during this research.

### **SELECTION OF UNIT OF ANALYSIS**

The selection of a unit of analysis is the pursuit of a “bounded system” (Stake, 1994: 236), or a particular instance around which the case study will focus (Merriam, 1990: 44). The unit of analysis may be an individual, program, institution, group, event, concept, process or organisational position (Merriam, 1990: 44-46). It has sometimes been described as the case study itself (Miles and Huberman, 1994: 25). The key issue in the selection of the case study is the decision “what it is you want to be able to say something about at the end of the study” (Patton, 1980: 100; Merriam, 1990: 44). It is ultimately the nature of the problem to be investigated that helps to set boundaries for analysis.

The research problem identified in chapter one revolved around the claim from some authors that some universities in Australia and North America failed to examine critically the merits of new learning management systems to their institutions, despite this being a core academic skill that is taught to their students. This thesis therefore focuses on the genesis, development and execution of the evaluation and adoption of various learning management systems, and discarding of other “templates for organising” (Greenwood and Hinings, 1996) in selected Australian universities. This information will then be used to develop theory in an attempt to answer this study’s research problem.

### **SELECTION AND JUSTIFICATION OF UNIVERSITY CASES**

The next section of this chapter details a theoretical basis for case selection and decisions related to the number of cases. It then notes various decisions made, and the impact of a range of different events, such as UTS’ ethics approval and other university responses on the final case selection. The impact of these final cases on extending theory is then considered.

### **Theoretical Justification**

The methodology literature provides several recommendations for the selection and number of particular cases used in a case study framework. Some of the different legitimate criteria for selecting cases are:

1. Maximum diversity/variation among the cases selected (Firestone, 1993; Merriam, 1990; Pettigrew, 1990; Miles and Huberman, 1994), particularly polar types (Eisenhardt, 1989; Pettigrew, 1990)
2. Manifestations of a theoretical construct (Miles and Huberman, 1994; Patton, 1990);
3. Variety, but not necessarily representativeness (Stake, 1994);
4. Typical cases (Patton, 1980; Merriam, 1990; Miles and Huberman, 1994);
5. Cases selected according to political importance (Patton, 1980);
6. An opportunity to learn (Merriam, 1990: 48), particularly the atypical case exemplars (Stake, 1994; Silverman, 2000) or deviant cases (Neuman, 2003). Such cases provide an opportunity to extend and refine theory (Eisenhardt, 1989: 542);
7. Access to data, a valid concern for case studies (Marshall and Rossman, 1995). Patton (1980) expressed this as a criteria based on convenience;
8. Snowball or chain sampling, where respondents refer the research to other cases to consider (Neuman, 2003; Patton, 1990), and opportunistic sampling, where new leads arise out of the unexpected (Patton, 1990);
9. Cases selected on reputation by experts in an area (Goetz and LeCompte, 1984; Merriam, 1990);
10. Purposive non-probabilistic sampling, where criteria or bases for selection are first established by which samples are later found that match certain criteria (Merriam, 1990; Patton, 1990; Neuman, 2003); and
11. Theoretical sampling, where cases are sought to populate emerging theoretical categories and properties of interest during data analysis to develop theory, particularly in traditional grounded theory approaches (Glaser, 1992; Strauss and Corbin, 1998; Strauss, 1987; Pidgeon and Henwood, 2004).

There are also limited discussions in the methodological literature related to the number of case studies required for quality research. The observation that less is written on this particular issue has much to do with the fact that there are no rules for sample size within qualitative data analysis.

There are no rules for sample size in qualitative inquiry. Sample size depends on what you want to know, the purpose of the inquiry, what's at stake, what will be useful, what will have credibility, and what can be done with the available time and resources (Patton, 1990: 185).

Unlike quantitative research approaches emanating from positivist and post-positivist paradigms, qualitative studies do not attempt to derive their quality from statistical representation of a population of data, but depend instead on the information richness of the case and the analytic abilities and decisions of the researcher (further issues relating to quality are discussed later in this chapter).

The validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information-richness of the cases selected and the observational/analytical capabilities of the researcher than with sample size (Patton, 1990: 185).

Patton (1990) argued further that the most crucial issue is that the research provides a full description, explanation and justification for the sampling decisions and how these are likely to affect the findings, analysis, results and generalisability of the research (Patton, 1990: 186). This research heeds Patton's (1990) advice and discusses next how the sampling decisions made during this research are likely to impact upon the broader research aims and claims of this study.

### **Pragmatic Justification**

The proposed criteria for selection of Australian universities was originally designed in 2004<sup>2</sup>, and included approaching five different Australian universities. These universities were selected for maximum diversity (criterion 1) according to their adoption decisions in order to generate novel theory. Although Australian universities do vary on many dimensions according to their university type, Bell et al. (2002) found that there was no discernable difference in adoption across this particular dimension. In addition to studying these Australian university cases, a range of experts in the field were also approached, such as government representatives and other relevant academics and professionals, based on their expertise (criterion 9). These field level experts were intended to complement the focus on intra-university adoption through assisting with the identification and

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<sup>2</sup> Part of the university requirements for this doctoral research involved this researcher's candidature being formally confirmed before a school research panel, following examination of a written research proposal at the School of Management's research mini-conference. Formal approval from the University of Technology, Sydney Human Research Ethics Committee was also required, in which a lengthy application form was submitted and considered by the Committee. This process is revisited later in this chapter.

development of an historical and field level perspective on the evaluation and adoption of learning management systems across the Australian higher education sector.

Recommendations for selection of cases and field level respondents were sought from experts in the online learning field who were invited to attend and speak at a conference on the Gold Coast in 2004.<sup>3</sup> Additional recommendations were also sought from this researcher's co-supervisor who is known in this field, and from information in secondary field sources (criterion 9). These respondents generated a list of names, cases and relevant justifications for each (criterion 8 and 9). The criterion for selection and the response of each university case is discussed further below.

Prior to approaching particular institutions, the University of Technology, Sydney (UTS) requires all research students to submit a formal ethics application to the Human Research Ethics Committee (HREC) for approval. This committee mandated several modifications to the original research design. Two of the relevant recommendations that related to the selection of cases included:

1. A rejection of the request to modify the working title of this thesis ("Uncritical Thinking in Australian Universities: Institutional Isomorphism, Vested Interests and the Fashion of Online Learning"). This was originally sought out of a fear that it might lead some universities to reject requests to research their prior decisions. This title was conceived out of the process of writing several refereed conference and journal articles (see the appendices of this thesis for further information), and was argued to be theoretically justified at that time, however pragmatically unhelpful in gaining institutional consent. The proposed change to the title and correspondence templates were not approved on the grounds that this could be considered deceptive, that it could breach privacy principles, and that it was inconsistent with the nature of socially constructed research that engaged rather than avoided potential researcher bias.
2. In an attempt to assist in gaining institutional approval, the Committee recommended citing in correspondence a recent front page article in *The Sydney Morning Herald* on the failure of Australian universities to use online learning technologies appropriately (Rood, 2004) to encourage institutions to engage with this topic.

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<sup>3</sup>e-Agenda 2004 International Roundtable, held at the Marriott, Surfers Paradise, Queensland from 3rd-5th August, 2004.



Following the above recommendations of the UTS HREC, the range of targeted universities was expanded to seven, given a fear that some universities might not participate in this study. Formal institutional approval letters were then sent to the relevant Deputy Vice Chancellors of each targeted institution<sup>4</sup> in late December 2004, following approval to conduct this research project from the UTS HREC. The dates of formal written correspondence and resulting university responses are summarised in Figure 2.

**Figure 2: Selected University Responses to Participate in Doctoral Research**

University	First Request	Institutional Response	Reason for Not Pursuing Research at this Uni
University 1	20-Dec-04	<b>Approval</b>	
University 2	20-Dec-04	<b>Approval</b>	
University 3	20-Dec-04	<i>Refusal</i>	Conducting own "review" of this issue
University 4	22-Dec-04	<i>Refusal</i>	Confidential issues arising out of current termination agreement
University 5	20-Dec-04	<i>Refusal</i>	No reason given
University 6	20-Dec-04	<i>Undecided</i>	No formal response to repeated requests
University 7	22-Dec-04	<i>Undecided</i>	No formal response to repeated requests
University 8	04-Mar-05	<b>Approval</b>	
University 9	04-Mar-05	<i>Undecided</i>	No formal response to repeated requests
University 10	26-Apr-05	<b>Approval</b>	Approval received too late to pursue on 1 June 2005

The response of the first seven universities approached<sup>5</sup> was somewhat surprising. Although two universities initially gave institutional consent for this research within a month of the December 2004 correspondence, the remaining five universities either refused or failed to respond to repeated formal requests to conduct research at their institution. Given the empirical literature on this issue discussed in chapter one, and the recommendation from the UTS HREC to keep the provocative working title and cite a recent newspaper article on online learning failure, this response was not entirely unpredictable.

By the beginning of March 2005, it became evident that this research was not going to achieve its targeted response of five universities drawn from the original selection pool of seven universities. A decision was made at this time to reduce the sample size to four, and then send out further requests to three more universities in March and April 2005 (criterion 7).

<sup>4</sup> The UTS Human Research Ethics Committee (HREC) approval of this research required that formal permission to interview staff and collect documents be granted at both an institutional and individual level.

<sup>5</sup> The UTS HREC approval required institutional anonymity in this research. Therefore the names of relevant institutions have not been disclosed in this thesis.

University one was initially selected as a typical example (criterion 4) of a university that adopted a learning management system. It was also recommended by field experts (criterion 9). What emerged during data collection, however, was that this university made its decision more quickly and later than many other Australian universities. University one is written up in chapter three of this thesis as 'Suburban University', as it was located in the suburbs of a major Australian city.

University two was initially selected as a result of reading the literature in the field. This university was identified by the Australian Government in the higher education literature for its early adoption and development of online learning (criteria 1 and 5). This university was also recommended in discussions with field experts (criterion 9), including one respondent from this university who invited this researcher to interview them (criterion 7). University two is written up in chapter five of this thesis as 'Regional University', as it is located primarily outside a major Australian city.

University eight was a highly visible university in the area of online learning and was politically active (criterion 5) in shaping the national and international online learning domain, including the decisions of other Australian universities. This university also had an unusually long decision making period and unique adoption decision, and thus represented an extreme case (criterion 1). University eight was also recommended by several experts in the field (criterion 9), and is written up in chapter four of this thesis as 'Metropolitan University', as it is located in the suburbs of a major Australian city.

At the end of May 2004, having completed field research at two of the three approving universities, a decision was made with this researcher's supervisors to reduce the sample size for this research down to the three approving universities, in order to complete this research within the time limits and resources prescribed by the university (criterion 7). After this decision was made, University ten accepted an invitation to research. This acceptance was promptly acknowledged, with notice given, that this researcher would not require their institution to participate due to a recent decision to reduce the scope of this research, following a shortage of critical resources to complete this project.

This doctoral research, as a result of the previously discussed decisions, has therefore restricted its field research to three Australian universities. Although this research did not intentionally set out to research only three universities, particularly the first three universities that responded to formal institutional correspondence, these cases do satisfy the original selection intentions of this study,

despite their serendipitous self-selection. Figure 3 highlights the diversity of these university types and adoption decisions across a few selected criteria.

**Figure 3: Diversity Among Selected University Cases**

Criteria	‘Suburban University’	‘Metropolitan University’	‘Regional University’
Early institutional disposition toward learning management systems	Patchy experimentation among some interested academics of learning management systems. Strong senior management deprecation of university teaching and distance education.	Institutional history and experimentation with multimedia and learning management systems. Strong senior management deprecation of distance education.	Institutional history and experimentation with multimedia and learning management systems, particularly across multiple campus locations.
Summary of institutional adoption of new learning management systems:	<u>2000</u> : – University decision to adopt WebCT Campus Edition. <u>2005</u> : - University decision to adopt WebCT Vista and discard WebCT Campus Edition.	<u>1994 -2004</u> : Widespread yet uncoordinated faculty and individual academic adoption of various custom and commercial platforms. <u>2005</u> : –University decision to adopt Blackboard and discard various custom and commercial products.	<u>1997</u> : Evaluation and limited trial of Topclass. <u>1998</u> : University decision to discard Topclass and adopt WebCT Campus Edition <u>2003</u> : Re-evaluation of WebCT Campus Edition <u>2005</u> : – University decision to adopt WebCT Vista and discard WebCT Campus Edition
Speed of decisions:	Very fast (weeks)	Very slow (7+ years)	Moderate (months)
Evidence of Uncritical Examination?	Yes <sup>6</sup>	No	No

*Source: original contribution, based on case information presented in chapters three - five.*

Figure 3 indicates that the three case universities did share some similarities in their institutional disposition towards early educational technologies. For example, Regional University and Metropolitan University both shared a significant history of experimentation with multimedia and learning management systems at an institutional level. The senior management of Metropolitan University and Suburban University also shared a common view of distance education that was not present at Regional University.

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<sup>6</sup> This assessment of uncritical examination was conducted in chapter seven, on the basis of detailed discussion of the three case studies in chapters four to six.

The adoption decisions of the three universities are also indicated in Figure 3. Metropolitan University was one of the last universities in Australia to agree to a centrally managed learning management system, and probably took the longest time of any institution to do so, based on claims made by respondents at that university. This decision was delayed as a result of a number of failed attempts to gain senior management approval for earlier recommendations of alternative platforms, including the pursuit of open source technology. Regional University was one of the earlier adopters of a learning management system, with involvement in centrally managed platforms since 1997. Suburban university made a decision to adopt later than many Australian universities, and as a result made an extremely fast and uncritical organisational decision to adopt a learning management system in 2000. The details of these decisions and their implications are discussed in full in chapters three to five of this thesis.

### **Implications for Theory**

As discussed previously in this section, the selection of Suburban, Metropolitan and Regional Universities (Universities one, eight and two in Figure 2) was originally guided by a sound theoretical rationale, however was ultimately determined by the serendipitous decisions of individual universities to grant or refuse access to their institutions. These decisions do have various implications for theory.

A number of authors have suggested that the issue of representation in case study selection is far less important than other matters. Patton (1990) was quoted by Firestone (1993) as authority for the proposition that the purpose of case studies is “to facilitate the discovery of relevant explanations, not generalization” (Firestone, 1993: 20). Stake (1994: 244) similarly argued that representativeness among cases was not as much an issue as variety (1994: 244), or the opportunity to learn.

My choice would be to take that case from which we feel we can learn the most. That may mean taking the one that we can spend the most time with. Potential for learning is a different and sometimes superior criterion to representativeness (Stake, 1998: 101).

This research will therefore need to be careful to ensure that it does not “over-generalize” (Patton, 1990: 186), without justification or support from other data sources, the findings of this research to the Australian or North American higher education sector. It will therefore major on theory building, a real strength of the case study method (Eisenhardt, 1989). When little is known about a phenomenon, such as the adoption of learning management systems in this research, Eisenhardt argued that

theory building from case study research is particularly appropriate because theory building from case studies does not rely on previous literature or prior empirical evidence. Also, the conflict inherent in the process is likely to generate the kind of novel theory which is desirable when extant theory seems inadequate (Eisenhardt, 1989: 548).

In addition to the variety observed between the three selected university cases, field level experts were also drawn from a range of other institutional backgrounds, including many of the universities who refused institutional consent to conduct research on their site. Further detail on the backgrounds of these respondents is discussed in the following section of this chapter.

## **DATA COLLECTION INSTRUMENTS**

This study draws data from two different types of data sources, at two different levels of analysis. This next section discusses the interviews conducted and documents collected within three university case studies. This data is later used to compile explanations of adoption for these three universities, further explored in chapters three through five. Following this discussion is a review of the interviews conducted and documents collected at the field level of analysis. This information is then later used in chapter six to verify a theoretical explanation for uncritical examination proposed in chapter six, building up from the three case studies in chapters three to five.

### **University Case Study Interviews**

Interviews provide an excellent opportunity to investigate previously unexplored areas, and allow researchers to aggregate their own concepts and data (Dunkerley, 1988: 89). There is however, much scope in how interviews are conducted, in terms of their form and substance.

Structured interviews ask the same pre-established questions of all respondents, with little room for variation, unless the questions are open-ended in nature. There are usually very strict instructions on how they are conducted, with the interviewer assuming a non-evaluative stance. Whilst this approach can translate into high response quality, it can be difficult to pick up the context-driven nature of responses, as well as the emotional dimensions behind these responses (Fontana and Frey, 2003).

Unstructured interviews on the other hand, can provide greater breadth of data than the structured interview. This type of interview is open-ended and is often carried out with participant observation (Fontana and Frey, 2003). Unstructured interviews apply little *a priori* structure before hand, and

allow for a greater capacity to understand the relevant emotions, context, culture and language of the respondent (Fontana and Frey, 2003). There is also greater flexibility to build rapport, gain trust and collect empirical materials, such as field notes and other supporting documents (Fontana and Frey, 2003).

This research has made use of semi-structured interviews, finding a compromise between the two extremes above. Interview question sets were initially prepared for early interviews in each case. However, it became clear when speaking with different respondents that the questions needed to be tailored to each individual, given their different experiences and perceptions within different universities. These background experiences and perceptions of each respondent were not always known until during the interview itself, and required a much more flexible approach than the structured interview could allow. Therefore this research encouraged respondents to describe the history of events in their institution, guiding and prompting respondent narratives through a range of key issues that were of particular interest to this research. This compromise had the benefit of building rapport and trust with respondents, allowing them flexibility to cover issues of relevance that were not anticipated before the interview, and to do this in a way that allowed them to use their own language, culture and context.

The interviews conducted with university case study respondents were between 40 minutes and over an hour in length. Following institutional consent to interview staff and collect relevant documents in each case university, a shortlist of relevant individuals was identified through recommendations from field level experts and a search of the relevant university's website. All short listed interviewees were then sent an email inviting them to participate in this doctoral research, along with a request to sign the attached individual consent form required by the UTS HREC. Early interviews in each institution targeted those respondents who were involved in central educational technology units of the relevant university. At the end of these interviews, these respondents were asked to recommend other people in their institution whom they thought could speak about similar issues. This process, repeated for each university case study respondent, yielded a productive list of names that were pursued in later interviews. These recommendations were then followed up and interviews conducted until there were no more new names suggested, and no new information revealed about the case. This approach corresponds with criteria 7-9 in the earlier case selection section in this chapter. Figure 4 describes the profiles of the different respondents interviewed across the three selected university case studies.

**Figure 4: University Case Study Respondent Profile**

<b>Case Respondent Type</b>	<b>Suburban Uni</b>	<b>Metropolitan Uni</b>	<b>Regional Uni</b>	<b>Total</b>
Senior management	3	3	1	<b>7</b>
Central education unit	4	2	-	<b>6</b>
Central educational technology unit	2	4	4	<b>10</b>
Central information technology unit	1	1	1	<b>3</b>
Faculty management	2	2	2	<b>6</b>
Faculty academics	1	1	1	<b>3</b>
<b>Total case respondents</b>	<b>13</b>	<b>13</b>	<b>9</b>	<b>35</b>

**Key Terminology**

Senior management: – Includes past and present Vice Chancellors, Deputy Vice Chancellors, Pro Vice Chancellors, Principals and Vice Principals of various portfolios, and Presidents of Academic Board.

Central education unit: – Refers to those staff in centrally located units responsible for assisting the university to evaluate various educational developments and train academics in their teaching skills.

Central education technology unit: – Refers to those specialist central units and academics that were employed to find and evaluate new ways to improve teaching through new technologies, such as multimedia applications, learning management systems and computer-aided learning.

Central information technology unit: – Refers to those representatives of the university responsible for the broader management of university I.T. systems, of which learning management systems were just one component.

Faculty management: – Includes faculty and school staff that exercised some formal leadership role within the faculty, such as past and present Deans, Associate Deans, Heads of Schools, or heads of various faculty-based learning and teaching units.

Faculty Academics: –Refers to academics who did not exercise formal leadership within the faculty.

Figure 5 represents an attempt to illustrate the scope of the 35 interviews conducted across the three university case studies. 10 interviews at five universities were planned initially, however only three universities ultimately approved a request to interview staff and access internal documents within the agreed timeframe, as discussed earlier in this chapter. Snowball sampling was conducted at each of the three universities, yielding an emergent list of names and documents that were followed up systematically until no new information was obtained and the research site was exhausted (i.e. saturation). Interviews were conducted with staff and former staff who were involved, affected, or were in a position to report on the relevant examination and adoption processes in each institution. Other staff involved but not interviewed (primarily due to a lack of access) were reported in the three case studies (chapters three to five). The fact that 13 interviews were conducted in both the first two universities was pure coincidence. Only nine interviews were conducted at Regional University as a result of this university being a smaller organisation with fewer people involved in evaluation and adoption processes.



Interviews were conducted with a range of different people in each university, including senior management, central education units, central education technology units, central information technology units, faculty management and interested academics. Regional University did not have a separate central education unit distinct from its central education technology unit, as a result of the historical development of this university. Further details regarding the profiles of these universities and their responses to new learning management systems can be found in chapters three to five of this thesis.

Various attempts were made to ensure that the quality of information from each interview was as high as possible. Details relating to the conduct and handling of interviews conducted at the three university case studies are indicated in Figure 5.

**Figure 5: University Case Study Interview Details**

<b>Interview Details</b>	<b>Suburban Uni</b>	<b>Metropolitan Uni</b>	<b>Regional Uni</b>	<b>Total</b>
Date of first interview	8 Feb 2005	16 Jun 2005	25 Feb 2005	
Date of last interview	11 May 2005	12 Jul 2005	18 May 2005	
No. of interviews conducted off site	-	1	3	<b>4</b>
No. of interviews not fully transcribed	1*	-	2**	<b>3</b>
No. of interviews transcribed by a professional transcriber***.	1	13	5	<b>19</b>
No. of transcriptions corrected by university case study respondents	4	6	2	<b>12</b>
No. of special conditions requested	1	1	1	<b>3</b>
<b>Notes:</b>				
*The interview not transcribed at Suburban University was a result of a request by that particular respondent not to have the interview recorded by tape. Comprehensive field notes were made by hand, which were later corrected and validated by that respondent.				
**The two interviews not fully transcribed at Regional University were the result of a micro-tape recorder malfunction. Field notes made by hand at the time of interview were typed up and sent to the relevant respondents in place of a transcript. One of these respondents corrected and validated these field notes, whereas the other did not.				
***All transcripts typed by a paid transcriber were checked and corrected by listening to the relevant full tape/s again, before being sent off to the respondent for further correction.				

Figure 5 indicates the timing of the 35 interviews conducted. The first interviews were carried out at Suburban University, with parallel data collection at both Regional University and Suburban University until May 2005. Interviews at Metropolitan University were carried out during June and July 2005. The great majority of interviews were carried out on the campus of the three Australian universities, except for four instances where it was more convenient to conduct interviews at another location, usually at the request of the respondent.

All interviews were recorded on a mini-cassette recorder and transcribed word-for-word, except for three interviews where there was either a mechanical error in the recording device, or the respondent denied permission to tape the interview, prior to their individual consent to that interview. In such cases where the interview was not transcribed, hand-written field notes recorded at the time of interview were typed and emailed to the relevant respondents for correction. For two of these three interviews, the interviewees in these institutions responded to this email and provided corrections that were sought.

In the remaining 32 interviews, tapes were either transcribed by the researcher, or with the assistance of professional transcription services, paid for by UTS. Figure 5 notes that 19 interview tapes were transcribed by a professional transcriber, particularly later interviews at Metropolitan University. All 19 of these interview transcripts were checked against the original tapes by the researcher, and relevant alterations made where required. All 32 fully transcribed interview transcripts were then sent to each of the interviewees for correction and validation, from which 12 were amended at the request of the respondent. In addition to these corrections, three respondents specifically requested that care be taken, or additional permission be sought, where particular respondent quotes were used in future publications. All care has been taken to comply with these three requests.

As a result of the above measures taken when interviewing university case study respondents, it is argued that a degree of trust can be placed in the quality of the transcriptions and notes as a basis for data analysis and theorising in later chapters.

### **University Case Study Documents**

Documents are a key form of historical evidence (Neuman, 1997: 390) and have been described by one author as the bread and butter of the historian (Dunkerley, 1988: 88). Documents are argued to

be of a different nature from records, as documents are prepared for personal reasons, whereas records capture transactions and are officially sanctioned (Hodder, 2003). Problems interpreting these two classes of materials can occur when there is a failure to understand the context and conditions of production and reading (Hodder, 2003).

Researchers may draw on primary sources (e.g. archives, letters, diaries, newspapers, novels etc.), published and unpublished reports, various secondary sources, running records (e.g. files and documents maintained by organisations) and recollections (words of individuals about their past lives and experiences, either in autobiographies, memoirs or interviews) (Neuman, 1997: 396-8). Pettigrew (1990) argued that documents are of great value in establishing the “facts” of a case.

A number of documents were collected when researching and interviewing respondents from the three selected Australian universities. Each case study respondent, in addition to being asked to suggest further names that could be approached for interviews, was also asked to recommend or provide further documentation in relation to issues that were discussed. Figure 6 profiles the different university case study documents collected and analysed during this study.

Not all documentary information collected was useful for the purposes of this research, and not all desired documents were made available. Although some documents were helpful in establishing the facts of the case, others were less relevant, sometimes without enough detail to supplement more detailed information gained through semi-structured interviews. Where documentary evidence was particularly relevant to the cases, it was quoted in the body of chapters three through five. For example, an internal discussion paper was particularly helpful in challenging respondent claims at Suburban University, a journal article and several internal discussion papers assisted in illustrating decisions made at Metropolitan University, and an individual research thesis and private memoirs enabled the reconstructing and ordering of historical decisions at Regional University.

**Figure 6: University Case Studies Document Profile**

Case Document Type	Suburban Uni	Metropolitan Uni	Regional Uni	Total
Strategic plans	1	3	1	5
Teaching and learning plans	3	1	1	5
Other management papers	2	5	0	7
Annual reports	0	0	5	5
Central education technology unit papers	3	3	5	11
Central education unit papers	2	2	0	4
Faculty papers	1	9	16	26
Faculty theses	0	2	1	3
Faculty member reflections	0	1	1	2
University websites	1	1	2	4
Government reports	2	1	1	4
Newspaper articles	1	1	0	2
<b>Total case documents</b>	<b>16</b>	<b>29</b>	<b>33</b>	<b>78</b>

**Key Terminology**

Strategic plans: records of senior management plans concerning the future of their university.

Teaching and learning plans: records of senior management plans for teaching and learning at their university.

Other management papers: includes other papers not included in the above two categories, such as internal discussion papers, seminar presentations and minutes of meetings.

Annual report: officially sanctioned reports produced by the university for its various stakeholders.

Central education technology unit papers: papers produced by these departments, including research reports, seminar presentations, progress reports on key projects and information packs developed for staff.

Central education unit papers: papers produced by these departments, including referred papers, guidelines, evaluation reports and promotional material.

Faculty papers: Includes refereed and non-refereed journal articles, conference papers and other articles written by university staff on areas relevant to this study.

Faculty theses: copies of doctoral theses produced by staff on areas relevant to this study.

Faculty member reflections: papers recording the thoughts and reflections of university staff on areas relevant to this study.

University websites: Sites on the web with information about the universities

Government reports: reports on external evaluations and audits conducted by government agents.

Newspaper articles: relevant articles written about different aspects of the university that were published in newspapers.

### Field Level Interviews

Similar to the interviews conducted at the three selected Australian universities, this study also conducted semi-structured interviews with various field level representatives, in order to understand the broader field level dynamics operating in the Australian higher education field. Interviews conducted with field level respondents were approximately an hour in length, and followed similar email invitation and individual consent protocols observed for university case study respondents.

Field level respondents were selected largely on the basis of reputation, from recommendations made by participants in the field at recent conferences, by respondents in university case studies, or by this author's own initiative, following perceived leadership in the higher education sector or participation in novel ventures that were relevant for this study. These criteria correspond to criteria 8-9 in an earlier section of this chapter on case selection. Figure 7 describes the profiles of the different field level respondents interviewed in this study.

**Figure 7: Field Level Respondent Profile**

<b>Nature of Field Expertise</b>	<b>Number</b>
Expert Professors and Associate Professors	4
Other expert academics	3
Australian Government representative	1
<b>Total</b>	<b>8</b>
<b>Key Terminology</b> <u>Expert Professors and Associate Professors</u> : These academics were interviewed as a result of their competence in a relevant field of expertise, including a Professor in Higher Education, one Associate Professor in Online Learning, one Associate Professor in Distance Education, and one Professor who is now a senior manager responsible for leading a major Australian distance education university. <u>Other expert academics</u> : These experts had extensive experience in the higher education field, with two of these respondents having well-recognised expertise in distance education in Australia and overseas. <u>Australian Government representative</u> : One field level representative previously held a senior position in the Australian Government, and had a long and significant relationship with the Australian higher education sector.	

As can be seen in Figure 7, eight field level respondents were interviewed as part of this project, to help develop a macro understanding of the dynamics of the Australian higher education system, as well as the history of online learning and distance education in Australian higher education. Four of these respondents had particular expertise in distance education, with two of these respondents acting as editors of a well reputed distance education journal. No special significance is associated with the number of interviews conducted among field respondents. It was hoped that a range of

expert views might promote the inclusion of multiple perspectives and viewpoints in responding to the research problem defined in chapter one, particularly in the analysis of the three selected case studies. The contributions of these field level respondents, where relevant in verifying theory developed in chapter six, are found in the appendices of this thesis.

Various attempts were also made to ensure that the quality of information from each field interview was as high as possible. Details relating to the conduct and handling of these interviews are indicated in Figure 8. The first of these interviews began in February 2005, and they finished in July 2005. All interviews were recorded on mini-cassette and transcribed, except for one interview where the mini-cassette recorder failed to record. In this instance, hand-written field notes made at the time of interview were typed and emailed to the respondent. These notes were then checked by the respondent for accuracy, and corrections made.

**Figure 8: Field Level Interview Details**

<b>Interview Details</b>	<b>Total</b>
Date of first interview	17 Feb 05
Date of last interview	7 Jul 05
No. of interviews conducted off site	N/A
No. of interviews not fully transcribed	1*
No. of interviews transcribed by a professional transcriber	6**
No. of transcriptions corrected by field-level respondents	2
No. of special conditions requested	1
<b>Notes:</b>	
* The field level interview not fully transcribed was the result of a micro-tape recorder malfunction. Field notes made by hand at the time of interview were typed up and sent to the relevant respondents in place of a transcript. This particular respondent corrected and validated these field notes.	
**All transcripts typed by a paid transcriber were checked and corrected by listening to the relevant full tape/s again, before sending off to the respondent for further correction.	

For the remaining seven interviews that were recorded, tapes were either transcribed by this researcher, or with the assistance of professional transcription services, paid for by UTS. Of the six interviews transcribed by a professional transcriber, all transcripts were checked against the original tapes by this researcher, and relevant alternations made where required. The seven full interview transcripts were then sent to each of the interviewees for correction and validation, from which two were amended at the request of the respondent. In addition to these corrections, one respondent

specifically requested that they be given the opportunity to check how excerpts from their transcript were used, prior to publishing.

As a result of the above measures taken when interviewing field level respondents, it is therefore argued that a degree of trust can be placed in the quality of the transcriptions and notes as a basis for data analysis and theorising in later chapters.

### **Field Level Documents**

Similar to the documents collected on the three selected university cases, documents on the broader higher education and online learning fields were also collected and analysed. Many of these documents were recommended or provided by university case study or field level respondents. Other documents were the result of both systematic searches and serendipitous discovery. In each case, these documents are cited where they are used, particularly in the verification of cross-case analysis in chapter six. A detailed analysis of the field literature is recorded towards the end of that chapter (particularly Figures 55-57).

## **Data Analysis**

Qualitative data analysis has experienced a rather haphazard development, and is often learned through mentoring and apprentice-like conditions, rather than formal educational design (Lee and Fielding, 2004: 529; Charmaz, 2000). Data analysis in this thesis, refers to

a search for patterns in data - recurrent behaviors, objects, or a body of knowledge. Once a pattern is identified, it is interpreted in terms of a social theory or the setting in which it occurred. The qualitative researcher moves from the description of a historical event or social setting to a more general interpretation of its meaning (Neuman, 2003: 447).

Patton has argued that unlike quantitative data analysis, qualitative data analysis presents a unique challenge to the researcher to

make sense of massive amounts of data, reduce the volume of information, identify significant patterns, and construct a framework for communicating the essence of what the data reveal (Patton, 1990: 371-372).

In the past, qualitative research rarely made its data analysis open to inspection for later researchers. However, it has been claimed that it is now moving towards more explicit and systematic approaches (Neuman, 2003: 538). For example, there has been growing interest in developing a

range of analytic procedures by Strauss (Strauss and Corbin, 1998; Strauss, 1987; Strauss and Corbin, 1990), Miles and Huberman (1994), Bryman (Dunkerley, 1988; Bryman, 1989; Lee and Fielding, 2004; Smith, 2004; Pidgeon and Henwood, 2004), and other texts on qualitative research (e.g. Patton, 1980; Patton, 1990). Despite these recent shifts, however, there are only guidelines and procedures, not rules, for determining reliability and significance in qualitative data analysis (Patton, 1990: 372).

We have few agreed-on canons for qualitative data analysis, in the sense of shared ground rules for drawing conclusions and verifying their sturdiness (Miles and Huberman, 1984: 16).

This chapter has so far proposed the use of interviews and documents, at both a case and field level of analysis, as a means of capturing meaningful data on the adoption of learning management systems. As both interview transcripts and documents are capable of being analysed as texts, this research draws on and integrates two compatible methodological data analysis approaches: grounded theory and case studies. Both of these approaches build general explanations from particular observations, yet do so by drawing upon different theoretical traditions. Grounded theory textual analysis is discussed first, followed by case study analysis. The approach of this particular study is then explained within this context, with further detail in the appendices extending some of these discussions.

## **GROUNDED THEORY**

Within qualitative analysis, it has been claimed that there has been a gradual dominance of “emergent analysis”, a reference to methodological approaches developed originally by grounded theory (Huberman and Miles, 2002: 120). To understand grounded theory data analysis however, a broader review of this method is required.

### **Origins of Grounded Theory**

Glazer and Strauss (1967) are widely credited with establishing the foundations of grounded theory in their seminal text *The Discovery of Grounded Theory*. This text was originally conceived to liberate sociological analysis from its preoccupation with repeated testing of a few speculative, ‘grand’, or large-scale theories. It attempted to close the gap between theory and evidence, and presented an argument in favour of middle range theory (Pidgeon and Henwood, 2004: 625).



Charmaz claimed that Glaser and Strauss' text had a revolutionary impact on the methodology field, despite the fact that it took some twenty years or so for the field to respond (Charmaz, 2000: 511). It was argued to be so ground breaking because it challenged:

- a) arbitrary divisions between theory and research,
- b) views of qualitative research as primarily a precursor to more "rigorous" quantitative methods,
- c) claims that the quest for rigor made qualitative research illegitimate,
- d) beliefs that qualitative methods are impressionistic and unsystematic,
- e) separation of data collection and analysis, and
- f) assumptions that qualitative research could produce only descriptive case studies rather than theory development (Charmaz, 2000: 511).

Grounded theory has therefore been described as a

general methodology for developing theory that is grounded in data systematically gathered and analysed (Strauss and Corbin, 1994: 273).

At the core of grounded theory is

the grounding of theory upon data through data-theory interplay, the making of constant comparisons, the asking of theoretically orientated questions, theoretical coding, and the development of theory (Strauss and Corbin, 1994: 273).

This approach to qualitative data analysis does not have a particular commitment to any kinds of data, lines of research, or theoretical interests (Strauss, 1987: 5), but attempts, rather, to analyse data systematically and intensively,

often sentence by sentence, or phrase by phrase of the field note, interview, or other document; by constant comparison, data are extensively collected and coded...producing a well-constructed theory (Strauss, 1987: 22).

Pidgeon and Henwood (2004: 629) argue that there appear to be core agreement on the following principles in grounded approaches:

1. Open coding to capture detail;
2. Sampling data and cases on theoretical grounds and as analysis progresses;
3. Constant comparing of data instances, cases and categories;
4. Writing theoretical memos to explore concepts and links to theory;
5. Making comparisons and use of theoretical sampling until saturation occurs;
6. Engaging in more focused coding to select core categories; and
7. The use of various tactics to force analysis from description to theory.

### **Distinguishing Grounded Theory from Other Qualitative Analysis Frameworks**

Grounded theory differs from other qualitative approaches to data analysis on at least four important grounds. The first point of difference that grounded theory proponents argue for is the need to avoid predefining the nature of the research problem before data collection and analysis. The research problem under a grounded approach is argued to become evident after “diving into the analysis” (Glaser, 1992: 21) “with no problem” (Glaser, 1992: 22). Strauss and Corbin (1998) are significantly more flexible on this issue however.

A researcher does not begin a project with a preconceived theory in mind (unless his or her purpose is to elaborate and extend existing theory). Rather, the researcher begins with an area of study and allows the theory to emerge from the data (Strauss and Corbin, 1998: 12).

This approach stands in direct contrast to mainstream qualitative data approaches. For example, Patton (1990: 375) has argued that the focus for data analysis should flow directly from the development of research questions generated at the beginning of a study.

The second major point of difference between grounded theory and other qualitative approaches is that some grounded theory proponents argue that the substantive literature should not be consulted until after data analysis (Glaser, 1992), as opposed to before data collection (Patton, 1990: 376). Glaser (1992) argued strongly that such reading would “contaminate, constrain, inhibit, stifle or impede the researcher’s own work” (Glaser, 1992: 31). The researcher should go, rather, to the literature after the emergent theory is sufficiently developed (Glaser, 1992: 32), when such reading could make one more theoretically sensitive, leading to further theoretical sampling and analysis (Glaser, 1992: 34). Strauss and Corbin (1998) similarly warn that consulting the substantive literature could lead to researchers seeing what they want to see in the data (Strauss and Corbin, 1998: 50), although they do permit this practice to occur. Strauss and Corbin (1998) assert that the literature should be used to compare emerging concepts to see where they are similar and different (Strauss and Corbin, 1998: 49), and to confirm (Strauss and Corbin, 1998: 51) or illustrate valid contributions to the literature (Strauss and Corbin, 1998: 52).

A third major point of contrast is in the sampling methodology employed. Although grounded studies can initially employ sampling along purposive lines, later research is usually conducted to explore emerging theoretical categories and dimensions uncovered during data analysis, with the aim of achieving saturation where new data fits into existing categories. This theoretical sampling approach is a defining characteristic of grounded theory (Charmaz, 2000: 519).

Once data collection begins, the initial interview or observational guides (used to satisfy committees) give way to concepts that emerge from the data. To adhere rigidly to initial guidelines throughout a

study, as is done in some forms of both qualitative and quantitative research, hinders discovery because it limits the amount and type of data that can be gathered (Strauss and Corbin, 1998: 205).

Finally, grounded theory boasts that it actually lends itself to theory building, as opposed to just high level descriptive analysis, although it is certainly more than competent in both areas (Strauss and Corbin, 1998: 9). Grounded theory's claim to theory building arises out of its unique approach to coding up from the level of the individual words and phrases in transcripts and texts towards core categories that describe the nature of the phenomenon (Charmaz, 2000; Glaser, 1992; Kan and Parry, 2004; Pidgeon and Henwood, 2004; Strauss and Corbin, 1998; Strauss, 1987; Strauss and Corbin, 1990). Although many other qualitative approaches prescribe various coding procedures (for example, Patton, 1990, and Ryan and Bernard, 2003), no other qualitative tradition has gone to such lengths to detail how such coding should be conducted in as systematic a manner as grounded theory analysis.

Charmaz argued that the strengths of the grounded theory approach to data analysis, drawing many of the prior arguments together, lay in:

- a) Strategies that guide the researcher step by step through an analytic process,
- b) The self-correcting nature of the data collection process,
- c) The methods inherent bent towards theory and the simultaneous turning away from acontextual description, and
- d) The emphasis on comparative methods (Charmaz, 2000: 522).

### **Divergence Among the Authors of Grounded Theory**

Despite the success of their 1967 text, Glaser and Strauss have since parted company and sought to progress their grounded approaches in theoretically divergent, and in Glaser's case, an openly hostile manner (Glaser, 1992). Following her 1987 text (Strauss, 1987), Strauss coauthored a book with Corbin (Strauss and Corbin, 1990) which aimed to develop grounded theory further through the identification of more analytic methodological tools. This book was later released in 1998 (Strauss and Corbin, 1998) and was slightly less prescriptive in its approach (Charmaz, 2000: 512).

In 1992, Glaser published his work, *Basics of Grounded Theory Analysis: Emergence vs. Forcing* (Glaser, 1992), as a response to Strauss and Corbin's (1990) early book. Glaser claimed that Strauss and Corbin adopted a forced analysis of data through their preconceptions, analytical questions, hypotheses and methodological techniques (Charmaz, 2000, p.512), rather than permitting the data to take its own form and allow categories to emerge through comparison of data against data. He claimed further that the purpose of grounded theory lies in theory generation and not theory

verification, the thrust of Strauss and Corbin's work (Charmaz, 2000, p.513). He therefore claimed that Strauss' work

produces a forced, preconceived, full conceptual description, which is fine, but it is not grounded theory (Glaser, 1992: 3).

According to Charmaz, a self-confessed constructivist (Charmaz, 2000: 510), Glaser and Strauss' original work was positivist in nature, through their assumptions of external reality and a lack of researcher bias or interactivity with the data (Charmaz, 2000: 513). She credits this stance to a positivist training in methodology from Columbia University for Glaser, and a more pragmatic philosophical training for Strauss from the University of Chicago.

Both endorse a realist ontology and positivist epistemology, albeit with some sharp differences. Glaser remains in the positivist camp; Strauss and Corbin less so. They move between objectivist and constructivist assumptions in various works, although *Basics*, for which they are best known, stands in the objectivist terrain (Charmaz, 2000, p.513).

Although Charmaz acknowledges movements in the position of Strauss and Corbin in their 1998 book (Strauss and Corbin, 1998), she argued that there is still an appeal to common 'scientific' concerns for validity, reliability and research bias (Charmaz, 2000).

### **Modifications Recommended to Grounded Theory**

Charmaz contended that grounded theory must offer a set of flexible strategies and not rigid prescriptions (Charmaz, 2000: 513), and therefore proposed a new constructivist approach to grounded theory. This approach should acknowledge multiple human realities, the researcher's creation of 'data' as their own construction, and the researcher's inherent impact on emergent coding and writing through their interpretations of data shapes (Charmaz, 2000: 514). Charmaz' views reflect a degree of postmodernism to the extent to which she encourages a greater awareness of the relationship of the researcher to subjects, and the importance of situating the research in the appropriate historical and cultural context (Charmaz, 2000: 528).

Grounded theorists adopting Charmaz' recommendations would therefore need to propose "suggestive, incomplete and indeterminate" theory that was "open to refinement" (Charmaz, 2000: 524). Positivist approaches proposed by the original authors of grounded theory instead argued for "provisionally true, testable, and ultimately verifiable 'theory'" and prediction (Charmaz, 2000: 524). This movement away from a positivist grounding of the approach is claimed to advance this approach further.

Must grounded theorists be objectionist and positivist? No. Grounded theory offers a set of flexible strategies, not rigid prescriptions. Should grounded theorists adopt symbolic interactionism? Not always. Emphases on action and process and, from my constructionist view, meaning and emergence within symbolic interactionism complement grounded theory (Charmaz, 2000: 513).

Charmaz' recommendations for a constructivist approach to grounded theory were also argued not to be incommensurate with other research philosophies.

Researchers starting from other vantage points - feminist, Marxist, phenomenologist - can use grounded theory strategies for their empirical studies. These strategies allow for varied fundamental assumptions, data gathering approaches, analytic emphases, and theoretical levels (Charmaz, 2000: 511).

Pidgeon and Henwood (2004) also noted this same push for a recognition of a constructivist approach to data analysis, referring to Hammersley's (1989) "dilemma of qualitative method". This dilemma arises out of the tension between a commitment to science and realism by claiming to reflect objective data through common sense understandings, and on the other to constructivism where they recognise multiple meanings and subjectivism through a symbolic interactionist worldview (Pidgeon and Henwood, 2004: 627). Pidgeon and Henwood argued further that theory can't 'emerge' as data is always interpreted and analysed through some conceptual framework by the analyst (Pidgeon and Henwood, 2004: 628).

Pidgeon and Henwood therefore echo Charmaz' (2000) call for a constructivist revision of grounded theory to capture the systematic rigour of this data analysis framework with the interpretive research process (Pidgeon and Henwood, 2004: 628). This modified approach would similarly require researchers to hold onto their disciplinary knowledge and 'theoretical sensitivities' as tools that can both open up or blind (Pidgeon and Henwood, 2004: 628). Such a modified approach would not only be constructivist in nature, but also hermeneutic (Pidgeon and Henwood, 2004: 628). These authors supported Cutliff (2000) who proposed that the disciplinary literature be used early on to get a grip on the gaps in substantive theory that needed to be filled; the researcher just had to make sure that they weren't too wedded to it (Pidgeon and Henwood, 2004: 634).

Charmaz' (2000) and Pidgeon and Henwood's (2004) claim for greater awareness of the researcher's own assumptions and theoretical frameworks also resonates with critical theorists who require that such assumptions are disclosed openly as a part of the hermeneutical process (Kincheloe and McLaren, 2000: 286). To the extent to which these assumptions are not acknowledged, the researcher can be held hostage to them. These assumptions may influence the choice of research questions, shape interpretation, and be impacted upon by broader historical,

cultural and disciplinary influences (Kincheloe and McLaren, 2000: 288). These assumptions can also change on the research site.

### **Grounded Theory in this Research**

A grounded approach to data analysis in this thesis draws upon many of the strengths of the grounded theory analytical approach, but makes several modifications to fit with the research design already developed and stated in this thesis. This study adopts the systematic analysis of collected data using grounded approaches, making use of constant comparisons, the asking of theoretical questions, theoretical coding and the development of theory. In particular, this research follows many of the practical data analysis suggestions in Strauss and Corbin (1998), Charmaz (2000) and Pidgeon and Henwood (2004), particularly in relation to recommendations for coding transcripts and relevant documents for theoretical categories relevant to the research problem and questions for this study.

Counter to some grounded theory approaches however, this thesis begins with a review of the higher education literature and identification of a particular research problem and associated questions, discussed in chapter one. Great effort has been directed towards allowing theory to 'emerge' out of the collected data, with four chapters dedicated to empirical analysis of the issues. Attention was, therefore, first directed towards constant comparison of data with data (within and between cases) in the study.

This study does not make full use of theoretical sampling techniques from grounded theory, being limited to the study of just three university cases. Selection was made and grounded analysis conducted in the context of a broader case study methodology, discussed further in the next section of this chapter.

Following recommendations from various constructivist and critical theorists, this study also acknowledges the multiple social realities of the various respondents, following recognition of a socially constructed reality within a critical theory methodological framework. This, therefore, led to explanations that were "suggestive, incomplete and indeterminate", following Charmaz (2000: 524). These constructions have also been assessed against a broader historical and cultural context however, formed through the integration of constructions of individual respondents and literature in the field, following the critical theory tradition.

To further test and refine grounded theory developed from the three case studies, the institutional theory literature, in particular the literature on institutional change, was consulted. A range of arguments have been made concerning why this particular literature is relevant to the research problem in this thesis, and is located in the appendices. It is claimed that this approach helps to confirm and illustrate valid contributions to the literature (Strauss and Corbin, 1998: 51-52), and can open up new observations (Pidgeon and Henwood, 2004: 628) and help refine theory emerging from the data.

Finally, this grounded theory analytical framework requires an examination of this researcher's assumptions and hermeneutical bias in interpretation. These assumptions are discussed in a later section in this chapter. The following section of this chapter describes how this grounded theory analytical framework fits within the context of a case study framework.

## **THE CASE STUDY FRAMEWORK**

Case studies often draw on the Chicago tradition in sociology, where analytic induction is important to the analysis of case materials. Case studies aim to produce universal statements about social phenomena that identify the essential features of the phenomena by identifying the conditions associated with it (Lee and Fielding, 2004: 539). Negative cases are argued to be quite important to this method, so that explanations can be complete and universal (Lee and Fielding, 2004: 540).

Patton has claimed that the first place to begin with case study analysis is to describe the answers to basic questions, but without interpretation, attaching significance to the results, or putting these patterns within a wider framework (Patton, 1990: 374-375). Pettigrew (1990) has similarly proposed that researchers should attempt to establish the "what" of their research problems by looking at the chronology of events, to be established through analysis of archival data and interviews first. It was also argued that it is more appropriate to begin with individual case studies where variation was the key focus, before building up to broader cross-case analysis (Patton, 1990: 376). This recommendation has been adopted in the very structuring of this thesis into individual case analysis chapters three to five, followed by broader cross-case and field level analysis in chapter six of this thesis.

The how and why of changes should then be reviewed through further interviews and documents, drawing on data at different levels of analysis (Pettigrew, 1990). This stage is likely to be aided by the use of “rich thick description”(Patton, 1990: 375). Analysis can draw on both the materials collected and the observations and interpretations made in the field (Patton, 1990). Eisenhardt has argued that field notes recording hunches about relationships, anecdotes and informal observations, can allow researchers to be flexible in data collection in terms of the methods and sources, especially when theory building (Eisenhardt, 1989: 539).

The key issue in organising the data in each case is to ensure that it is complete and there are no holes that need to be filled (Patton, 1990). All of the information accumulated from different sources goes into this case (Patton, 1990: 386), such as the university case study interviews and documents described earlier. After this information is collected, a case record is compiled that pulls together this data into a package. Information is here edited, redundancies removed, parts fitted together and the case record organised chronologically and/or topically (Patton, 1990: 387). It should not require access to other background analysis. From this case study record, the case study narrative is put together as a descriptive, based on either chronological or thematic structure. Case comparisons can be discussed later, but at this stage, the case record must allow the reader to understand the case as a “unique, holistic entity” (Patton, 1990: 387). There is a need to ensure that information in the case is correct, readable, with limited researcher bias affecting this work (Patton, 1990: 389).<sup>7</sup> Despite these strong recommendations, it has been claimed that there is still no right way to organise this case data (Patton, 1990; Strauss, 1987).

Because different people manage their creativity, intellectual endeavours, and hard work in different ways, there is no right way to go about organizing, analyzing, and interpreting qualitative data (Patton, 1990: 381).

Following the construction and analysis of individual cases, the next step in case study analysis is to select different dimensions and to compare within group and inter-group similarities and differences across these dimensions. It is also possible to compare findings by data source, where the greater the degree of corroboration, the stronger the finding (Eisenhardt, 1989: 541).

Finally, when building theory from case studies, Eisenhardt has argued that the researcher needs to assess how the emergent frame fits with the data from each case (Eisenhardt, 1989: 541). One then needs to compare emergent concepts, theory and hypotheses with the relevant literature to assess

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<sup>7</sup> The issue of researcher bias is discussed later in this chapter.



the extent to which it is the same, similar or different, and why. If the emergent frame sits with the existing theory, it is said to promote internal validity and generalisability (Eisenhardt, 1989: 544), lifting the theoretical level of the theory being developed (Eisenhardt, 1989: 545).

Case study frameworks are less common within purely grounded approaches to data analysis as grounded studies tend to use theoretical sampling and constant comparison extensively (Strauss, 1987: 218-219). Grounded scholars also tend to research phenomena more than particular cases. When cases are used, the developed theory tends to drive the structure, with cases constructed to frame the particular theoretical propositions and points. It has been argued that it is not inappropriate to propose the main theoretical points first, allow the case discussion to unfold, and then restate and follow-up the theory later (Strauss, 1987: 219).

Where cases are used under a grounded approach, Strauss (1987: 219-223) has argued that such approaches should be careful to:

1. Outline the chronology of events to give continuity to the story when beginning the case construction;
2. Keep the theoretical story line clear in writing up the case, and move toward the development of the core category (discussed further in the appendices of this study);
3. Construct a theoretical model out of the case study, with particular attention to the points of intersection and connection; and
4. Build in illustrative case data to bring out the key theoretical aspects to serve the developed theory.

The grounded theory analysis model used in this thesis draws upon the inductive traditions of the grounded theory approach, described in the previous section and appendices. However, it structures these findings within a case study framework. Chapters three to five of this thesis outline the recent experiences of three selected Australian universities. These chapters are complete 'case records', arranged as chronologically-structured narrative accounts of the evaluation and adoption experiences of these universities, within a broader context of change within these institutions and the Australian higher education sector at large. These cases describe the answers to basic questions without significant interpretation, and allow multiple and divergent respondent views to be ascertained by the reader.

Chapter six of this study then compares the intra- and inter-group differences at a cross-case level of analysis. Here in this chapter, the descriptive accounts of the prior cases are analysed for their similarities and differences, making use of two ‘negative’ cases (Metropolitan University and Regional University). Closely following the structure suggested by Strauss (1987), these findings are then used to develop explanations and build theory in an attempt to address this study’s core research problem.

The empirical findings, analysis and grounded theory from chapter six are then compared to the substantive higher education and institutional theory literatures in that same chapter, to assist further theory building and verification. The institutional theory conceptual framework, therefore, acts as a proxy theoretical sampling measure, helping to compare emerging theory and findings with the substantive literature (Glaser, 1992; Strauss and Corbin, 1990). Contributions to higher education literature are then identified in brief within this chapter, and are later consolidated in chapter seven.

A record of the views of eight field respondents in relation to the grounded theory developed in chapter six is located in the appendices. These respondents were also interviewed about a range of broader issues instrumental in shaping the direction of inquiry in this research. Due to space limitations however, the appendices record their views only in relation to the grounded theory.

## **CODING AND NVIVO**

This study used NVivo qualitative software within a grounded theory and case study analytical framework to analyse information obtained from interviews and documents for each case. Careful attention was paid to coding and memoing extensively during data analysis, following several conventions developed by grounded theory scholars. Where the software presented restrictions at higher levels of analysis, manual methods were used to supplement the software, following recommendations from Soliman and Kan (2004). A more detailed discussion around the particular techniques used within this study can be found in the appendices of this study.

## **RESEARCHER BIAS**

This chapter has already flagged the importance of recognising the impact of possible researcher bias, particularly as a result of the researcher’s assumptions and limitations. These discussions related particularly to the research paradigm of this thesis, university selection, and data analysis.

The next section of this chapter discloses and discusses both of these types of possible researcher bias, along with various measures that have been taken to address them, in order to ensure that these possible biases do not impact adversely upon the quality of this research thesis.

### **Researcher Assumptions**

Sadler (2002), echoing the calls of Charmaz (2000), Kincheloe and McLaren (2000) and Pidgeon and Henwood (2004), claimed that researchers needed to be aware of the possibility that different kinds of bias could impact upon their research projects. In relation to researcher assumptions as one form of bias, he argued that researchers must disclose their interests, externalise their value propositions, and provide a rationale for subjective judgments. Without acknowledging explicitly these assumptions, “value inertias” can arise from the researcher’s own knowledge, prior experience, emotional makeup or worldview, providing

unwanted distorting influences which reflect the evaluator’s background experience (Sadler, 2002: 124).

The critical theory research paradigm, counter to the positivist and post-positivist research paradigms, assumes that the investigator and phenomenon will be linked interactively. The values of the inquirer are assumed to influence the inquiry itself, leading to a “value-mediated” design (Guba and Lincoln, 1994: 110). Under this paradigm, the investigator may even legitimately allow his or her values to shape the inquiry outcomes, and further create space for promoting restitution and transformation, following a dialectical process of historical revision (Guba and Lincoln, 1994: 113-114). Therefore, the influence of a researcher’s assumptions may not always be unwanted, providing that their identification and possible impact are identified explicitly to the reader (Kincheloe and McLaren, 2000: 292).

The grounded theory analysis framework argued for in this chapter, also recognised that researchers create and construct their own data (Charmaz, 2000); that their assumptions can impact on emergent coding, interpretation and writing (Charmaz, 2000; Glaser, 1992; Pidgeon and Henwood, 2004; Strauss and Corbin, 1998; Strauss, 1987; Strauss and Corbin, 1990); and that the researcher’s disciplinary knowledge can both open up and blind the research process (Charmaz, 2000; Pidgeon and Henwood, 2004). Declaring these assumptions also assists the researcher in not becoming “too wedded” to them (Pidgeon and Henwood, 2004).

Finally, within a case study framework, Patton (1990) has argued from a more conventional research paradigm, calling for limited researcher bias on the construction and analysis of case studies (Patton, 1990: 389). Explicit identification of this researcher's assumptions will again help to ensure that unwarranted researcher bias is mitigated and/or addressed.

Following Sadler's (2002) identification of the potential for a researcher's interests, prior experience, emotional makeup and worldview to shape a researcher's values, an attempt has been made to disclose this researcher's relevant background in an effort to assist the externalisation of the researcher's value propositions. The researcher has an educational background in law and business, and has worked in the retail, consulting and higher education industries. During work in the retail industry, a major computer implementation project was assigned to the researcher to manage, which was eventually unsuccessful due to a host of problems associated with the software, software developer, and the researcher's lack of skill and experience in managing these issues. Following employment in the higher education industry and enrolment into a PhD program some years later in 2001 and 2002 respectively, many Australian universities were observed (primarily through media reports) adopting new online learning technologies for use in their teaching programs. As an emerging field of inquiry in higher education, there appeared to be a degree of excitement about the prospect of new technologically-enabled possibilities in education. Following analysis of the 'Dot Com' crash (Cassidy, 2002) and reports that some universities were disappointed with the outcomes of their new technological purchases, discussed in chapter one of this thesis, scepticism relating to new technologies and universities' handling of them was rekindled, giving birth to this very research project.

During the years 2003 to 2007, one refereed journal article (Pratt, 2005) and six conference papers (Pratt, 2003, 2004b, 2004a, 2007; Pratt and Alexander, 2004; Pratt and Johnston, 2003) were written to address the research problem of this thesis. As a function of researching the higher education literature in this area, this researcher's scepticism regarding uncritical examination of these new technologies was further reinforced. It was not until the anonymous reviewers of Pratt (2005), and the UTS Human Research Ethics Committee indicated that the attitude of the researcher may not be impartial to this research, that the researcher became conscious of this possible bias.

Since this possible researcher bias was first raised in late 2004 and early 2005, attempts were made to adopt more neutral language in all relevant research publications and correspondence. A conscious attempt was also made to beware of this possible bias when conducting interviews among

university and field respondents. Despite the fact that this research has uncovered various forms of uncritical examination of new technology, the researcher's attitude toward new technology *per se* has been challenged by the positive experiences of many respondents in this study. Further to this, the grounded theory textual analysis techniques, particularly the coding protocols adopted from grounded theory, have assisted with the grounding of case and field level claims in the respondent's worldview. Rich thick description in each of the chapters three through five have included alternative opinions and views, following recommendations from the literature in this area (Charmaz, 2000; Patton, 1990; Pidgeon and Henwood, 2004).

This research has therefore disclosed this possible research bias upfront, so that the reader might be aware of its possible influence in the analysis of collected data. Whilst every effort has been made to adopt the recommendations of the grounded theory and case study scholars, it is still possible that this bias has permeated into the writing of the remaining chapters of this thesis. To the extent to which this is observed, it will be argued that this is a legitimate part of the critical theory framework, providing it is well grounded in the collected data and disclosed to the reader. Further, this research design actually provides scope for calling for changes to be made in the higher education field at large, where these recommendations are grounded in the research data.

### **Researcher Limitations**

In addition to the possible impact of a range of this researcher's basic assumptions and values on this research design and analysis, it is also possible that limitations may arise out of a limited information processing capacity of the researcher (Patton, 1990; Sadler, 2002). Sadler claimed that these limitations could cause misperception, misaggregation, and defective inference, leading to suboptimal assessments (Sadler, 2002: 127). Sadler claimed that these limitations can arise from:

1. Data overload;
2. The impact of first impressions;
3. Limited availability of information;
4. A halo effect over negative instances;
5. A desire for internal consistency that plays down conflicting information;
6. Uneven reliability of information;
7. Revision of tentative hypotheses, evaluation or diagnoses;
8. The impact of natural variability in sampling considerations;
9. The difficulty in shaking formed opinions;

10. Co-occurrences and correlation; and
11. Consistency in judgment (Sadler, 2002: 127).

This research has already discussed the grounded analysis framework that has been used on relevant interview and document texts arising out of this study. Arguments have also been made for the use of NVivo qualitative data software to assist with analysis, particularly in consolidating data and theory, consistent exploring of data, assisting in theory building, and ease and flexibility of coding and memoing (Soliman and Kan, 2004: 4) (these arguments are found in the appendices to this research study). Following suggestions from Eisenhardt (1989), this research has also analysed and discussed each university case study one at a time, before building broader explanations. It is therefore argued that the analytical strategies discussed in this chapter are sufficient to address limitations identified by Sadler (2002) listed above.

In addition to bias from the researcher's assumptions and limitations, there are a range of other considerations that the reader should take into account when assessing the quality of this research. The following final section of this chapter outlines these issues and defends the quality of this thesis on these grounds.

## **Evaluating the Quality of this Research**

### **RECOGNISING THE SOCIAL CONSTRUCTION OF REALITY**

The question of whether or not there is a real world outside the human experience of that world has been a much debated ontological question. Modernist researchers (those researchers who draw upon enlightenment, scientific method, conventional, and positivist philosophy of science frameworks [Lincoln and Guba, 2000, p.176]) claim that there is a 'real' reality that can be approached through methods devoid of human bias, misconception and other techniques (Lincoln and Guba, 2000: 176). New paradigm researchers, including critical theorists, take the subjective and intersubjective social knowledge and active construction as their primary field of interest (Lincoln and Guba, 2000: 176). They are also rather critical of claims to objectivity in research evaluation, arguing that objectivity

is a chimera: a mythological creature that never existed, save in the imaginations of those who believe that knowing can be separated from the knower (Lincoln and Guba, 2000: 181).

The key issue in evaluating research is, therefore, how to defend the judgments made during the research process when there is no appeal to something outside the social processes of knowledge construction (Smith and Deemer, 2000: 884). The following section of this chapter outlines various theoretical suggestions for ensuring quality in this research project, and how this thesis has addressed them.

## **EVALUATING THE QUALITY OF THIS RESEARCH**

There are sometimes multiple and conflicting mandates for what constitutes ‘good’ research. No one method or set of methods has a claim to ultimate knowledge (Lincoln and Guba, 2000: 178). New paradigm studies propose that interpretation, in addition to method, is important. It is this interpretive work that has come under most scrutiny. Classical social scientists are interested in drawing generalisations from their work. However new paradigm inquirers are increasingly concerned with the single experience (Lincoln and Guba, 2000: 178).

Maxwell (2002) adopted the position that understanding was more fundamental than validity, drawing on Wolcott (1990: 146). He presented a typology of the different kinds of validity that he argued were most important to the research process (Maxwell, 2002: 39). This framework was essentially a reformulation of the categorisation of validity used in qualitative research, based on the way that qualitative researchers think about and deal with validity in their actual practice (Maxwell, 2002: 40). This framework for validity was argued to be flexible enough to accommodate a wide range of qualitative approaches, including critical theory.

Validity, in a broad sense, pertains to this relationship between an account and something outside of that account, whether this something is construed as objective reality, the constructions of actors, or a variety of other possible interpretations (Maxwell, 2002: 41).

Maxwell (2002) argued that validity was not dependent on comparison to an absolute truth, but was much more concerned with the researcher’s inferences, rather than the strict data and methods used *per se* (Maxwell, 2002: 42).

Validity is not an inherent property of a particular method, but pertains to the data, accounts, or conclusions reached by using that method in a particular context for a particular purpose (Maxwell, 2002: 42).

Five broad categories of understanding that were relevant to qualitative research were thus identified by Maxwell, with five corresponding types of validity that concerned qualitative researchers. This framework was constructed to evaluate theory in use, based on the work of

Runciman (1983) and Kaplan (1964). It was argued, however, that there were always fuzzy boundaries and ambiguity in these conceptions.

Maxwell claimed that this approach was more relevant and implicit in qualitative research, and based validity on the kinds of understanding of the phenomena studied, compared to positivist typologies based on research procedures. Quantitative researchers addressed threats to validity in prior design features. For qualitative researchers, elimination of threats was less possible as it was more inductive, and focused primarily on the understanding of particulars rather than generalising to universals. In summary, qualitative researchers deal with specific threats to validity by addressing such threats with evidence that would allow them to be ruled out. Alternative hypotheses are therefore addressed after a tentative account has been developed, and is accepted by qualitative researchers from a range of philosophical positions. Maxwell claimed that this approach was implicit in most substantive qualitative studies, but has received little formal development in the literature (Maxwell, 2002: 56).

The following five sections outline Maxwell's framework for validity in the qualitative research process. Under each of these five categories, a range of suggestions from the literature is noted, along with the measures that have been taken to assure quality in this research project's processes.

### **Descriptive Validity**

Descriptive validity is concerned with the factual accuracy of the respondent's account. The key issue is that the accounts were not made up or distorted. Two types of descriptive validity that are foundational to qualitative work were proposed:

1. **Primary descriptive validity:** "the descriptive validity that the researcher reports having seen or heard" (Maxwell, 2002: 45); and
2. **Secondary descriptive validity:** "the validity of accounts of things that could in principle be observed, but that were inferred from other data — for example, things that happened in the classroom when the researcher was not present." (Maxwell, 2002: 45-46).

These two types of validity refer to the recording of specific events and inter-substantive agreement between data. There is no issue of interpretation, theorising or generalising at this stage. In most cases, it usually refers to errors of commission and omission, such as transcribing the actual words used and the respondent's meaning around these.



Figures 5 and 8 outlined the quality details associated with case and field level interviews conducted with this study. For the 35 interviews conducted at the case level, and eight interviews at the field level, all respondents were sent an email with a copy of their transcript or notes, which they validated for the purposes of this research. In a total of 14 cases, corrections to these transcripts were provided by the respondent. Therefore, for all interview data, it is argued that the respondents themselves have validated that the data recorded is factually correct, providing strong support for descriptive validity in this research.

Documents collected at the case and field level, detailed in Figure 6 and chapter six (particularly Figures 55-57), were not altered in their substantive form following collection. Earlier sections of this thesis have already outlined the context in which these documents were collected. It is therefore also argued that in respect of the descriptive validity of the documents used in this research, there is a high level of research quality in so far as the data obtained reflect the original intent of these documents' authors.

Further to these tests, Patton (1990) has argued that the researcher should report on any personal or professional information that may have affected data collection, analysis and interpretation (Patton, 1990), including possible impacts on field respondents. This chapter provides an account of these details, as well as their possible impact on the research project. Further sections below describe how the impact of these personal biases has been mitigated.

### **Interpretive Validity**

This second major category for process validity is “concerned with what these objects, events, and behaviours mean to the people engaged in and with them” (Maxwell, 2002: 48). It includes intentions, cognitions, affects, beliefs, evaluation, and broadly the participant’s perspective. Maxwell claimed that there were no equivalent criteria in quantitative studies. Maxwell argued that accounts of meaning must therefore be based on the conceptual frameworks of the people whose meaning is in question. Interpretive studies are thus grounded in the language of the people studied, using their words and concepts, on the basis of participant accounts and other evidence (Maxwell, 2002: 49).

Other qualitative theorists have argued for similar forms of validity, and suggested a range of ways in which such criteria might be satisfied. These various researchers have recommended that qualitative research should:

- Display enough information that readers can come to their own views about the interpretative decisions made (Eisenhardt, 1989), making use of the participant's terminology (in-vivo terminology (Glaser and Strauss, 1967) and rich thick descriptions [Patton, 1990]); and
- Show an oversight of the fieldwork and analytic procedures used (Lee and Fielding, 2004: 542; Eisenhardt, 1989), being open about the decisions the researcher has made in the field, data management, coding and analysis (Lee and Fielding, 2004: 543).

Lee and Fielding (2004) further noted that using a systematic analytic procedure such as grounded theory which documents every analytic step undertaken, would help this research, even though few actually do this. Further, they claim that qualitative data software used to this end would also help in retracing the analytic processes adopted through inspection of the coding schemes and records of searches and retrievals (Lee and Fielding, 2004). Although the original authors of the grounded approach claimed to pursue unbiased and objective work (Charmaz, 2000), it has already been argued that this method should allow for the multiple realities of respondents to emerge in an account that is “suggestive, incomplete and indeterminate” and “open to refinement” (Charmaz, 2000: 524). This does not suggest that researchers need to let go of their disciplinary knowledges however (Pidgeon and Henwood, 2004: 628).

This methodology chapter has already detailed the grounded theory data analysis framework and data collection procedures that have been used in this research. Particular decisions relating to the coding and analysis of case study data are detailed in chapter six of this thesis. Case study chapters outline the different multiple realities of respondents that emerged in the relevant cases. NVivo qualitative data analysis software was used to further assist in this analysis. It is argued, therefore, that this research has a strong claim to interpretive validity in the research process, based on the satisfaction of these recommendations.

### **Theoretical Validity**

“Theoretical validity . . . refers to an account's validity as a theory of some phenomenon” (Maxwell, 2002: 51). It is concerned with the researcher's account as an explanation, as well as description and

interpretation. There are two aspects to theoretical validity, corresponding to two different aspects of theory: the validity of the concepts themselves applied against the phenomena, and the validity of the relationships among the concepts themselves assembled as a theory. The first is often called construct validity, and the second is often called internal or causal validity (Maxwell, 2002). The central issue at stake for this form of validity is the legitimacy of the application of a given concept or theory to established facts.

Various qualitative researchers have suggested a number of recommendations to help support theoretical validity, including:

- Testing rival explanations (Patton, 1990; Strauss and Corbin, 1998; Eisenhardt, 1989), both inductive and logical. It is claimed that explanations proposed must be a good but not necessarily perfect fit with the data (Eisenhardt, 1989; Strauss and Corbin, 1998).
- The inclusion of negative cases, or those cases that are an exception to the rule. It is claimed that these cases can broaden, change or cast doubt on the theory developed (Patton, 1990; Strauss and Corbin, 1998).
- Cross verification (or “triangulation” according to some authors), including the use of mixed methods, observation and interview data, public and private explanations, consistency over time, different perspectives of people from different points of view (Patton, 1990; Strauss and Corbin, 1998; Merriam, 1990), and theory verification using multiple frameworks (Patton, 1990). Cross verification of data was argued to help clarify meaning by identifying different ways the phenomenon is seen (Stake, 1994: 241), providing a more holistic understanding of the construct (Merriam, 1990: 169), and greater substantiation of constructs and hypotheses (Eisenhardt, 1989). It also encourages the researcher to approach their research questions from different angles and to explore their intellectual puzzles in a rounded and multi-faceted way (Mason, 1996: 17).
- Declaration of the investigator’s own assumptions behind the basis for the selection and description of the groups and the context from which they were drawn (Merriam, 1990: 172).
- Consulting the literature on the topic (Eisenhardt, 1989).

This research has adopted the great majority of these recommendations. First, the empirical higher education and theoretical institutional theory literatures have been consulted extensively, forming the substance of chapter one and a major appendix to this thesis, and background for chapter six. Second, the basis for selection of respondent and document data sources was described in detail

earlier in this chapter. Third, this researcher's potential bias has been the subject of a section of this methodology chapter, as well as its possible implications. The extent to which this is likely to play a role in theorising is argued to be limited, however, due to the grounded theory data analysis framework adopted in this study, explained earlier in this chapter. Fourth, three different university case studies are included in this research, of which only one is argued to be an example of uncritical examination and adoption of new learning management systems in a way predicted by the higher education literature. The other two cases represent universities that adopted in different ways, particularly in terms of their timing and the duration over which these adoptions occurred. Further details relating to these 'negative' cases are noted in the next chapters of this thesis. Finally, explanations developed are discussed in some depth, including the ruling out of rival explanations, based on their support and fit with the interview and document data.

Some theorists (noted on the previous page) recommend that triangulation of method, data, collection interval, and different perspectives be adopted. This research has indeed used a broad range of data sources, methods and informant perspectives, described in further detail earlier in this chapter. These sources and methods allow this research to consider a range of alternative perspectives in the pursuit of a defensible theoretical explanation, detailed further in chapters three to six and the appendices.

The approach of this research is to use cross verification and not data triangulation, as some authors would define it. If triangulation is defined as measuring exactly the same single phenomenon through multiple methods and sources (Silverman, 2000), then this project has not adopted such a narrow definition of triangulation. Silverman (2000) in particular, argued against the merits of triangulation for studies that assume a socially constructed reality, as different data methods have their own unique contexts for interpretation.

'Mapping' one set of data upon another is a more or less complicated task depending on your analytic framework. In particular, if you treat social reality as constructed in different ways in different contexts, then you cannot appeal to a single 'phenomenon' which all your data apparently represent. (Silverman, 2000: 99).

This research thesis attempted to use a range of methods, data sources, and perspectives. However it was never assumed that these different methods, data sources and perspectives would measure and support a singular theoretical view and interpretation. Chapters three to six and the appendices of this thesis attempt to include a range of different perspectives following the pursuit of a critical and grounded theory framework, allowing for various constructed realities among respondents.

Following the adoption of these recommendations, it is, therefore, argued that this thesis makes a strong case for theoretical validity.

### **External Validity**

Sometimes referred to as external validity, “generalizability refers to the extent to which one can extend the account of a particular situation or population to other persons, times, or settings than those studied directly” (Maxwell, 2002: 52). Generalisability usually takes place through the development of a theory that makes sense of the particular situation studied, and then shows how the same process in different situations could lead to similar results. Generalisability in qualitative studies is about making sense of similar persons or situations, not about statistical inference (Maxwell, 2002).

Maxwell (2002) argued that there were really two main types of generalisability. Internal generalisability refers to generalising within the community, group or institutions studied, to persons, events and settings that were not directly observed or interviewed. External generalisability refers to generalisations to other communities, groups or institutions (Maxwell, 2002: 53). Internal generalisability was claimed to be the most important as qualitative researchers do not tend to pursue the second as much. External generalisability has also been noted by many as perhaps one of the most serious criticisms leveled at qualitative research (Merriam, 1990: 173; Yin, 1994: 36; Firestone, 1993: 16).

It has been argued that much confusion flows from contrasting statistical generalisation from a sample to the population, and analytic generalisation in cases to some broader theory (Yin, 1994: 36). In experimental or correlation designs, generalisation is ensured through *a priori* conditions between the sample and population, such as assumptions of equivalency and random sampling, etc (Merriam, 1990: 173). In case studies, generalisation is taken to the level of theory and not the population (Yin, 1994: 36). Once the theory is tested on several other cases and found to hold, it might be accepted for further generalisation (Yin, 1994: 36). To generalise to a theory is to provide evidence that supports (but does not definitively prove) the theory (Firestone, 1993: 17). One then uses such a theory to make predictions. In a specific study, predictions hold under those particular conditions and they, therefore, become scope conditions that limit the generalisability of the study (Firestone, 1993: 17). It has, therefore, been argued that from this perspective, internal validity, or theoretical validity, is more important than generalisability (Ward Schofield, 2002: 174).

A range of suggestions have been provided by many methodology scholars for defending the generalisability of a research study. These include:

- Limiting generalisations and conclusions to the situations and time periods for which the data is applicable (Patton, 1990).
- Using rich thick descriptions in both the site studied and being generalised to, so that the search for similarities and differences can be conducted, allowing a reasoned judgment about generalisation to be made (Ward Schofield, 2002: 179-180; Merriam, 1990).
- Adopting multi-site studies (Firestone, 1993: 19) that seek maximum variation (Ward Schofield, 2002: 185; Firestone, 1993). Each of these new cases ought to be a replication of the past case study where the theory has specified that the same results should occur (Yin, 1994: 36).
- Identifying situations known to be ideal or exceptional on some basis and conduct research on these sites, with selection on an *a priori* theoretical basis, depending on the outcomes or conditions observed there (Ward Schofield, 2002; Firestone, 1993).
- Making use of different qualitative comparative methods, such as truth tables to compare cases and variables (Ward Schofield, 2002; Firestone, 1993) and matrices/tables (Miles and Huberman, 1994).

This thesis is made up of a multi-case design, investigating the decisions and contexts for three different Australian university cases. A brief description of these cases, their variation and selection basis, was summarised in this chapter. Figure 3 seeks to highlight some key differences between these cases. Further comparisons between these cases are highlighted in chapter six of this thesis.

This research also employs rich, thick descriptions in chapters three to five of this thesis, consistent with the grounded theory analytical framework discussed in this chapter. Generalisations made to theory from these cases are justified, based on the similarities and differences highlighted between them, allowing a reasoned judgment to be made.

Analysis progressed on a case-by-case basis, building theory in chapter six using a grounded theory analytical framework, explained and defended earlier in this chapter. Generalisations from these cases are extended primarily to the level of theory development, rather than to the sector at large. Interview and document data were also collected at a field level, to assist the verification of field level explanations that assist extending the generalisation of theory to broader levels, where

justified. Such theorising is made only so far as inductive and logical reasoning can support such claims. These claims can be found in chapters six and seven of this thesis.

On the basis of adopting all of the previously discussed recommendations in this thesis, it is argued that this thesis makes a valid claim to external validity.

### **Evaluative Validity**

The final form of validity that Maxwell (2002) argued was necessary to justify claims to quality in the research process relates to evaluation. Evaluative validity differs from other forms of validity as it involves the application of an evaluative framework to the objects of study, rather than a merely descriptive or interpretive one. Like external generalisability, it is claimed not to be as central to qualitative research as other forms of validity. No account is immune from such questions, however (Maxwell, 2002: 55).

As already discussed, this research draws on a critical theory framework, allowing scope for the researcher's values to shape the inquiry outcomes, and further creating space for promoting restitution and transformation, following a dialectical process of historical revision (Guba and Lincoln, 1994: 113-114). Therefore, the influence of a researcher's assumptions may not always be unwanted, providing that their identification and possible impact are identified explicitly (Kincheloe and McLaren, 2000: 292), as was done earlier in this chapter.

Based on the previously applied process validity framework drawn from Maxwell (2002), it is argued that this thesis has engaged in a quality research process, to the extent to which it has followed the guidelines outlined in this chapter. Following on from this discussion, the next minor section of this chapter attempts to outline relevant delimitations bounding this research project.

## **ANALYTICAL DELIMITATIONS**

There are three major delimitations that have bounded the research processes and outcomes of this thesis. The first of these relates to the fact that just three out of 40 universities in Australia were researched in reasonable depth. Although additional interviews and field documents were collected at the field level of analysis, these three university cases are insufficient in themselves to make statistical representations about what occurred in all Australian universities. Therefore, an attempt

has been made to generalise to theory, following the qualitative method, rather than focus on the broader population of Australian universities. Where theorising has been conducted at a field level, it has been restricted to a level that can reasonably be supported and defended by inductive and logical reasoning, grounded in case and field-level interviews and documents.

Second, case study interviews were limited to 13 respondents in two universities and nine in the third university, representing only a small proportion of the total staff at the university. Both case and field level respondents were, however, asked to recommend further relevant staff to interview as discussed earlier in this chapter, following snowball sampling techniques also discussed earlier in this chapter. In all three university cases, interviewing concluded when no new respondents were suggested, and no new information was obtained in each case by further interviews (i.e. saturation was reached and the research site was exhausted). It is still possible, despite these findings, that relevant case information was not obtained as a function of these restrictions.

## **COMMITMENT TO ETHICAL RESEARCH**

This researcher endeavoured to maintain the highest of ethical standards. As such, five key ethical principles were identified for their inclusion in the research design:

1. **Approval from the UTS Human Research Ethics Committee.** Approval for this thesis was obtained from the UTS Human Research Ethics Committee (HREC) in accordance with university rules governing such research, before the commencement of the pilot study.
2. **Confidentiality.** This research project offers the assurance that no real names of institutions or respondents have been disclosed or recorded outside meetings with supervisors. Interview transcripts were 'de-identified' prior to data analysis.
3. **Approaching Respondents.** Potential respondents were identified following the guidelines outlined earlier in this chapter. All interviewees were sent an email inviting them to participate in this doctoral research, along with a request to sign the attached individual consent form required by the UTS HREC. Case study interviewees in the three university case studies were not approved until institutional approval to approach staff was received.



All respondents were offered the opportunity to terminate their involvement in this research at any stage, following guidelines proposed by the UTS Human Research Ethics Committee.

4. **Validation of Transcripts.** All respondents were sent a copy of their interview transcript or notes to validate its authenticity. Of these records, fourteen transcripts and notes were corrected by interviewees. Four respondents requested that special conditions be placed on the use of their transcript data. All of these conditions have been upheld in this research.
5. **Storage of Data.** All transcripts have been de-identified, coded and secured. Completed transcripts and tapes will be stored in a locked cabinet in the researcher's office at the university. Data will be kept for a period of five years and then disposed in confidential waste.

Further details relating to the ethical guidelines underpinning this research can be found in the appendices to this research.

This discussion concludes this methodological chapter of this thesis. It discusses and defends the various methodological decisions made in the research, particularly in relation to the research framework, data collection strategies, instruments and data; grounded theory data analysis, case study framework and coding framework; potential researcher bias in this study; and guidelines for evaluating the quality of this research thesis.

The next three chapters of this thesis investigate and explore three selected university case studies. Chapter six then compares and contrasts these cases in addressing the research problem and questions posed in chapter one, before attempting to construct grounded theory, drawing on these cases and additional field documents. An appendix item further tests this theory in the light of field respondent interviews. The final chapter of this thesis brings this material together and identifies major and minor contributions to the higher education and institutional theory literatures, implications for public policy and management, and directions for future research.

## **CHAPTER THREE: CASE STUDY ONE – 'SUBURBAN UNIVERSITY'**

This chapter describes the process of institutional change around the introduction of a new learning management system at Suburban University. This chapter proceeds by discussing the nature of the case evidence, the university's relative size and scope, structure and key relationships, as well as its institutional history and identity. Following this discussion, the process of institutional change is described in detail, with reference to liberal quotes from respondents and various documents, used to illustrate and ground this case study. This chapter will conclude with a discussion of the organisational impact of these changes on a range of different domains.

### **Nature of Case Evidence**

This case study has been compiled on the basis of thirteen in-depth interviews and sixteen internal and external documents. Following the critical theory research paradigm, discussed in the previous chapter, this case does not pretend to represent the only "true" account of historical events described at this university. Rather, it is argued that this case study is itself a social construction, formed by the researcher after the collection and analysis of the identified case evidence. The construction of this case however, is claimed to be valid, based on the quality of the evidence collected during the research process, and the way in which this evidence was analysed. Further discussion about the quality of these case studies is found at the end of the previous chapter.

Figure 9 indicates the major actors described throughout this case. These actors were classified as 'Senior Management', 'CETU/Learning Centre', 'CEU', and 'Faculty Representative', following their relative employment status in the university. Respondent quotes are normally denoted by these classifications in order to preserve individual respondent anonymity, except where the narrative of this case requires further detail. In these select instances, an alias name from Figure 9 has been used.

**Figure 9: Suburban University ‘Actor’ Profiles<sup>8</sup>**

No	Classification	Actor <sup>9</sup>	Background Information <sup>10</sup>
1	Senior Management	Alfred*	Former Vice-Chancellor
2		Silas*	Current Vice-Chancellor
3		Colin	Pro Vice-Chancellor (PVC), with broad responsibility for Education and Teaching in general, and the newly established Central Education Technology Unit (CETU) and Learning Centre in particular.
4		Mary*	Colin’s Personal Assistant
5		David	Another relevant Pro Vice-Chancellor (PVC)
6		Keith	Past President of Academic Board
7		Peter	Newly appointed Senior Information Officer, reporting to another PVC at Suburban University.
8	CETU/Learning Centre	Susan	Foundation Director of CETU
9		Caroline	Member of CETU, and former faculty staff member with a history of experimentation with learning management systems
10		Lisa	Foundation Director of the new Learning Centre
11	CEU	Norah*	Former Director of the now defunct Central Education Unit
12		Matt	Faculty academic, and former employee of the now defunct Central Education Unit
13		Andrew	Faculty academic, and former employee of the now defunct Central Education Unit
14		Theresa	Faculty academic, and former employee of the now defunct Central Education Unit
15	Faculty Representative	Troy	Head of School with a significant history of experimentation with learning management systems
16		Mike	Faculty academic with a significant history of experimentation with learning management systems
17		Tina	Faculty academic with a significant history of experimentation with learning management systems

**Key:** \* Denotes an actor not directly interviewed for this study.

<sup>8</sup> The term ‘actor’ was used instead of ‘respondent’ in this case because some people noted played a significant role as actors within Suburban University, although they were not directly interviewed as part of this research.

<sup>9</sup> All names noted in this table are alias codes to protect the true identity of the institution and its past and present employees.

<sup>10</sup> Some of these titles and descriptors are alias codes used to protect the identity of the institution and its past and present employees.

Figure 10 illustrates the various internal and external documents collected and analysed in the construction of this case. Documents are referred to by their classification to assist the interpretation of this material by data source.

**Figure 10: Suburban University Document Profiles**

No.	Classification	Author/s	Year <sup>11</sup>	Description of Document	Qty
1	Senior Management Document A	Colin, Silas, Keith and David	2000-2001	Senior management strategic priorities for the university	1
2	Senior Management Document B	Colin and Mary, with annotations from other faculty representatives	2000-2001	Internal university-wide discussion paper on the future of university teaching	1
3	Senior Management Document C/D	Senior Management	2003-2004	Various teaching and learning plans	2
4	Senior Management Document E	Senior Management	2004-2005	Progress made towards teaching and learning goals	1
5	Senior Management Document F	Senior Management	2005	Governance arrangements of the university council	1
6	CETU Paper 1/2	Susan	2000-2001	Handouts from internal university seminars on using WebCT	2
7	CETU Paper 3	Susan and a visiting academic	2001	Report from a study on the effective use of WebCT	1
8	CEU Paper 1	Andrew and Matt	1998	Refereed conference paper on a custom learning management system	1
9	CEU Paper 2	Andrew and Matt	2002-2004	Promotional material relating to a custom learning management system	1
10	Faculty Paper	Faculty representative	2003	Internal guide for faculty staff using WebCT in their teaching	1
11	University Website	Senior Management	2004-5	Selected information gathered from the university website	1
11	Government Report 1	Australian Universities Quality Agency	2005-2006	Report of an external university-wide audit	1
12	Government Report 2	Government agency <sup>12</sup>	2000-2004	Report of another external audit at the university	1
13	Newspaper Article	Withheld <sup>13</sup>	2005	Newspaper article on changes at the university	1
					<b>16</b>

<sup>11</sup> The year of publication for some documents have been broadened to reflect either uncertainty around the exact date of publication, or to protect the identity of the university.

<sup>12</sup> Name changed to protect the identity of the university.

<sup>13</sup> Author's name not included to protect the identity of the university.

# **An Introduction to Suburban University**

## **SIZE AND SCOPE**

Suburban University is a large ‘Redbrick’ university. Approximately half the university’s students are part-time and almost a quarter are from overseas (Government Report 1). It is located in the suburbs of a major Australian city and has campuses in Australia and overseas.

## **STRUCTURE AND KEY RELATIONSHIPS**

The Vice-Chancellor (VC) is the chief executive officer in this university, who is assisted by a team of Pro Vice-Chancellors (PVCs) and other divisional managers, who take responsibility for a range of institutional portfolios. In common with most universities, much of the actual research and teaching however, is conducted primarily at a faculty and school level. Supporting the faculties in these functions are several past and present central units, with responsibility for various educational and technology portfolios, which are ultimately accountable to the senior management of the university. The deans of the faculties, together with the PVCs and divisional managers, form the Vice Chancellor’s Advisory Committee (VCAC) (Government Report 1).

Suburban University boasts of hundreds of external partnerships with universities and other learning institutions around the world, particularly in South-East Asia. The most significant network with which Suburban University claims to belong however, is participation in the Australian University Consortium. This group consists of an informal network of Vice-Chancellors from several Australian universities. The Australian University Consortium claims that member universities are recognised as world class research institutions, as well as highly regarded in their teaching and graduate connections (University Website).

## **INSTITUTIONAL HISTORY AND IDENTITY**

Respondents claimed consistently that their university was comprised of a number of institutional identities that characterised the university. One of the most common of these was the claim that Suburban University was a “traditional”, “conservative” and primarily “research-based” university.

It’s a really research-driven university. It always has been. There’s a really clear link between research and promotion (Faculty Representative).

In addition to the institution having a strong research focus, the university also had strong technological origins (Government Report 1).

And this institution, it essentially came out of a technological beginning, it was a strong technological institution, with engineering and science and so on (CETU/Learning Centre).

There was also evidence to suggest that Suburban University's membership in the Australian University Consortium may not only have reinforced its institutional "research" values, but may actually have constituted part of its broader institutional identity.

Yeah, it sees itself as an Australian University Consortium, a big research university. It gets huge numbers of grants, and lots of money for all sorts of research (Faculty Representative).

Although the relationship of power between senior management and faculties at Suburban University was recently acknowledged as "devolved" (Government Report 1), there is evidence to suggest a rather centralised approach being adopted in the past, particularly in important university decisions. For example, one document reviewed stated that prior to 2002, the strategic planning processes at Suburban University

...had become too bureaucratic and top down... (Government Report 1).

Suburban University was also highly aspirational, with several references found in support of a particular desired institutional status relative to other Australian universities. For example, several senior managers identified their university as an "absolute leader", "muscle player", and "high-class opportunity university". Other academics in the faculties also held similar views about their university.

...Competition is a significant but not sole driver of how we do things here. We've constantly got an eye on the other two, what we regard as the better universities, namely Premier Uni and Metropolitan Uni, to see what they do and how we can distinguish ourselves from them or match them, or even be better than them (Faculty Representative).

These institutional identities and aspirations were pursued primarily by attempting to frame the university publicly as a campus-based research university, similar to older and more respected research universities within the Australian University Consortium (Senior Management Documents A-E). The cost of this mimicry at an institutional identity level was a lack of focus on teaching in general, and innovative distance education methodologies in particular, under former VC Alfred. This interpretative framework (Ranson, Hinings and Greenwood, 1980) appears largely to have been taken for granted by many members of the university.

Alfred...says we don't do distance education. Now that's a political statement, because if you said you did distance education, it made you look like you were in that second tier of new universities, and he didn't want to be in that tier...He wanted to be with the big boys, and not cast politically with the small boys. So the first thing you do like dirty words like distance education. In fact, we used to,

we'd call it the t-word, we used to call it the t-word. We used to wait for him to say the t-word. Because if he referred to teaching, it was a sort of a tacit executive recognition that we teach, and he would always talk about research (CEU).

...This university has never had, or is beginning to, with someone like Colin who's really gung-ho, but back then, the push for teaching, and the strategies around teaching, just were not on the radar... Online learning for us is all about teaching and learning... So I think they were happy to wallow before because teaching just wasn't a focus. It was research, research, research (Faculty Representative).

Despite Alfred's attempts to direct the institution's focus away from teaching and distance education in the 1990s, a number of academics began to experiment with new learning management systems.

## **Unsupported Academic Experimentation**

A limited number of academics from various faculties within Suburban University experimented with different learning management systems in their teaching, particularly during the mid to late 1990s. Lotus Learning Space, WebCT, Suburban Online (a home-grown system developed by staff in the Central Education Unit), Topclass and Blackboard were all trialled by various respondents.

...When I first came in '96 [I] worked for the centralised business arm of the university. And that, was, I behaved like a consultant, and we sort of designed various projects and things but our use of educational technology was really minimal in those days, and then while I was there, it began to creep in and we used programs like Topclass, and we looked into I think it was Learning Space as well. So it was beginning to kind of happen, but there was no centralised support, or even policy or any kind of you know. It was basically happening on a, bits and spurts throughout the university (Faculty Representative).

The senior management of Suburban University perceived academics who experimented with these emerging learning management systems to have several common characteristics, summarised in Figure 11.

**Figure 11: Perceptions of Academics who Experimented with Learning Management Systems**

<b>Common Characteristics</b>	<b>Illustrative Quote</b>
Young	<i>They didn't have 20 year old lecture notes. They didn't have lecture notes at all. So they were younger. They didn't have anything, they didn't have existing technologies that had to be replaced. They, their technology was a computer. So even if they were putting, even if they were typing out their lecture notes, or doing their overheads with you know, with whatever the early version, whatever their version of PowerPoint was, or whatever, they weren't replacing a technology. They were initiating. So I think young was one characteristic (Senior Management).</i>
Well connected or had an absolute need for the technologies in their courses	<i>I can think of a couple of people whereby, we're not talking about hundreds of people here, I can think of 10, 11 or 12 people, who were early enthusiasts. They were either, they either had connections with people who were doing these things, overseas or in the business world, or they had absolute demands for it (Senior Management).</i>
Often in disciplines where pictures were important	<i>And I guess the third characteristic that comes to mind, and I'll say this in a way that could be seen as flippant, it's, some of the disciplines where pictures were important. Microbiology, Anatomy, some of those areas where, the sexy term learning objects. You know, pictures of disgusting livers and kidneys, and things like that (Senior Management).</i>
Had an interest in education	<i>It was only a very short engagement with it, but my interest with educational technology started with my interest in education (Faculty Representative).</i>

It was also suggested that there were a number of different characteristics in the technology itself that appealed to these academics. One staff member suggested that the utility, accessibility and low cost to individuals made this technology attractive.

...A small number of people adopted it quickly and found immediate use for it in what they were doing... The digital technology itself made a lot more technology accessible to students and teachers, and you know, and if it's there, you use it type of problem... The natural reaction by I guess a small group of teachers initially was, well, here's another bit of technology, another tool, it looks to be cheap and free, I'll have a go at it (CEU).

It was suggested by many respondents (7) that academics who experimented with these emerging learning management systems did so without central technical support. Staff from the Central Education Unit however, appeared to play a limited facilitation role in encouraging the sharing of individual experiences at a local level through public forums.

CETU/Learning Centre

...I recall that the Central Education Unit organised a bit of an expo. So I think it was half a day, could have been a day. And I was asked to stand up and present on the WebCT course management system. And there were other people that presented on other tools that they were using... And so we actually had a half hour slot on what features and functionality each tool had, and how it was being used etc. So there were people working pretty much in isolation in an experimental way with different types of tools.

Researcher

So this was the first coming out I suppose, of the technology at a broader scale, so people were exposed to new things?



CETU/Learning Centre

Yes. There may have been one or two other academic members who had independently discovered WebCT and were using it. And I don't recall if they did it as a result of that seminar or prior to that.

Some staff (6) alleged that one of the significant impediments to both individual experimentation and central support of emerging learning management systems at Suburban University, was the institution's strong preference for research relative to teaching.

It actually bothered me that people were doing things very much as individuals and they were not getting support within their schools. So if an individual lecturer chose to use WebCT, that was done out of their own initiative. They did not get support or recognition. They certainly got no rewards. And I had lecturers very early complaining to me that their colleagues did not understand, that their colleagues saw it as competing for time where they could be doing research, and they were being criticised for putting time into their teaching and the use of this technology, when they could be doing research... They were not being supported and they were actually being criticised for taking it up (CETU/Learning Centre).

The above claim was corroborated by the following admission in Suburban University's Learning and Teaching plan some years later.

The plan outlines the means for effectively identifying and rewarding teaching excellence and for reducing the imbalance, real or perceived, between the recognition given to research and teaching within the university (Senior Management Report C).

A broad range of staff claimed that academic experimentation and central support of these learning management systems were further impeded by their framing as "distance education", an institutional value antithetical to the "on-campus", "high-class", "research-based" university identity that the former VC desired for Suburban University.<sup>14</sup>

We don't do a lot of online stuff here. I mean there are a few online courses inside [names deleted], but there is not a lot, because we have never been a distance education supplier (Senior Management).

Now Suburban University is not in the business of running distance courses, and that is not where we want to go. We, that was a very early decision, that we were not going to become a virtual university (CETU/Learning Centre).

And I remember our previous, one of our previous Vice Chancellors when we were pushing to try and get the university to sort of get into this technology in a sort of a planned way, saying "That's distance education, and Suburban University doesn't do distance education" (CEU).

But [the] other thing is the idea of the distance university, I think it's probably a snob thing. I think that Australian University Consortium universities don't need to go into that sort of thing, because goodness knows why. It's because State Distance Education Uni and Technology Savvy Uni<sup>15</sup> and

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<sup>14</sup> The provision of distance education was restricted to eight nominated Distance Education Centres under Dawkins in 1989, but was later relaxed in the early to mid 1990s.

<sup>15</sup> Pseudonyms assigned to protect the identity of these case universities.

all those sort of places who do run big distance education are not top research universities (Faculty Representative).

An internal document produced in 2000 by Senior Management supported these respondent claims by acknowledging the way in which distance education and online learning had now become interchangeable terms within the Suburban University community.

‘On-line teaching’ and ‘distance education’ are terms that are often used synonymously (Senior Management Document B).

Only a few years after the VC’s strong public stance against learning management systems as “distance education” in 1994, Alfred and the senior management changed their attitude toward these emerging technologies in the most radical of ways.

## **‘Falling Behind’**

In 1997, the VC of Metropolitan University (chapter five of this thesis), a member university of the Australian University Consortium, established a new network of VCs from various ‘research’ universities across the globe called International Consortium. Up until this point in time, unsupported academic experimentation with learning management systems continued whilst the university focused on building its institutional research agenda. The university’s response to these emerging technologies appears to have shifted sometime during 1998/1999 as a result of discussions between Alfred the VC, and other VCs who were representative members of International Consortium. As a result of these discussions, it was suggested by a number of respondents (7) that the VC of the university realised that they were ‘falling behind’ their respected peers who had taken more active steps in promoting university-wide adoption of learning management systems through the activities of their central university departments.

And then when International Consortium came up, and this is at the tail end of my sort of interest at the central level, came up and they suddenly started meeting other Vice Chancellors who were in these big name universities. And the World Education staff came up too, and suddenly Suburban University looked at itself, and looked at what other people were doing and realised that they were out of the game, pretty much. They were just way behind, and I think they wanted urgently to do something and to look modern, and to bring themselves up to date (CEU).

Most respondent groups argued that the management of Suburban University did not embrace the value of educational technologies as a result of recognising their educational merit, but because the university was ‘forced’ to change its policy as a result of competition with other universities. Such

competition was perceived as a threat to Suburban University's institutional aspirations and future student enrolments.

Okay, I'll tell you my perspective. From what I could see, I felt that the university, in the way it made its decision, was forced down this path, not because it particularly valued it or had a commitment to it, but was being forced down this path by competition. That's how it appeared to me. I, on the one hand, had been waiting for a long time to see this development happen, but on the other hand, I was really disappointed with the way it turned out, because I really felt that senior management in the university had not really embraced it in a way that they valued it or understood it or were committed to it. I really felt like, reading between the lines, that we were going down this path because we had to catch up. Other people were doing it, and whether we liked it or not, we also had to also get into this game, because it appeared that we were not as technically advanced, not as technically competent, not using the latest technologies, the latest methods. And perhaps also, there was some fear that, of this idea of students being able to study courses from anywhere around the globe, so there was competition in terms of enrolments starting to happen. And there was an acknowledgement that this competition would impact on us, whether we like it or not, we had no choice. And I'm sure if you hunt around you may find statements along those lines, that were made publicly by the Vice Chancellor for instance (CETU/Learning Centre).

I remember the Vice Chancellor came out with a statement that said, "you know a Suburban University education will always be an education on campus. We're not about providing distance programmes. This is about augmenting the programmes that we offer on campus". So I mean Suburban University was really reluctant to get into this area. They really only did it under pressure from other institutions. It was not like some of the smaller universities that saw it as the big opportunity to expand their student base. It was just that we wanted to be high class opportunity university, and every other high class university was offering all these extras, so we had to offer them too...(CEU).

At that stage, it was looking like we were behind the eight-ball sort of thing. A lot of other institutions were, had a really strong web-presence, they were offering this flexibility, and suddenly Suburban University didn't have an online learning presence. And they obviously thought, "Hang on a moment, we don't want to look like we're a bit old fashioned here, and we're a really great university, we're one of the best, blah, blah, blah...", and they wanted to make sure we were up there (Faculty Representative).

Senior Management did not agree with all of these assertions however. One Senior Manager challenged the idea that the university was 'forced' to catch up, but did agree with other respondents that the university was not "at the top of the pile", and that this was part of the motivation for institutional change.

There was never a feeling that we had to do it, but there was a recognition that it was one of the criteria that universities used to compare themselves that we weren't at that time at the top of the pile. And Suburban University was and is a university, you know, pick ten indicators, we'd like to be towards the top on all ten. There are some universities that would comfortably say we want to be towards the top on these six, and these other four indicators can go screw themselves. That's not the style of this university (Senior Management).

Associated with this fear of falling behind, was a further fear that Australian Government policy might shift in the future, resulting in a lost opportunity for further government funding. It was claimed that many of the Australian University Consortium universities were in a similar position.

There was a genuine recognition by those of us in management that we were an upstart, successful, Australian University Consortium university. We were a muscle player in the system. However, many, a number of universities, I won't say many, a number of universities which, Australian University Consortium universities would not see as their equal, were streets ahead in coming to grips with online education. If the government turned, not changed, but turned its face to say online education is the bees knees, and we're going to throw truckloads of money at those universities that are ahead of the pack, then there was a recognition that we and a number of other Australian University Consortium universities were behind the pack, at that time (Senior Management).

A senior management report supported this claim that the university's adoption of appropriate educational technologies was relatively low, and that this could have dire implications for future government funding. The anticipated mechanism through which these adoption activities would be monitored was the Australian Universities Quality Agency, an agent of the Australian Government.

In the recent DETYA<sup>16</sup> education and action plan "Learning for the Knowledge Society", it is stressed that universities must have staff with "the vision and skills to make use of the new technology, new applications and new approaches to learning". Yet despite some excellent exceptions, the proportion of courses taught at Suburban University that use imaginative and appropriate digital technology remains low. To change there is a need to invest over the next few years considerable monies...to ensure we remain competitive. Government will require it and the Australian Universities Quality Agency will expect us to have in place clear procedures to train staff in appropriate use of IT in our teaching. In the long term, this will be an investment in the future as there will almost certainly be a significant tranche of funding from government competitively tied to successful demonstration of quality assurance measures in teaching and learning at Suburban University (Senior Management Document A).

Later in that same document, senior management actually used the language of 'left behind' in their discussion of how they might respond with central university funding.

How do we cope with this given we have to proceed as described above or we will get left behind (Senior Management Document A)?

The proposition that Suburban University adopted a learning management system out of a fear of falling behind other universities was challenged by one Senior Manager however. He argued, against the views of the majority of respondents, that Suburban University was attempting to find "educationally beneficial" ways to enhance the on-campus student experience. This comment is somewhat understandable, given the implications of agreeing with this statement, following this person's participation in these changes.

I don't think it was a fear of being left behind, I think it was a sense in which we had to try and make the technology work for us. To find ways of using it in ways that were educationally beneficial. So I don't know that it was a fear of being left behind. It was a sort of sense in which how do we actually enhance the student experience on the campus (Senior Management).

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<sup>16</sup> The Department of Education, Training and Youth Affairs (an agent of the Australian Federal Government).

When pressed as to which particular universities Suburban University was afraid of falling behind, respondents noted Australian University Consortium members City University (also a member of International Consortium) and Premier University, as well as other International Consortium members. Falling behind therefore appeared to be a localised fear that emanated out of the Vice-Chancellor's personal networks, rather than a diffused one which flowed directly from the broader higher education sector. For example, the "technology universities" were perceived to be leading the field, but did not create direct pressure upon Suburban University.

Researcher

Were there any particular universities that you or this university looked at, that were markers for leadership that you were concerned about falling behind?

CETU/Learning Centre

Well, yes, a good example at the time was City University. They had already adopted WebCT in a central systematic way and it was very, very clearly obvious that they were moving ahead. And that we had no similar service to be offering. So City University was certainly a marker.

And then of course, there were the other international ones. Our International Consortium partners and the big users like North American University, an International Consortium partner. Other users like that. So our partners were big in it. Other partners were big users that we look up to in the beginning.

Despite the technology universities leading the field in adopting learning management systems at the time, Suburban University looked toward its Australian University Consortium peer Premier University for both institutional comparison and even future staff.

It does always measure itself against Premier Uni. And Premier Uni had a high profile Educational Technology...In fact we poached their director...Susan...Our Executive would not have measured themselves against the technology universities. They were certainly leading the field in that area, but the Australian University Consortium universities were all doing something in this area (CEU).

Susan's recruitment from another university in the Australian University Consortium was one mechanism used to assist Suburban University in 'catching up' with its peers.

## **'Catching Up'**

After Suburban University realised that they were 'falling behind' other Australian University Consortium and International Consortium members, they attempted to "fast-track" their 'catch up' as quickly as possible through a number of structural initiatives, some of which were questioned by several respondents.

## RESTRUCTURING

One of the major initiatives that Suburban University engaged in was a process of organisational restructuring. The primary instrument used throughout was a review process that led to the retrenchment of the staff of one central unit, a new Pro Vice Chancellor (PVC) executive portfolio, and the creation of two new central units replacing the functions of the first unit.

The first unit to be restructured was the Central Education Unit, which was ‘disestablished’, and its staff retrenched and offered for hire to the faculties. A newly established and focused Central Education Technology Unit (CETU) was then proposed to replace this central unit. The key rationale for this restructure, according to senior managers of Suburban University, was that the Central Education Unit’s activities were too broad.

And around the same time that this was going on, we had done a review of Central Education at this university. I had chaired that working party, and central education before my review, was trying to be all things to all people. The kind way of saying it is that it was satisfying everyone to a small degree. The less kind way of saying it was that it was satisfying no one to a large degree. And there were a number of changes that came out of the review that I did, and this was in 98...And one of those changes was the establishment of the CETU, the Central Educational Technology Centre, where we tried to bring in some expertise, or grow some expertise, and to focus, so that the enthusiastic amateurs, early adopters, whatever language, however you wish to label them, so they weren’t sort of chasing their own tails (Senior Management).

Other staff remarked that they believed the university was attempting to “catch up” with its peers who had pursued a similar (and apparently popular) strategy of concentrating institutional attention on a focused central education technology centre.

The university acknowledged back then, and that was around ‘98/99, that we were very far behind other institutions in Australia, and overseas. So other institutions had already setup central services for delivery, for management of learning management systems and hosting people’s courses and providing learning and teaching, staff development in learning and teaching, but specifically for educational technologies and especially online technology. And Suburban University had done nothing in that area (CETU/Learning Centre).

Well it was very much the flavour of the month at that time. Universities all over the place were setting up special units to deal with it, because it’s such an expensive area and obviously it’s just madness to do it on a faculty level because you’ll end up with all of these systems that don’t talk to each other. So if nothing else was clear, it was clear that they had to do that centrally and we were being somewhat out-classed by other universities who were you know, flushing their Educational Technology Centres and their services and so forth (CEU).

Affected staff perceived that one of the argued rationales for closing down the Central Education was a new organisational capacity to save money that it could now spend in a more focused pursuit of educational technology.

So I worked there for, until about ’97, 97/98 when they closed that centre. There was a big push then for more intense effort on educational technology in the university and I think they wanted to get

some money for that. So they closed the Central Education Unit, which was a combined academic-general staff development unit, closed that down and re-deployed the staff. And instead here what was called, what is called now the CETU unit to focus on educational technology (CEU).

Other university staff were not so convinced however. A small number of respondents (3) noted that this review was also the product of a political “falling out” between Alfred the VC and the former head of the Central Education Unit at the time.

I’m, you know, I never really knew, but from my perspective, it was, the people in it were really talented, and they were doing excellent work. They were running really good workshops, and I think it really was a political falling out between I think it was Norah who was heading it up, but it’s really, it’s still quite an emotive issue for people and I think Alfred, the then Vice Chancellor, probably, there was some major falling out, some major clash of ideology, and so yeah, it was disestablished. That’s how they put it...But it was I think very politically driven that whole thing. And then they established CETU (Faculty Representative).

Whatever the true motivations for this review might have been, the manner in which this review was conducted was perceived to be “politically driven”. This may have been due to the approach of the President of the Academic Board at the time.<sup>17</sup>

CEU

There was an advisory committee set up to investigate and I was put on that committee, largely against my will, but anyway. That was headed by Keith, who was the head of Academic Board. And it had, I was the only representative from the Central Education Unit, but it also had representatives from the Library, the unions and I can’t remember who else in, it was all internal people...and the library and the unions and the other members of the committee were initially determined that the Central Education Unit should stay. Keith continually put the position that it was the university’s management philosophy now to devolve all these functions to faculties and so the stable was not an option. And in the end the committee recommended that there remain a central unit for some functions, particularly for flexible learning, but that some functions be developed, devolved to the faculties.

Researcher

Was that decision a unanimous one by the committee?

CEU

Yes, with a lot of reluctance...

Susan, the newly appointed director of CETU, was employed in 1999 with a brief to “fast-track” the use of educational technology at Suburban University.

And, well as I said, my agreement from the then DVC was to fast-track the use of educational technology here because he did feel we were falling behind. And there was perhaps some truth in that. There was a perception, I think, because a lot of universities were actually in the same boat (CETU/Learning Centre).

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<sup>17</sup> Further details relating to the specific strategies and tactics used by various groups and individuals within Suburban University are discussed later in this chapter.

A major priority of CETU is to fast-track the uptake of educational technology at Suburban University (CETU Document 3).

When asked why the university had to fast-track the use of educational technologies to catch up with other universities in this area, Susan claimed that there was no real evidence or research to support the merit of the university's new change of direction. Further, the burden for developing such a convincing rationale was actually left to her to demonstrate, following the university's decision and Susan's subsequent appointment.

Well, no, there was no real evidence. There was nothing quantitative. There was no research work that had been done, saying "Yes, we should go down this route and, these would be the benefits". These were up to me to demonstrate, to do the catching up, to fast-track as I said. That was the instruction to fast-track educational technologies and I guess it would be up to me to demonstrate the value, rationale for doing it (CETU/Learning Centre).

One of the implications of senior management's focus on 'fast-tracking' the use of education technology on campus, was a subsequent lack of institutional focus on broader educational and pedagogical issues, formerly the responsibility of the 'disestablished' Central Education Unit.

CETU was established to replace the CEU, for reasons that I've never fully understood, but Susan chose not to take, I think it certainly drove the university in terms of development and acceptance of technology and put enormous energy and passion into that, but didn't really take on the pedagogical side, which can happen. I mean, you know, I can really understand that happening. And so, yeah, it left a vacuum (CETU/Learning Centre).

Then they set up the CETU unit. That took on, that was supposed to take on the academic development focus, and it never did. In fact, its original name was the Learning Unit I think, and the first Director Susan, who's there now, changed the name to CETU, because she wanted it to focus on educational technology and she didn't want to take on the academic development stuff, so it never took on that role (CEU).

Although Susan was supposed to take responsibility for both the technology and educational pedagogy institutional concerns, some respondents (5) claimed she was not able to do the latter as a result of not having a background in education. Susan's long history of academic work in another non-education discipline was also acknowledged at internal university seminars (CETU Document 1).

Susan didn't come from a background of educational, a background of education. You know she was a person who was interested in the technology and so she took her budget and she did what she wanted to with it, and that's why, and the senior executive didn't interfere with that (CEU).

There's a whole level of awareness that unfortunately management don't have. And like Susan and that, she's coming from technology...She got into it, ed tech stuff ten years ago like most people did (CEU).

Finally, after the CETU was established, the Council of Suburban University recommended that a new PVC Education position be created in 2000. Colin was subsequently appointed to this position,



having served for many years in one of the non-education faculties of Suburban University. This appointment followed recognition by Alfred that he needed someone responsible for improving the educational experience on campus. Colin therefore took responsibility for the newly established CETU and Learning Unit, in addition to a range of ongoing units.

And after that, a decision was made that one of the areas that the university needed to focus on was its educational portfolio, what it was doing in educational terms. And then Colin's job was created. But all those particular functions that report to Colin except CETU and quality systems group, were there before hand. So they were reporting probably to the DVC, and it was a decision made by Alfred as Vice-Chancellor of the time, that he needed, we were getting overloaded, and we needed someone who was simply responsible in the central organisational sense for improving the quality of education experience on the campus. I know at the time, well the core of that business if you like, is the Learning Unit, and CETU. And then over time, other things have been moved across. I was, the Library reported to me at one stage, then we moved it across to Colin. It seemed to make sense. So it has evolved in that way (Senior Management).

The Learning Unit was established by Colin in 2001 to focus on pedagogical functions not addressed by Susan and CETU. It was deemed by several staff in the university who observed these changes that the university had not only gone full circle in returning to another centrally-funded staff education unit, but in the process has actually lost much of its prior expertise in this area.

Very, very soon after you know the Central Education Unit was broken up, the Vice Chancellor stepped down, a new Pro Vice Chancellor for Education was appointed, Colin, he had always been a strong supporter of the Central Education team, and he established the Learning Unit, to do academic development, which CETU was not doing. And some faculties, the richer faculties who had acquired their own academic development people, you know a handful of them were functioning okay...And the rest you know, nothing was happening, there was nothing available for academic staff so... Colin essentially replaced the Central Education Unit with the Learning Unit. They kept the staff development functioning for general staff separate but that function has really declined I think (CEU).

## **INITIAL EVALUATION OF ONLINE LEARNING PLATFORMS**

Following Susan's appointment to the newly created CETU, Susan proceeded to 'fast-track' the adoption of online learning with the selection of a learning management system that could be adopted university-wide by the faculties. Among the many alternative platforms available on the market, Susan made the decision in 2000 to adopt WebCT Campus Edition (C.E.). This decision was based on Susan's observation that the majority of other universities involved in International Consortium had adopted WebCT, and that she had not received any objections from people at Suburban University with this choice. WebCT was perceived by Susan to be the most popular learning management system in the market at that time, and was therefore believed to be the best platform in the world, and by implication, the best platform for Suburban University.

So I canvassed around, asked various people, what kind of technologies we were talking about, what kind of platforms might they be interested in, and what platforms were out in the world at that time.

What were the big players? Why were people using certain platforms? Pretty much as it is today: WebCT, Blackboard, and at that time, Learning Space. And the reasons for choosing one centrally supported platform; you can't have more than one...

...And there were was also International Consortium. And the majority of those universities were using WebCT. And that, talking to people here, there was no objection to making that choice, so that was the one I chose, central WebCT and central services...

...I chose WebCT because it was the best platform in the world at that time, and more universities were using it than any other. And Australian universities were the same. Of those using an online platform, WebCT, was the dominant one (CETU/Learning Centre).

Susan's claims that her decision was made on the basis of other universities' prior decisions was supported by other documents authored by Susan (CETU Paper 1 and 2). For example:

CETU have implemented WebCT as the Suburban University platform for online learning because it is the world's most popular tool for creating online learning environments and meets the needs of most academic staff (CETU Paper 3).

Once Susan had made her decision to adopt WebCT, she then convinced the Vice Chancellor's Advisory Group to bypass the usual critical review processes, as she claimed that the university could save time and money by basing its decision on the adoption decisions of other respected peer universities in the International Consortium network. Susan's suggestion is likely to have appealed to senior management's desire to 'fast-track' adoption of these new educational technologies to catch up with other members of the International Consortium for external legitimacy. The Vice Chancellor's Advisory Group subsequently approved the purchase of the new WebCT platform.

And I recall Susan, that she had decided that she would, or she had convinced the VCAG, the Vice Chancellor's Advisory Group, that WebCT was the way to go and that they should provide some initial funding for the server and for the software. Now the software was very very cheap....So Susan had convinced VCAC of that. This software is being used around the world, because by that stage, it was fairly widespread. It is being used successfully. There's no need to undertake a massive research project into what's available, what do the different software packages offer, what should we use. She said "Look, its been done elsewhere, we can save ourselves a lot of money, a lot of time, by basing our decision on what's happening elsewhere". And that is exactly what happened. VCAC agreed. It was a very cheap proposal. I mean it was \$80,000 for a server I recall, something like that (CETU/Learning Centre).

Susan's claim that her decision was based on the decisions of other universities was unanimously supported by all other respondents who commented on this issue (6). Many aspects of this institutional decision process were criticised by respondents at Suburban University however. One of the first criticisms that arose related to the extent to which WebCT was the most well used learning management system at the time of Susan's decision. One respondent questioned both the merit and independence of Susan's decision, given this vendor's subsequent use of her decision in further advancing their marketing and development ambitions among other Australian universities.

And she went out and sort of declared WebCT as the tool that we were going to work with. ... Why she chose that one, you'd have to ask her. But in retrospect, they'll tell you because it's the tool that everyone uses. But I remember at the time that they took it on, WebCT company used the fact that Suburban University had it as a marketing tool. They went around everywhere else and said "Look, if Suburban University uses us, we must be good". And so they actually leveraged off our use of it to promote themselves as a company. And now Suburban University is a major development site for the next version and they're doing coding and you know. They're a direct agent of WebCT. So there's no debate about what we are using (CEU).

The rigor of Susan's examination process, or lack thereof, was also criticised by a number of different respondents. For example, one senior manager claimed that the original WebCT evaluation was

...done on a wing and a prayer by the CETU group here at Suburban University (Senior Management).

In addition to convincing the Vice Chancellor's Advisory Committee that Suburban University should consciously discard the usual review process for such technology decisions, it was argued by several respondents (6) that Susan had not personally tested or trialled the new software prior to purchasing it.

I think literally it, WebCT was chosen because the person that was appointed Director of CETU, which is Susan, she literally had it in her mind. Like, I remember speaking, I remember meeting her on campus for the first time, meeting her in the street sort of thing, and her saying to me, "we'll probably go with WebCT because it's a really good package". And I said, "oh, why is that?" She said "Well...", and she just couldn't tell me. And I said "Have you used it?" And she said "No, I haven't". So literally, she came with the vision that we would use WebCT, and I've never, I don't think there was any process ... But I got the impression, because I know she had never used it when she chose it, that's what really kind of stuck in my mind. I thought how can you really... Perhaps she used it very quickly after deciding but I'm sure, I have a memory of that, because I remember discussing it with people saying "Isn't that weird" (Faculty Representative).

Further to this, there did not appear to have been any trialling of other comparable platforms that could have been purchased.

I really do think it was not made under any rigorous kind of process. I think Susan had it in her head and she just went with it... There were a lot of programs out there, like Blackboard and there were competing ones, but I mean for example, we never trialled any of those. We never trialled Blackboard... WebCT was just delivered basically; it was just given to us (Faculty Representative).

Other staff also challenged Susan's assertion that she consulted with relevant staff on campus.<sup>18</sup> These staff claims were also corroborated by internal university documents.

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<sup>18</sup> Given that the CEU was 'disestablished' to make room for Susan's CETU, it is perhaps understandable that former CEU staff were not consulted. It is this comment that they knew of no such consultation at the university that is of most interest. Susan's claim to have "canvassed around" was not supported by any other respondents or documents.

But from the outside, nothing happened. It just happened. I mean they just said “WebCT is it”. There was no consultation that I know of. There was no... The only little bit of consultation that I recall. No, there was no consultation centrally. The decision was made to go WebCT centrally I think basically by Susan, because she just looked around and said “Oh, that’s what other people are doing, that’s what we’ll do”. I know that when the decision, we were told that we were making this decision because everybody else was going WebCT basically (CEU).

Seldom are staff consulted and it appears that students never are (if indeed they ever have been). This is particularly true with Suburban University’s selection of WebCT as the internet teaching tool of choice (Faculty Paper).

Other faculty staff, had they been consulted, may have been able to provide valuable information to assist Susan’s decision. For example, immediately prior to Susan’s decision to adopt WebCT, Theresa conducted a more thorough examination at the faculty level and recommended another learning management system, but did not purchase this due to Susan’s decision to adopt WebCT.

...One of the first things I did when I came into [name deleted] was the faculty asked me to evaluate whether they should change the particular technologies that they were using at that time for whatever week those teaching were doing. And so another colleague and I did a literature review and looked at you know, everything that was on the market to try and make a decision. And we published it. And that involved talking with Susan who was then, had you know fairly recently come into the head of the CETU Centre, and asking her, and she had just opted for Web CT. And we thought there were a couple of other programs that were potentially better than Web CT, but if the university was going to go with Web CT, you know that would be a major factor for the faculty. So in the end, that’s what we opted for recommending, but Susan’s whole basis for making the decision on Web CT was that at the time it was the most used in universities, and she didn’t go beyond that. So yeah, I thought that was an opportunity lost too (CEU).

Concurring with the previous assertions of a lack of rigour in decision making at the university on a more general level, one respondent claimed that this was not the first time that senior management had made decisions without due investigation.

And there are bizarre things going on there, and the university I think just makes these decisions at a very high level on, with almost, in the past, with no investigation whatsoever (CEU).

These claims of a lack of investigation in high level decisions were supported by two externally conducted reviews investigating various internal decision processes at the university (Government Report 1 and 2). In relation to the implementation of the learning management system at the university, one paper claimed that the university suffered from a lack of planning and appropriate governance arrangements.

...Suburban University has no planning guidelines or framework for the implementation of online courses throughout the University. The Panel considers that a plan and governance arrangements for online course development would assist in forward planning and scheduling (Government Report 1).

This same general criticism was also made in a separate review of another unrelated process issue at the university.

...A concern whether other activities within the University, or indeed within any other university, could be functioning with similar lack of corporate governance and accountability arrangements (Government Report 2).

There is some evidence to suggest that the university has made a conscious effort to change many of these patterns in recent years however, particularly in relation to decision making around new investments in information technology.

Improvements over the past several years have focussed primarily on IT investment decisions, project management and governance for new systems, in order to provide a more robust decision-making framework for new projects (Government Report 1).

### **'FAST-TRACKING' ADOPTION AMONG THE FACULTIES**

Once the Vice Chancellor's Advisory Group approved Susan's decision to adopt WebCT, following the decisions of other universities in the International Consortium, the university then faced the challenge of 'fast-tracking' the adoption of this platform among the faculties. To this end, a number of different strategies and tactics were employed, which were received with mixed reactions by faculty staff. Examples of these different strategies, with supporting quotes, are found in Figure 12.

Given the restructuring that took place at Suburban University, resulting in the establishment of several new portfolios and units, there was a need to employ more staff to carry out critical functions. New external staff were therefore employed to assist Susan in the newly established CETU, the Learning Centre, and the newly created PVC Education portfolio (Colin).

**Figure 12: Strategies Employed to Encourage Adoption at Suburban University**

Strategy	Supporting Quote
Employment agreements	<i>But Susan invited me to her office and she basically said "I need someone to manage this. Would you do it"? (CETU/Learning Centre)</i>
Strategic Imperatives Fund	<i>... We also set up a number of years ago, the Strategic Imperatives Fund, which changed the budgeting process and put money aside for strategic priorities, determined by the University Executive what they were (Senior Management).</i>
SUTT Fellowship Scheme	<i>One of our big drivers has been the Suburban University Teaching and Technology program, SUTT, and the SUTT Fellowship Scheme...And those Fellows are change agents, because they come out of their environment and get involved in six months of education and development and using technologies and they develop online learning programs, then go back to their place of work and implement them. So they become central people in their Schools and Faculty so people can come to them. We've got plenty of evidence of the 'ripple effect' ... That's been very successful and was implemented by Colin (CETU/Learning Centre).</i>
Budget alignment	<i>What I mean by budget alignment is three things from a budget perspective, or from a financial management perspective. The first is a conscious decision that there had to be line items within budgets for the support of online education....But the second thing that it means from a budget perspective, is that budgets had to be reasonably costed early on, and that there had to be explicit mechanisms for costing...And I guess the third thing that I mean by budget alignment is that an actual follow-up ....(Senior Management).</i>
Refurbishing lecture rooms	<i>When lecture theatres, lecture rooms were being refurbished, they were refurbished in a way that made it easy to take, you know, your disk, or to show stuff on the web. It made it easier for lecturers to do it and it created an expectation for the students (Senior Management).</i>
Funding only one platform	<i>And because the university made a decision to fund WebCT and not fund other alternatives, so any other alternative has to be funded by the school or faculty. That's a pretty good way of getting a unitary perspective going, and only providing training in WebCT, it's a great way to provide a unitary sort of approach isn't it (CETU/Learning Centre).</i>
Training and support	<i>So we offer training, support, help with design, we look at the course and curriculum, and problem issues and improvements and show staff how to use the technologies and the learning environment, to actually go on and do it for themselves...And that's the way the uptake has been supported. At the beginning of sessions, we have busy training periods (CETU/Learning Centre).</i>
Policies and procedures	<i>The other problem was that the university didn't have that drive until Colin came on board to develop policies and processes (CETU/Learning Centre).</i>
Awards	<i>Colin has probably told you about some of the awards they have given out, and you know, things like that that kind of, in a sense, encourage people (Faculty Representative).</i>
Forums	<i>...There's been various forums, annual get-togethers, show and tell sessions, so that throughout, over 2001 through 2004, Academic Board for instance has run a teaching forum, often with a focus on online stuff. We run many of those. Colin and his group have run, I'm not downplaying them, but they're show and tell days. You know, these are the projects that we've done, these are the good things, and they attract those committed, and they also attract some of those that are interested (Senior Management).</i>
Management directives	<i>And so the cry that you've probably heard in every faculty in every university is "I want your course on the web by the start of next year". Or Industry Uni says, all of our courses will be in I think it was Topclass at the time, by 2000. And this university said "all courses will have a WebCT presence by 2000" or whatever it was (CEU).</i>

Following appointment to the PVC portfolio, Colin and senior management put in place a number of financial controls and incentives that encouraged adoption among the faculties. One of the significant early initiatives started by Colin was the creation of a small working group among the senior management made up of Keith, David and Silas to address how the university could fast-track its adoption of new technologies. This group put together a proposal for a range of different initiatives at a budgeted cost of \$9.5 million, and was approved by the Vice-Chancellor's Advisory Committee in January 2001.

...So we put all this thing together in this package which really was a huge number of things. There were ideas in peer mentoring, ideas in staff development. The one specific thing was the issue of how do you enhance the E-Learning stuff. And the overall document, a total of \$9 million dollars...But that it came out of clearly we needed to do something, but basically through this group, we identified strategies, they were written in, and we got the funding to do it (Senior Management).

A range of initiatives came out of this Strategic Imperatives Fund. One of the most talked about aspects among respondents, was the SUTT Fellowship Scheme. This program effectively paid for six months of time release for academics from the faculties to be trained in pedagogy and educational technology, and released back to the faculties as change agents. This program thus created a new complementary peer pressure to conform to the university's decision at a faculty level. By the year 2005, some 75 faculty staff had completed the SUTT Fellowship Scheme (Senior Management Document E).

In addition to the Imperatives Fund, there were a range of other financial strategies put in place. The university applied much stricter controls around the allocation of funds to various projects and faculties through a range of budget alignment protocols. One item coming out of this spending was an attempt to refurbish the lecture theatres and classrooms, to enable access to the learning management system within classes at a lecturer level. There was even a suggestion that the university sought to encourage student pressures on faculty academics through their design of student learning spaces. Finally in this area, training and support was provided for only one learning management system by CETU, WebCT, limiting the incentive and capacity of faculties, particularly those with limited funds, to experiment with and adopt alternative platforms.

In addition to these more directly funded strategies, there was a range of other normative mechanisms that were also put in place by the management of Suburban University. A range of policies and procedures was developed by Colin in the area of teaching and learning in the university, given the historic lack of management attention given to this area. New teaching and learning goals were developed that sought to reposition Suburban University at the leading edge of

online learning. For example, the following strategic goal was found in the university's teaching and learning plan:

Lead the implementation of a new learning management system that positions Suburban University at the forefront of online learning opportunities (Senior Management Document C).

A range of forums were also organised to showcase the benefits and application of online learning, particularly around the adoption of WebCT. Finally, university awards were given out to encourage people in the use and value of educational technologies.

The collective hope of this 'scheme' was that it would position Suburban University to lead, rather than be left behind, in their teaching enterprise in the future. Being a leader would increase the university's external legitimacy before key agents of the state and prospective students.

The above scheme, although requiring considerable resources, will be a strong investment in ensuring Suburban University becomes a leader in effective, appropriate and imaginative use of IT in teaching and learning. The scheme would give us a very high profile with AUQA and DETYA and could be a big selling point for prospective students (Senior Management Document A).

One of the notable comments made by one respondent was the use of a management directive to compel staff to use WebCT in their courses. The use of such a management directive, whilst not confirmed in interviews with senior management, was supported in internal documents. The following 'standard' was provided by Alfred the VC in the year 2000 and, according to the quote in Figure 12, may not have been an uncommon strategy among other Australian universities at that time.

Provide and support Educational Technology, particularly the infrastructure and facilities necessary for the development and effective use of educational technology in subjects under Faculty Control (Alfred (2000), quoted in CETU Paper 1).

There were also a range of challenges identified by staff involved in adopting WebCT in faculties. Whilst there was some mention of the technical challenge associated with implementing a complex technology on the university servers, the overwhelming majority of concerns related to staff acceptance.

One of the major problems of technology is not the technology but the staff. The real challenge was, how do you actually, particularly in a fairly traditional, conservative, research-based university, how do you make people realise that actually online learning does have something to offer (Senior Management).

One of the primary concerns that faculty staff expressed, was a fear that these new technologies would increase their workload.

Like the academics, it's a time thing with academics, well not just that, but often it is a time thing. And they're scared of committing to more time sort of thing (Faculty Representative).



Design of a new course using the WebCT requires significant inputs of time and effort to create and maintain the course (e.g. student and course management, tutorial discussion boards, and assessments). In general, the use of WebCT requires more labour (in people and/or hours) than its traditional counterpart, at least initially as the learning curve is rather steep. Currently no provisions are in place to relieve teachers of other time commitments when preparing online courses (Faculty Paper).

There were also a range of other concerns also raised by staff, including concerns about the technology's ease-of-use, and the way it was perceived to dictate a particular pedagogical approach to teachers.

Some problems impeding the use of WebCT include a general lack of technical assistance in the School (and Faculty); teachers are expected to manage the online technology by themselves (Faculty Paper).

I think people should be able to develop in the ways that they want to use the tool, rather than the tool dictating what they can do (CETU/Learning Centre).

Staff expressed their concern about the value of educational technologies in general, and the platform decisions in particular, in several different ways, indicated in Figure 13. Two of the most popular forms of resistance were public scepticism and observing the minimum required compliance. Many CEU staff observed that there were significant debates on campus concerning the merit of learning management systems, with appeals from many academics to produce technical supporting evidence that these technologies were beneficial educationally to students. Other staff adopted only so far as they were compelled to. This strategy involved loading a limited number of papers or handouts onto the WebCT course so that they could claim that WebCT was being adopted, but they avoided using this platform in educationally substantive ways within their courses.

**Figure 13: Staff Resistance at Suburban University**

Tactic	Supporting Quote
Public scepticism	<i>There were the sceptics who were saying, we had it within the campus, Susan and I would go to present to schools and there would be academic staff who would be asking a lot, in a fairly hostile way “Prove to us that online education works. Where is the research? Show us that this actually works. Show us how it can work. What are the benefits?” (CETU/Learning Centre).</i>
Observing the minimum required compliance	<i>Another faculty which will remain nameless, and a school within that faculty has been told that they’ve really got to get all their courses into WebCT. Now this is like 5 years on after it’s been put up, and they’re saying how, why, you know. ... Of course, they haven’t got anything much to put up. And you say, well, what have you got? And their course materials consist of 25 overheads and a couple of handouts and them. And they can’t put themselves into WebCT. And so they put up a few pathetic bits of paper and they’ve got a WebCT course. But nothing ever, they don’t actually teach in there. It’s just like a pigeon hole (CEU).</i>
High profile academic resistance	<i>I know there is a bit of resistance, people talk to me about resistance to it because they know that I don’t use it and I’m fairly prominent among the contacts among the early adopters of educational technology who don’t necessarily like it (CEU).</i>
Sustained challenges through various legitimate university committees	<i>So we just kept hammering away and we just kept asking questions at committees saying “why doesn’t the university support this?” And “what’s wrong with this?” And there was nothing wrong with it. We’ve gone to WebCT. “Well, there’s no financial argument because it’s free.” “Oh, it’s technically too, well, you know, it’s very simple.” “It’s a database and we’ve already got the servers up”, it’s just, all we’ve got to know at this stage... And this just went on and on and finally at the end of last year, the head tec guy, the IT techies from up there came down and said “Well alright, I’ve been instructed to talk to you gentlemen. We’re going to put it up”. So success (CEU).</i>
Appealing to sympathetic powerful others	<i>And then last year, I got sick of this again, so I went to the Academic Board this time. I bypassed the PVC and went to the Academic Board, and went to a professor in [name deleted] who is on Academic Board and said “Listen, I’m going to the Academic Board about Suburban Online. I want to show it to you” because he didn’t know about it. I showed it to him and he sort of took it up and that Academic Board, Academic Services committee to investigate it. But that seems to have rung a bit of a bell somewhere. I don’t know what happened. But anyway, we’ve managed to get it up on the CETU servers (CEU).</i>

There is evidence of more protracted resistance against particular management decisions made around the selection of WebCT however. Some high profile early adopters provided a form of encouragement and thought leadership to other staff who seemed to be troubled by the university’s decision. Some of these same staff also resisted the particular selection of WebCT as the university’s learning management system. Instead, they advocated the adoption of an alternative platform Suburban Online, a custom learning package developed at Suburban University in which Suburban University had a proprietary interest. These staff resisted further through formal university committees, sometimes with the support of sympathetic powerful others, resulting in the decision to finally load this program on the central CETU servers.

Faculty staff were not the only group to employ a range of political tactics to advance their cause. Various members of the senior management of Suburban University also resorted to a host of

different measures to ‘fast-track’ the adoption of educational technology in that institution. Figure 14 indicates a range of examples of different political tactics used by different members of the management.

During the restructuring of the university (previously discussed), staff in the Central Education Unit were retrenched in order to not only refocus the institution’s resources on adopting educational technology, but also to remove “difficult” individuals in this unit.

I think the factors that brought about the closure had very little to do with the actual performance of the centre. I think there were two main causes, and one of them was that the director of the centre was a fairly abrasive personality, and she was, she’d challenge the Vice Chancellor and other members of the Executive frequently in public. So you know because she wasn’t on the well, a follower of the Executive. And at the same time the Vice Chancellor was devolving as many central functions as possible to the faculties. So I think those two things came together and the Vice Chancellor thought “you know here’s the chance to both get rid of this funding cost to the central budget, and at the same time get this difficult person out of my life” (CEU).

The minutes of critical meetings that reviewed the Central Education Unit were re-written by the chair of that committee, who finally succeeded in pushing through his agenda to restructure this area of the university. In addition to more general public responses to the sceptics, members of the senior management “stonewalled” resistant staff, censored competing perspectives, “stamped on” competing programs, inflated the success claims of their own program, and hid failures in relation to their own adoption decisions. These last responses may not necessarily be unique to this particular technology however. These tactics are illustrated with more detail in Figure 14.

Figure 15 summarises the chronology of broad changes at Suburban University, and attempts to group them according to relevant templates for organising. It is quite clear from Figure 15 that the shift from “unsupported academic experimentation” to “catching up” was triggered as a result of the VC’s participation in the International Consortium network, when he realised that Suburban University was ‘falling behind’ its peers. After employing a number of different institutional change mechanisms, Suburban University finally ‘caught up’ with its peer universities, evidencing significant change in a relatively short period of time.

**Figure 14: Management’s Response to Staff Resistance at Suburban University**

Tactic	Supporting Quote
Re-writing meeting minutes	<i>And he would say “I will not be ruled by the tyranny of the majority”, and would re-write the minutes of the meeting, to make the recommendation. And he did it several times and in the end they gave up (CEU).</i>
Retrenching staff	<i>I was talking to people in the Central Education Unit. Of course they were very unhappy because they were being disbanded. Their jobs were being made redundant. I couldn’t understand why this needed to happen myself. I really didn’t understand that. But there were other politics at play that I don’t know, I know nothing about (CETU/Learning Centre).</i>
Public response to the sceptics	<i>And in fact, I actually wrote a document which, with Mary, on the universities of the future dealing with that sort of issue. And you can have a copy of that. It wasn’t published, it was just delivered to the university community (Senior Management).</i>
Stonewalling resistant staff	<i>We went to the Pro Vice Chancellor about that. Andrew asked for a meeting with the Pro Vice Chancellor about Suburban Online and when we turned up, the head of, Susan, the head of CETU and somebody else were there, even though we didn’t know that they were going to be there, we’d asked for the meeting. They’d been invited without us being told. We sort of went through what we wanted which was that we would like Suburban Online put on the central university servers. In the middle of the meeting, Susan suddenly turned to me and said ‘Is Suburban Online synchronous?’ And I said ‘No’. It was quite clear that she had never even looked at it. Never even looked at, knew nothing about it, but was quite happy to pontificate that WebCT could do everything that Suburban Online could do to the PVC. Well the PVC said that he would go away and think about it, and of course we never got a reply. And so I emailed him again. No reply, no reply. So just stonewalling effectively, at that level. And this has gone on for a number of years now (CEU).</i>
Censoring competing perspectives	<i>Andrew and I have tried, CETU ran a series of seminars, lunch time seminars on what’s going on, and the closest that we have ever come, is the Director of the [name deleted] program let us in on what she was doing, but she was clearly told not to mention Suburban Online. So she ran the whole seminar on what they were doing without mentioning the fact that they weren’t using WebCT (CEU).</i>
Squashing competing platforms	<i>I mean I do know for example, there was a very successful program...using the program Suburban Online, but I also know there are a whole lot of politics around that and for some reason, when the university decided to go with WebCT, which I think was actually decided on the basis of a very flimsy thing at the time, but because it was decided it was all gone with, Suburban Online has really been, sort of stamped on, because they don’t want two competing programs up and running (Faculty Representative).</i>
Inflating claims of success	<i>It’s very hard to tell that, very hard to tell. Because from the very early days, they kept talking about you know “We’ve got 10,000 seats, 12,000 seats, 15, 000 seats”, and it’s very hard to correlate that with what you see happening around you, which is very little happening around you... And I know that every time you went to a training program, you got enrolled and you were a seat. I’m probably a user, because I have access, but I don’t actively use it (CEU).</i>
Hiding failures	<i>Yeah, it’s a political process. There’s an issue about not being wrong. You know, it’s like that going with the IBM stuff. If you say something’s good, then you can’t say it’s bad later. So you’re really stuck with it. So I think the challenge now is to get, you know, if you’ve got that infrastructure...It’s like this, once you’ve got this pathways and roads set up, we’re not going to be able to change those in the university, so how do we set up the bollards and the crossings so that few people get killed. You know, do as little damage as possible (CEU).</i>

**Figure 15: Summary of Key Changes at Suburban University: 1990-2005**

Year	Key Changes Observed	Template for Organising
1990		Unsupported Academic Experimentation
1991		
1992		
1993		
1994		
1995		
1996		'Catching Up'
1997	VC invited to participate in the International Consortium - recognition that Suburban Uni was 'falling behind'	
1998	Former Central Education Unit (CEU) 'disestablished'	
1999	Susan appointed to head the newly created Central Education Technology Unit to 'fast-track' technology adoption	
2000	Examination and adoption of WebCT; Colin appointed to newly created PVC Education portfolio	
2001	Colin initiated \$9M education & technology program; Lisa appointed to newly created Learning and Teaching Unit	'Caught Up'
2002		
2003	Various strategies and tactics employed in support and opposition to adoption	
2004		
2005	"We do as much as anyone" (Colin); adoption of new WebCT update (Vista)	

The next section of this chapter will identify various external and internal sources of influence affecting these changes at Suburban University, before a discussion of the impacts of these changes on a range of organisational variables.

## Summary of External and Internal Sources of Influence

It has already been argued in this chapter that Suburban University based its decision to adopt online learning in general, and WebCT in particular, on the prior decisions of other partner universities, particularly those in International Consortium. In addition to this particular external source, there was also a range of other direct and diffuse influences acting upon and within Suburban University, many of which were noted in passing throughout this chapter.

## MAJOR EXTERNAL INFLUENCES

An indicative range of various external influences acting upon Suburban University are illustrated in Figure 16. Some respondents noted that the online learning literature consulted by some academics was given to extreme views about the future of higher education which did not fairly account for the nature of university education in a balanced way. Other academics also noted the way that this literature could be given to rather enthusiastic assertions, such as claims for educational and cost effectiveness, already discussed in this chapter. There is also indication in Figure 16 that the media picked up much of this same enthusiasm for new technology changing the face of higher education. Together these external influences created a pressure to “do something new”.

I think there was a pressure to do something new, and the educational technology stuff was new (CEU).

The online learning literature articulated the need for this new technology within the context of broader quality and resource concerns being debated at that time' discussed earlier in chapter one.

Yeah, I think there was a broad trend in the literature at the time that online learning, or not online learning, flexible learning was going to be the new wave of the future. And it reflected a number of quality as well as resource concerns. The quality concerns were about creating a student centred environment. There was feeling that the technology could create that. Whereas the current model, especially in traditional universities, tends to be the passive lecture. But more realistically, it was probably the resource constraints. Lectures were getting bigger, fewer teachers could support that, and it was felt that if you created something online, you could at least provide some opportunity for student reflection and self-directed learning when, you know, it was impossible to do that in a physical space (Faculty Representative).

In Figure 16, a quote was drawn from a key document that Colin co-authored, that was sent around the university community. Colin argued in that paper that there was, among other issues, expectation from government that university staff should be making use of this new technology. This message was expressed through DETYA publications (Department of Education, Training, and Youth Affairs — an agent of the Australian Government), it was anticipated it would be monitored by AUQA (the Australian Universities Quality Agency), and it was predicted it would be enforced through future DETYA budgets. This government intention was also reinforced through the funding of CAUT grants to individual academics to update their courses with web-related teaching technologies.

**Figure 16: Major External Influences at Suburban University**

External Influence	Supporting Quote
Online learning literature	<i>Well, we looked at a lot of the sort of literature and the, some of the arguments about universities all sort of being doomed, because the university as we know it was gone and it was all going to be totally different, trying to reflect on. But the reality is that the only way that a university like would ever survive is if it takes the very advantage of the fact that people are people and they want people (Senior Management).</i>
Media speculation	<i>Certainly we were all aware, through the media, that this was a growing trend. That it was a new thing that people were getting into, and there was a lot of interest in it, as there always is with new technology. That it was bringing about a lot of change in higher education. I mean, you know, there were things in the papers, there were things coming on in the news within the tertiary education sector, and certainly there was a lot of speculation about the impact that this would have in the future and whether or not online universities would survive (CETU/Learning Centre).</i>
Australian Commonwealth Government rhetoric	<i>Government certainly has an expectation that we will embrace ET [educational technology] in our teaching. In the recent DETYA education and action plan "Learning for the Knowledge Society", it is stressed that universities must have staff with "the vision and skills to make use of the new technology, new applications and new approaches to learning" (DETYA 2000). Thus part of our preparation for AUQA is to ensure that we do have strategies in place for effective use of ET. If we can't produce these strategies, we stand to lose a significant proportion of the "Teaching Quantum" that will undoubtedly soon be factored into DETYA budgets (Senior Management Document A)</i>
Australian Commonwealth Government grants	<i>And so everyone then started applying for buckets of Canberra money to sort of web-enable their courses. And that's when, and we put in proposals for this stuff to Canberra at the time (CEU).</i>
Software vendor marketing activities	<i>We get inundated with vendors wanting to show us their stuff. And they go and sort of try and needle their way in through other places in the university, other people, and they'll send to our chief architect, to the VC, to Colin, to Susan, to me (CETU/Learning Centre).</i>
Industry consultants	<i>During a visit to Australia, the Vice President of Educause, Richard Katz, a world leader on the impacts of technology on universities and editor of the influential book "Dancing with the Devil: Information technology and the new competition in higher education", kindly offered to also respond to the manuscript (Senior Management Document B).</i>
Other universities	<i>But then the institution, just when Alfred was coming to the end of his years said, "Gee, we're about the only university we know of that doesn't have this web presence". So there was an unseemly rush to first of all get a web presence that was sort of a marketing tool. And we went through some very ugly periods of Suburban University websites, which people didn't really understand what they were for (CEU).</i>
Domestic student expectations	<i>And students were beginning to say things I mean. Students still say things to me. I mean my course, I actually have a course in [WebCT] Vista, because I was one of the first ones to go into it. And all the students have said "Why doesn't everyone use this?" They really wanted that. It was postgraduate students I'm talking about. They make it quite explicit their needs, which are to have this flexibility through online learning (Faculty Representative).</i>
Emerging digital technologies	<i>So I think those two things came together, that the digital technology itself made a lot more technology accessible to students and teachers, and you know, and if it's there, you use it type of problem. And then secondly, the internet in particular, was a technology that linked people quite seamlessly, and so the natural reaction by I guess a small group of teachers initially was, well, here's another bit of technology, another tool, it looks to be cheap and free, I'll have a go at it. (CEU).</i>

Other staff in the university also picked up this same message from the Australian Government, who themselves appear to have been concerned about falling behind other countries.

Researcher

And just finally, are you aware of any other, any government influence or encouragement to go down that path? Or was it a case of a university initiative to walk down that path?

CEU

Well there was certainly a feeling from government that this would be a cost effective way of dealing with higher education, and I couldn't point you at this time to specific documents and other things, but certainly there was encouragement from government. It was the feeling that you know, we'd be able to deliver higher education much more cheaply, which of course if you knew anything about it you wouldn't believe you know....and that we probably could get into overseas markets and more educational technology, I think probably more of a threat, well I don't know that the government saw it that way, that if we didn't do it, overseas universities might take our students as well.

Whilst one senior manager did not agree with the assertion that the decline in Government funding was a factor in decision making at an executive level in the university, he did acknowledge that these economic concerns may have raised staff suspicions.

And so, I think the answer is no. I don't think that was an impact. I don't think, I can't think of any, no and certainly the intent of, I think there was a suspicion when I was starting to talk about e-learning among staff that part of the reason I was doing it, was because that was a way you could cut money. But everyone knows that ain't a reality anyway. But I certainly didn't think that, and I wasn't putting that view, from an executive view point (Senior Management).

When pushed to identify the source of unsupported claims that were taken up in the higher education sector, such as the debated issue of improved educational and cost effectiveness, another senior manager argued that there were several "proponents of IT in education".

Researcher:

You mentioned a few times this idea that there were certain claims put out which failed to be realised in practice. Were those claims coming from particular parties in general?

Senior Management:

Yes, they were coming from enthusiastic proponents of IT in education, from the computer people themselves, from the IT people themselves, who always oversold their product and always showed cost benefits to the institutions which from my experience, have never been borne out.

One of these IT proponent groups were IT vendors, who "inundated" the university at several different levels (Figure 16). The influence of these parties has already been briefly touched on throughout this chapter, particularly in so far as they were accused of "marketing hype" by other respondents. Further evidence of their subversive influence was picked up by one faculty representative, who noted that the decision to adopt WebCT was defended on the grounds that Suburban University would have a closer working relationship with the programmers.



The arguments that I think they used were that they tested both, so it wasn't really academic decisions at all, but technical decisions if you want to roll something out throughout the whole university. Their other argument was that they could, unlike with Blackboard, with WebCT they could actually work with the programmers, or at least have a relationship with the programmers so that in future installments of WebCT, there was this continuous feedback system which would mean that WebCT would better serve Suburban University's purposes, which you know, sounded perfectly sensible (Faculty Representative).

There was also evidence of external pressure, often exerted more subtly, in the form of expert advice from industry consultants or "experts". One industry consultant, highlighted in Figure 16, was a particularly hawkish advocate of online learning in higher education across the world. Katz and Associates (1999) essentially argued that new technologies had altered the destiny of the higher education industry, and that university leaders must decide how they will respond. At several points throughout their text, the authors suggested that the traditional market for higher education was under threat from private competitors, and that traditional universities might miss out if they did not act quickly, consistent with prior discussed claims in the broader online learning literature. For example:

Inaction is making it possible, for example, for a variety of new and traditional educators to compete for students' time and allegiance in areas of high academic demand. The possible loss, to new competitors, of enrolments in areas like business or psychology will place new pressures on institutions with comprehensive curricula. In effect, new competition, enabled by information technology, will "cherry pick" those offerings that subsidise much of the academy (Katz, 1999: 35-36).

Although these arguments were debunked the following year by several Australian researchers (Cunningham et al., 2000), they may have helped to create a fear of 'falling behind' among Katz' readers. Given Suburban University's identity as an "absolute leader" and "muscle player", along with their perception that they had fallen behind their peers about the same time as the release of this book, Katz' views may have influenced Suburban University's attitude toward online learning, or at least helped to strengthen their resolve to adopt a new learning management system.

Whilst the influence of other partner universities has been discussed throughout this chapter already, there was also evidence of other indirect influence occurring on at least two different levels. In addition to the executive decisions of a number of other universities (such as the adoption of the web in the CEU quote in Figure 16), there was an indirect pressure emanating out from some coursework graduate programs through their MBA graduates.

So I think that that is the final thing, it's the expectation of people, MBA people of course, mostly around the world, and certainly at Harvard, who have been out in the private sector for three to five years. They come back in, they simply expect these things, whether they are off campus or on campus, it doesn't matter (Senior Management).

Many respondents at Suburban University observed pressure from different student types to adopt learning management systems at both an individual and university level. Quotes supporting pressure from domestic postgraduate students in particular are indicated in Figure 16. It should be noted that these pressures were not necessarily complimentary at the student level however. For example, one of the reasons cited for Alfred avoiding 'distance education' was a belief that international students wanted to study on campus. These student pressures were not felt until students had actually experienced a learning management system in a prior subject at the university.

Finally, the emergence of new digital technologies made many innovations accessible to students and teachers alike. The development of the internet at that same time further facilitated experimentation with new digital technologies in university courses.

## **MAJOR INTERNAL INFLUENCES**

There were also a range of internal influences that appeared not to be insignificant in affecting the decisions made at Suburban University. Many of these influences were described in the previous narrative, and are summarised in Figure 17.

Respondents at the university described their institution in four major ways. These included observations about the relative conservatism of the institution, the fact that it was a campus-based university instead of a distance education or regional university, and that it was a member of the Australian University Consortium. As an ambitious research university, staff noted that teaching was not as highly valued as research, as it was claimed Alfred believed research performance was most important in establishing a national institutional reputation.

**Figure 17: Major Internal Influences at Suburban University**

<p>Institutional identity:</p> <ul style="list-style-type: none"><li>• A conservative university with technology-based origins</li><li>• A large campus-based institution located in the suburbs of a major Australian city</li><li>• A research university and member of the Australian University Consortium</li><li>• Strong ambitions to acquire and maintain a superior institutional reputation in the national higher education domain</li></ul> <p>Institutional history</p> <ul style="list-style-type: none"><li>• Past institutional behaviour shapes the internal conditions influencing later round behaviour</li></ul> <p>Key actors:</p> <ul style="list-style-type: none"><li>• Independent academics who were interested in teaching and new technologies</li><li>• A highly ambitious and powerful VC and senior management</li><li>• Former members of the ‘disestablished’ Central Education Unit</li><li>• A new external appointment as Director of the newly established Central Educational Technology Unit who lacked formal and substantive educational expertise</li></ul>
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There were at least four major sets of actors who played significant roles in the adoption of learning management systems at Suburban University. Initial adoption arose out of experimentation at a local academic level. University-wide adoption did not occur until the VC and senior management became aware of the need to ‘catch up’, resulting in several restructuring and decision making initiatives. All of these activities then set up the conditions for later round institutional behaviour, entitled institutional history.

Following the VC’s decision to fast-track the adoption of a learning management system, Susan was appointed to a newly established educational technology unit, following the ‘disestablishment’ of the former Central Education Unit. Unlike her predecessors in the Central Education Unit, Susan lacked both formal and substantive education expertise, according to several respondents interviewed at the university.

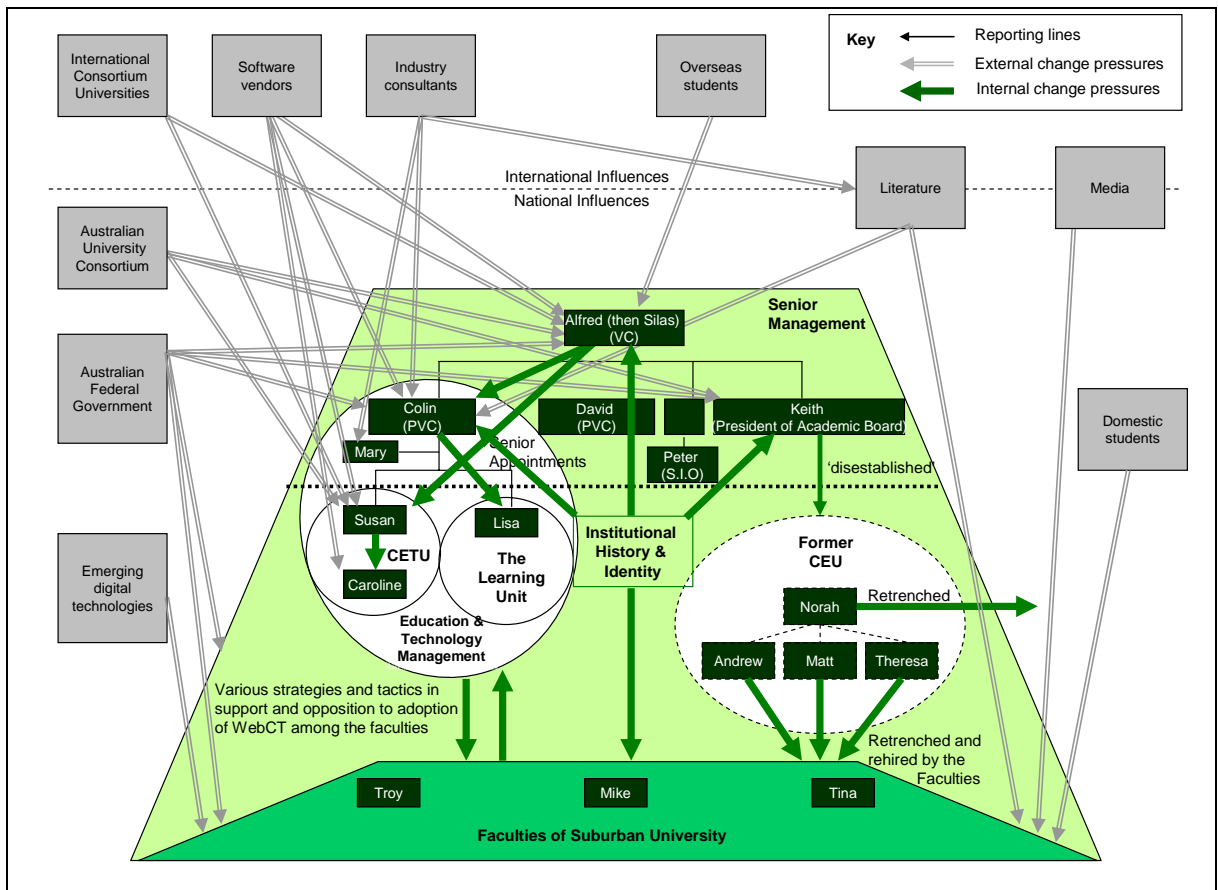
...They set up the Central Education Technology Unit as very much a centre focusing on technology and flexible learning. And the person that they had put in charge of it Susan, didn't come from a background of educational, a background of education (CEU).

The previously described internal and external factors, along with the key internal actors that both influenced and were influenced by these factors, are illustrated in Figure 18. This figure summarises the different internal and external factors found at Suburban University. The coloured trapezoid shape represents Suburban University, broken down into its major relevant internal units: Senior Management, CETU, The Learning Unit, Former CEU, and faculties of Suburban University.

There are several important observations that can be made through a more detailed study of Figure 18. The first is that there were a significant number of different external factors influencing various parts of Suburban University. Many of these influences, such as the influence of the online learning literature, various software vendors, industry consultants, media and Australian Government, were not acknowledged by some key respondents interviewed, including Susan. Alfred, Keith, Susan, and Colin, after his position was created, were subject to the greatest number of these external influences.

Second, there were also a range of internal forces for change, identified in Figure 18. The institutional history and identity of Suburban University has already been argued to have shaped Alfred's decision to position the university among his esteemed peers as a research university, given its history as a technological institution prior to the Dawkins reforms. Suburban University's membership of the Australian University Consortium, and especially the International Consortium, both enabled through this history and identity as a research institution, also influenced Alfred's decision to 'catch up' when he perceived that Suburban University had fallen behind its peers, along with Keith's rationale to 'disestablish' the former CEU. Colin was also likely to have been influenced by Suburban University's history and identity, given the length of his service within the faculties and his support for the vision of technology enabling the on campus education experience. Finally, general staff were also shaped by these same forces, particularly in the way that staff who spent time on teaching-related activities were treated by other faculty staff who valued research. Other internal forces and consequences are also shown in Figure 12, and have been explained in further detail earlier in this chapter.

**Figure 18: Internal and External Forces of Change at Suburban University**



The final important observation that can be made about Figure 18 is the concentration of these collective internal and external forces for change around Susan’s examination and adoption decision. Susan was employed under the leadership of Alfred, to ‘fast-track’ the university’s adoption of educational technologies. This decision itself was the subject of many different influences, discussed earlier in this chapter, and noted in Figure 18. Susan’s employment was enacted out of this context, leading to her eventual employment in the newly created CETU. Whilst acting in this position, she was also subject to a range of direct exogenous influences, including the Australian University Consortium, International Consortium, and software vendors, particularly the proprietors of WebCT. Given the concentration of these different internal and external forces for change around Susan’s position, and her lack of familiarity with basic educational theory frameworks, it is small wonder that Susan felt pressure to put aside standard university review processes, with the approval of the executive, in favour of mimicking the decisions of the International Consortium universities. Together, this complex mix of forces and factors appears to have contributed to this particular examination and adoption of this new learning management system, leading to a range of

organisational impacts at Suburban University, described in detail in the next and final section of this chapter.

## **Impact of Changes at Suburban University**

As a result of the processes and changes that took place at Suburban University, a number of consequences across a range of different measures were identified by respondents. These included educational and resource implications, as well as broader comments relating to the legitimacy, pace and stability of changes observed within the university.

### **ORGANISATIONAL RESOURCES**

The impact of these changes on Suburban University's organisational resources were noted across different criteria by respondents. All staff interviewed claimed that despite arguments on campus to the contrary, adopting WebCT cost a lot of money, particularly when the indirect costs of ownership were added to the cost of purchasing and maintaining the software, such as staff training, lost research productivity and new staff employment in the newly created CETU. The following quote from a senior manager is indicative of these claims.

There's a lot of debate on the campus, either the cost effectiveness, the time effectiveness of much of this. There was a time we went through when people said when you went online you saved time and money. It's a complete myth. You don't. It costs you. It costs more, both in time and money. And so there was this realisation that this is actually quite an expensive operation, so how do you actually maximise its value, vis-à-vis reducing the size of your tutorials, for example. That debate is beginning to happen inside the university now. There are those who say you can compensate for large classes by using more online, but there are those who also say, and I'm on their side, saying 'online is not cheap'. The technology is expensive, maintaining it is expensive, and the staff time involved developing materials is actually very expensive. It's not easy to do. So there's not cost saving. So the argument for using has to be other than cost. It has to be improving the quality of education (Senior Management).

Given the high financial costs associated with adoption of this technology, one senior manager claimed that these costs needed to be justified by an improvement in the quality of education. The next section investigates the extent to which this technology has actually delivered educational benefits to the university's learning and teaching.

## LEARNING AND TEACHING

The post-adoption assessment of the educational outcomes of WebCT were both mixed and contested. Some respondents argued for example, that WebCT enabled students to take advantage of active visual displays and streaming videos, which made learning in some content areas, such as science and art, easier to grasp. Other respondents noted that access to course materials and the digital library through the online sites was convenient for students.

The issue of whether or not student learning had improved as a result of adopting these technologies was a debated issue on campus. One academic who made use of moderated online discussion boards in their courses, claimed that learning outcomes improved among their shy students, as they were not dominated by louder students. Written discussions were also argued to be more critical and reflective than typical classroom interaction. This same academic went on to conclude that they were a strong supporter of these new technologies.

So I'm very committed to the online teaching, not because it's new fangled and gimmicky, but because it actually improves the learning outcomes of the course, and sometimes quite dramatically (Faculty Representative).

Other respondents claimed that these learning benefits were difficult to determine, as “there was a lot of hype to actually demonstrate, a lot of pressure to demonstrate progress, success and innovation...”. Even one of the senior managers acknowledged this same difficulty.

Researcher

Can you see it [WebCT] actually having enhanced student value, now that it's had such a large uptake among many students?

Senior Management

Some of it has. I mean a lot of it is rhetoric, and unproven...

This same senior manager argued further that there was “no intrinsic value” in these technologies as they were “just another tool”, similar to the claims of many others in the university. The value of this tool would therefore turn on how it was used by the individual teacher.

There is absolutely no evidence whatsoever that it's a superior form of education. What it can be is no different from using chalk, moving over from a blackboard and chalk to a whiteboard and a pen. There is actually no difference, it's just using a different technology. If it can help us in the development of students and their learning, terrific. If it doesn't, forget it. It is in itself of no intrinsic value.

My view would be one, there's, there'd be different views on the Council, my view would be fairly widely held on the Council. There is no intrinsic value on computer derived education. What there is is saying “Well, it's just another tool we've got. If you can use it in such a way to enhance the student learning process, good. But in and of its own, it's not necessarily of value” (Senior Management).

A related contested issue that also arose was the extent to which the adoption of this learning management system actually improved the quality of teaching on campus. Some respondents claimed that this technology has been good for teaching across the university, because it has forced academics to think more about how they teach in general.

The technology coming in has been a good thing for teaching, because what comes in with technology, and I think this is what CETU's been trying to do, and we've always done it, when you say to someone like CETU, "I want to use WebCT", they won't let you just, well as far as I'm aware, well I certainly don't, you don't sort of say "Well, here's the technology". You say, "Well ok, let's think about what you're trying to do in your course and let's think through the learning issues, and so in a way, it gets people to rethink what they've been doing" (Faculty Representative).

A small number of respondents (3) also noted the way in which many large programs like WebCT and Blackboard were designed according to limiting pedagogical assumptions that failed to facilitate basic educational processes of student learning.

I don't think any of these tools are very good yet, really. While there are big mainstream players in the market, it's pretty much been cornered by some big players, I don't think they're very good tools yet at all... I think the pity is the big players have sort of smothered the market and they all look the same. Whether you've got Blackboard or WebCT or Lotus Learning Space or whatever, there's some minor differences between them, but they really don't, I don't think they've yet really engaged with what the educational processes are online (CEU).

A new integrated learning management system is required to replace the current limited version of WebCT CE. Suburban University requirements for eLearning exceed the capabilities of the current system. The new system must be scalable and able to satisfy the expressed pedagogical, administrative and IT requirements (Senior Management Document C).

Another central problem that various respondents identified with this technology in teaching, when this issue arose, was the way in which some staff failed to reflect on how this technology might be used appropriately within their courses. This complaint reflects the importance of how these technologies were used by individual teachers.

And the students said they were unhappy...about the way staff were using it. So they were basically using it for uploading resources (CETU/Learning Centre).

I mean you can of course you can use the technology inappropriately. So if someone just sort of dumps a course into the online environment, it just isn't going to work, but there're steps in place to kind of avoid that in CETU and in our place, but it might happen in other places (Faculty Representative).

There is also evidence of Suburban University making a number of additional improvements in other areas of their educational enterprise. The next section details some of these changes.



## ORGANISATIONAL LEARNING

One significant positive consequence of Suburban University's experience in adopting this learning management system, as perceived by respondents, was the development of a more critical approach to examining related decisions in the future.

But I think we've learned, maybe it was a process we had to go through, we weren't a lone ranger, everybody went through that process. But we're much more hard-headed now about people actually really defining what they see as the benefits from it (Senior Management).

Following the university's adoption of WebCT, and a student records system prior to that, a number of changes were put in place to ensure that decisions of this nature were approached with a much more "hard-headed" view. Many of these changes were brought in with Peter's employment in the IT area of the university.

And to be fair to the IT people in the university now, we are now much more tough-minded for working out our costs, right at the beginning. In the early days, we could underestimate costs by 100 percent or 200 percent, and now we don't. We're much more wary now about claiming cost benefits. If you're claiming cost benefits, we demand that somebody prove where it's going to be. It shows how the budget can be cut at the end of the day, that really brings it home.

I think we are far more hard-headed now. You have to make a hard business case now. And IT expenditure comes up to the university executive for approval now. And there are people like me that are very hard-headed about it. We'll send it back and say "prove it". It doesn't mean we still don't waste money, we do, but I think we're far more hard-headed now (Senior Management).

Suburban University has since adopted an update from WebCT called Vista. In stark contrast to staff descriptions of the prior examination of the earlier Campus Edition of WebCT, many respondents claimed that the university's approach could not be faulted.

I do think on the other hand, since it has been adopted, they've been very careful about monitoring it, and evaluating it, and they, as you probably know, we're about to go to Vista. Now that's been a very rigorous process. I can't fault them there (Faculty Representative).

When quizzed about the extent to which this new examination process differed from the previous processes described earlier in this chapter, Caroline gave this detailed description.

What are our requirements? Is there any product that we are aware of that is significantly better than what Vista can offer? If not, let's try and evaluate Vista. So we started on evaluating Vista. And we did a paper-based evaluation. We evaluated version 2 based on what we read, its feature list, and we actually had a copy of the software, but we weren't using it, we were just investigating it. So again we got stakeholder involvement, once we got our results. We asked WebCT to respond to the same list of requirements. We compiled their responses with what we had discovered. We scored all of this. We came up with a mapping of the closeness of fit. We identified areas where there were gaps. We classified those areas as to whether we could live without them. If they were essential, we had to have them, whether there were other tools on the markets that could fill the gap. Again, all of this was reviewed with stakeholders, validated by stakeholders, we asked them to tell us how important the features were that were not being met by Vista and that kind of thing...So we rated things whether they were show stoppers or not. And so we got the approval to proceed with a hands-on evaluation, a preliminary analysis, and we got around about 20 people to work with the product, to

design courses, and to develop courses on it. And we also got some students to trial some of these sorts of preliminary courses. In the mean time, we were doing a lot of work in terms of trying to work out how to fill the gap in terms of the administrative area, and also to install, to design the system that would run Vista, install it, and at the same time evaluating this whole thing. Total cost of ownership, what it would take to run the thing, how happy the staff and students were. We kind of got a lot of evaluation feedback (CETU/Learning Centre).

In addition to these consequences, there were also a range of other impacts on the university.

## **LEGITIMACY OF ADOPTION**

The legitimacy of the original WebCT decision can be observed both indirectly and directly. Figure 13 earlier in this chapter documented a range of ways in which staff at Suburban University resisted the university's decision to pursue this technology. These included public scepticism and observing the minimum required compliance at a general staff level. It is probable that staff pursuing these tactics doubted the merit of this technology being applied on campus, and therefore questioned the legitimacy of these decisions.

Other staff provided direct comments relating to the legitimacy of different aspects of Suburban University's adoption behaviour. One of the common claims made was that the original WebCT program adopted was not the most appropriate technology that could have been used. That is, it was "failing" them. The following acknowledgement was made by someone who worked closely with WebCT.

...We needed to move off [WebCT] Campus Edition fairly quickly, because it was failing us quite frankly... (CETU/Learning Centre)

Other staff also commented on the means by which the university pursued this particular decision. In particular, some staff (7) observed that the university's decision to 'dis-establish' and set up CETU without a general teaching unit was a "mistake".

...I think it was "This is the new wave of thinking about teaching and learning so this is what we are going to do". I think though that in retrospect it was an, it wasn't right to have education, to set up CETU, and to have it replace or supplant the existing... They should have coexisted. They served two different purposes. I think the initial vision for CETU was that it would focus on teaching and learning theory with online applications but it's clearly become an online, a place for online learning, and the theory to support that, as opposed to generic support for learning. So in any university as I think Suburban University' experience has shown, you need both.

In some senses, online learning is not appropriate. Well, it's not suited to some personalities. You know, teaching is a very personality-driven type process. So I think, as a university, it should have, it shouldn't have gone down that narrow path. It should have introduced that as an adjunct, but not supplanted it. And I think the university has rectified that mistake (Faculty Representative).

The fact that at least two senior management documents (Senior Management Documents C and E) confirmed the need to replace WebCT CE with a new update in order to meet the educational needs of the university is further support for these legitimacy claims.

## **PACE OF ADOPTION**

Following Susan's decision to purchase WebCT, she attempted to 'fast-track' adoption among the faculties, discussed earlier in this chapter. Susan claimed faculty adoption since her original decision "has been rapid".

And when we started that in the year 2000, we had pretty well, most people adopt it straight away. There were about 3000 students on the server as soon as we got going. And at the end of last session in 2004, we had over 50,000 student seats, and over 1000 academic staff, teaching staff using it. So, the adoption has been rapid between 2000 and 2004 (CETU/Learning Centre).

Just a few months later when Caroline was interviewed, towards the end of first semester 2005, usage of WebCT was argued to have increased even further.

...We'd have, there are over 64,000 student seats on CE [WebCT Campus Edition] at the moment. And there are over 1,500 staff accounts and there's about 2000 courses, and about any time there are about 750 that are active each academic session (CETU/Learning Centre).

Relative to other universities, Suburban University is now claimed to be one of the largest users of WebCT in the world, an indication that it has indeed moved very quickly in a short space of time.

I mean, certainly we had been one of the first big takers of WebCT, and as I'm sure she told you. And, now we have one of the world's largest number of seats in WebCT (Senior Management).

When questioned about the pattern of adoption across the different faculties, there were competing claims made about the extent of its usage. Whilst it was acknowledged that the "early adopters" were among the first to use this technology, it is not clear just how much of the university actually uses this technology in practice. For example, Susan claimed that almost 100 percent of schools and faculties are now using WebCT.

WebCT is being used in all the faculties; we've got about eighty Schools and we're being used in each of those. It seems to be almost a hundred percent usage in terms of School usage (CETU/Learning Centre).

When this same question was put to Susan's boss Colin, he remarked that although the university was moving at a rapid pace, they were only ten percent of the way there. Colin also appeared to claim that Suburban University is now no longer behind other universities in its usage of educational technology.

I can't believe it but it's been five years in and I'd say we've nudged ten percent of the way. I really do. I just think it would be naïve to think otherwise. So, but, but its moving a pace now. And as I said, I think we do as much as anyone in a way, unless you are someone like Technology-Savvy Uni that has made a deliberate strategy (Senior Management).

It is difficult to determine what this large number of "seats" means in practice in the classroom at Suburban University, given that there are a range of competing interpretations from various staff. Several different staff groups noted that although there were a large number of "seats" on the system, this did not seem to correlate with actual student and staff usage at an educational level.

Um, well when we say large uptake, what do we actually mean when we say it's a large uptake? I'm not sure what people mean by that. There are a number of courses but the minority of courses on campus have their course an online course. Those that are, some of it's minimal stuff that's on there, and you wonder why they put it up there (Senior Management).

...The bottom line is not a lot's happening. You can quote these massive figures like, WebCT company would go to the UK and say Suburban Uni has got 28,000 students using our system. But they haven't. They've got 28,000 student numbers in the database and if you could look at the logs and see how often they got on and what they did when they got there, the most you'd find out is that they went and looked at a page. You don't even know if they read it. Because they're only access logs (CEU).

Presently the use of WebCT is relatively limited to a small group of teachers who typically already innovate with teaching techniques and technologies. In the School..., WebCT is currently used primarily as a supplementary tool to 'normal' classroom-based teaching. The strength of the media has not been adequately addressed and, in the main, WebCT has not been used effectively (Faculty Paper).

Reflecting on the timing and pace of adoption of educational technology at Suburban University, one former CEU staff member claimed that they started later than most other institutions, but then moved very quickly.

...I think they held back much longer than most institutions and then dove [sic] very quickly into WebCT without any consultation and there we are (CEU).

## **STABILITY OF ADOPTION**

The decision of the university to adopt WebCT CE and then WebCT Vista is likely to be one that is not easily changed. That is, the stability of these changes introduced to Suburban University is likely to be high. For example, many respondents noted the great difficulty involved in changing decisions in the university after they have been made.

...We know from a management perspective that once a management decision has been made to support something, it's very difficult for management to pull back on that decision. And there's more good money thrown after bad because of that, than probably anything else (Senior Management).

One of the reasons for this difficulty is the length of time and number of people involved in each change decision. The fact that the university chose to stay with an upgrade of WebCT rather than select a new platform in its second evaluation is perhaps further evidence to support this claim. The stability of this first decision was probably reinforced by adopting a process of “gradual filtration” into the faculties through the SUTT Fellowship Scheme, discussed earlier in this chapter.

And the principle is one of filtration I suppose. So that as a greater critical mass of interested people right across the uni become involved in this, then it will filter out to the rest. And I see this happening with our school, where people see that you know, the kinds of things that can be done. They can get tentatively interested, then I can give them some help in setting up WebCT. So I suppose the process is really one of gradual filtration, because, at least at this university, it's not accomplished by dictate and legislation (Faculty Representative).

One of the potential threats to the future stability of this decision was the recent decision to finally allow alternative online platforms onto CETU central servers.

So they were forced into having to compromise their single solution. And what we've managed to do with this strangely enough, this year finally, is there's been enough demand for the use of this that they had to support it centrally. They've actually put it on the CETU servers and we're about to announce to the rest of the university who have been kept in the dark, that there is this communicative tool now that is free, and if you don't like the discussion group on WebCT, you can use this (CEU).

It is possible that this decision could actually strengthen the stability and legitimacy of the university's original decision however, in so far as placing this much debated program on the central servers actually leads to a visible reduction in staff resistance associated with this very issue, discussed earlier in this chapter.

This chapter has described the process of institutional change around the introduction of new learning management systems at Suburban University. Respondent and document quotes have been used liberally throughout to illustrate the evaluation and adoption of WebCT as the learning management system selected at this university. The events surrounding these decisions, their implementation and ultimate organisational impacts were discussed in some detail, along with other contextual information helpful for understanding the particular dynamics at work within this university. The next chapter of this thesis explores the process of institutional change around the introduction of new learning management systems at Metropolitan University, this study's second case study.

## **CHAPTER FOUR: CASE STUDY TWO – ‘METROPOLITAN UNIVERSITY’**

The previous chapter described the process of institutional change around the introduction of a new learning management system at Suburban University. This chapter introduces Metropolitan University, the evidence used to construct this case, the university’s relative size and scope, structure and key relationships, as well as its institutional history and identity. Following this discussion, the process of institutional change is described in detail, with reference to liberal quotes from respondents and key documents, used throughout to illustrate and ground this case study. This chapter concludes with a discussion of the organisational impact of these changes across a range of different relevant domains.

### **Nature of Case Evidence**

This case study has been compiled on the basis of 13 in-depth interviews and 29 internal and external documents. Following the critical theory research paradigm, discussed in chapter two, this case does not pretend to represent the only “true” account of historical events described at this university. Rather, it is argued that this case study is itself a social construction, formed by the researcher after the collection and analysis of the identified case evidence. The construction of this case however, is argued to be valid, based on the quality of the evidence collected during the research process, and the way in which this evidence was analysed. Further discussion about the quality of these case studies is also found in chapter two.

Figure 19 indicates the major actors described throughout this case. These actors were classified as ‘Senior Management’, ‘Central Services’, ‘Education Research Centre’, ‘LATET’, and ‘Faculty Representative’, following their relative employment status in the university. Respondent quotes are normally denoted by these classifications in order to preserve individual respondent anonymity, except where the narrative of this case requires further detail. In these select instances, an alias name from Figure 19 has been used.

**Figure 19: Metropolitan University ‘Actor’ Profiles<sup>19</sup>**

No	Classification	Actor <sup>20</sup>	Background Information <sup>21</sup>
1	Senior Management	Roger*	Vice-Chancellor prior to Cecil
2		Cecil*	Former Vice-Chancellor
3		Brett*	Current Vice-Chancellor
4		Luke	Deputy Vice-Chancellor Academic and past President of Academic Board
5		Emily	Vice Principal of Central Services
6	Central Services	Stella	Director of Learning and Research Support (LARS), part of Central Services
7		Kurt	Senior manager in Central Services.
8		Nathan	Academic working within LARS
9		Toby*	Foundation Director of the Learning and Multimedia Unit, now part of Central Services
10		Oliver	Current Director of the Learning and Multimedia Unit
11		Ken	Project manager for the LMS implementation
12		Rachel*	Assisted with the central support of IT infrastructure
13	Education	Tim	Member of the Education Research Centre
14	Research Centre	Barbara	Member of the Education Research Centre
15	LATET	Stuart	Chair of the Learning and Teaching with Educational Technologies Committee (LATET)
16		Raymond	Senior faculty academic, and previous Chair of LATET
17	Faculty	Tyrone	Member of one of the faculty multimedia units
18	Representative	Jill	Director of one of the faculty multimedia units

Key: \* Denotes an actor not directly interviewed for this study.

Figure 20 illustrates the various internal and external documents collected and analysed in the construction of this case. Documents are referred to by their classification to assist the interpretation of this material by data source.

<sup>19</sup> The term ‘actor’ was used instead of ‘respondent’ in this case because some people noted played a significant role as actors within Metropolitan University, although they were not interviewed directly as part of this research.

<sup>20</sup> All names noted in this table are alias codes to protect the true identity of the institution and its past and present employees.

<sup>21</sup> Some of these titles and descriptors are alias codes used to protect the identity of the institution and its past and present employees.

**Figure 20: Metropolitan University Document Profiles**

No.	Classification	Author/s	Year <sup>22</sup>	Description of Document	Qty
1	Senior Management Document A	Cecil	1996-2000	'Metropolitan University Initiative', a long-term vision cast for the future of the university.	1
2	Senior Management Document B	Cecil	2001	Full transcript of a public lecture given by the VC	1
3	Senior Management Document C	Cecil	2001-2	Draft Strategic Plan for 2002 circulated for consultation.	1
4	Senior Management Document D	Senior Management	2004	Strategic plan	1
5	Senior Management Document E	Luke	2005	Teaching and learning plan	1
6	Senior Management Documents F-G	Emily	2004	Internal seminar presentation and accompanying paper on the university's future e-learning strategy.	2
7	Senior Management Document H	Senior Management	2004	University news article on the university's decision to adopt and implement Blackboard as the university's learning management system	1
8	Senior Management Document I	Senior Management	1996	Minutes of the Executive Committee Meeting	1
9	Central Services Paper 1	Unknown	2002	Review of academic staff's educational requirements for online teaching and learning systems and tools.	1
10	Central Services Paper 2	Oliver	2004-2005	Progress towards stated implementation goals for the university's learning management system	1
11	LATET Evaluation	Nathan	2002	Formal evaluation of university-funded publications and reports on staff educational technology adoption	1
12	ERU Evaluation	Tim and Barbara	2003	Formal evaluation of various learning management systems on behalf of the university	1
13	ERU Guidelines	Tim and Barbara	2002	Principles to guide teaching and learning adopted by the university	1
14	Faculty Theses 1-2	Faculty representatives	2003-2004	PhD theses completed by faculty representatives on relevant areas for this study.	2
15	Faculty Papers 1-9	Various faculty representatives	1992-2001	Refereed journal article and conference papers on individual academics' experiences with online learning and various learning management systems at Metropolitan University.	9
16	Faculty Member Reflections	Faculty Representative	2000	Personal reflections of a faculty academic on their experience of using online learning technologies such as a learning management system at the university	1
17	University Website	Senior Management	2004-5	Selected information gathered from the university website	1
18	Government Report	Australian Universities Quality Agency	2005-2006	Report of an external university-wide audit	1
19	Newspaper Article	Withheld <sup>23</sup>	2005	Newspaper article on the university's funding	1
					<b>29</b>

<sup>22</sup> The year of publication for some documents has been broadened to reflect either uncertainty around the exact date of publication, or to protect the identity of the university.

<sup>23</sup> Author's name not included to protect the identity of the university.



# **An Introduction to Metropolitan University**

## **SIZE AND SCOPE**

Metropolitan University is a large ‘Sandstone’ university, with a large number of international students. It is among Australia’s older universities, and is located within the suburbs of a major Australian city.

## **STRUCTURE AND KEY RELATIONSHIPS**

The Vice-Chancellor (VC) is the chief executive officer of this university, and is assisted by a team of Deputy Vice-Chancellors (DVCs) and other senior managers, who take responsibility for a range of institutional portfolios. Council directs a number of other important committees, such as the Academic Board (University Website). In common with most universities, the actual research and teaching is conducted at a faculty level. Assisting the faculties in these functions are several central units, with responsibility for various educational and technology portfolios, and are ultimately accountable to the senior management of the university. Within Metropolitan University, many of these central units are now found under the responsibility of Central Services.

Metropolitan University is an active member in the Australian University Consortium. This group consists of an informal network of Vice-Chancellors from several Australian universities, including Suburban University. The Australian University Consortium claims that member universities are recognised as world class research institutions, as well as becoming highly regarded for their teaching and graduate connections.

## **INSTITUTIONAL HISTORY AND IDENTITY**

The history and identity of Metropolitan University were reported by the majority of respondents interviewed as being important factors in university decisions. Respondents at Metropolitan University described their institution as a “conservative”, “research-orientated” university, whilst acknowledging that the value of teaching had shifted over time.

I mean clearly research is at the top of the pecking order for this institution and that ain’t gonna ever change. I think teaching has a higher profile these days to, people take it very, I mean people treat their teaching seriously and are professional about it and so on, but a strong part of this culture here is around research (Education Research Centre).

The Deputy Vice Chancellor Academic acknowledged this same perception of research being seen to be more important than teaching, also claiming that this had shifted in recent times. He argued further that this “perception” problem was also shared by many other Australian University Consortium universities, suggesting in concert with Suburban University, that membership in this vice-chancellor’s network appeared to constitute part of the university’s broader institutional identity.

A real challenge in research universities like Metropolitan University or the other Australian University Consortiums is that, when it comes to promotion, that there is certainly, I think there is a widely shared perception within the university that research is what matters. That’s all very well, we talk about teaching and research, but it’s research which really matters (Senior Management).

Many respondents also commented on the devolved culture of the university, which shaped both the means and limits under which the senior management could bring about university-wide change.

This claim was also supported by other documents (e.g. Government Report).

I think there is only one other university in Australia that is more devolved and decentralised than Metropolitan University and that’s Western University<sup>24</sup>, so we’re famous for that. Autonomy is a word you’ll hear a lot of...The deans are really quite strong and powerful, really probably more so than other universities ...I mean the Dean of [name deleted] at Metropolitan University is a very influential and powerful person, and the Vice Chancellor, no matter who they are, does not get things done by telling people to do them (Central Services).

The other major relevant component of the history and identity of Metropolitan University is in relation to its aspirational agenda. Apart from setting themselves apart from distance education institutions by defining themselves as an “on-campus university” (Senior Management Document C, Faculty Paper 6), respondents consistently reported that Metropolitan University “aims to be...amongst the finest universities in the world”. This identity was attributed to the previous Vice Chancellor Cecil, and was reported at multiple levels throughout the university and in a number of documents (Senior Management Documents A, C, D; Government Report 1).

We define ourselves as very much as wanting a, I guess an international profile. We put quite a lot of emphasis on international standing, but it’s difficult to do (Senior Management).

## **Centrally Supported Academic Experimentation**

Metropolitan University has a long and relatively unusual history of experimentation with new technologies in teaching and learning, going back to the early 1990s. During 1991, the Learning and

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<sup>24</sup> The name of this university was changed to preserve the anonymity of this institution.

Multimedia Unit was set up to assist interested academics experiment with emerging multimedia technology in their teaching.<sup>25</sup>

We had a very strong involvement in innovative multi media developments since '90. Well going back to, going back to '91, because when they could have set up a strategy for innovation in educational technology with a strategy plan that came out of ITS and education, and they set up the first central unit which is called LAMU, Learning And Multimedia Unit, to sort of be a sort of a leader and assist the earlier innovators and so on (Central Services).

..The University established a Learning and Multimedia Unit (LAMU) charged with enabling the effective use of multimedia technology in the educational arena. Those of us with even a modest interest or ability were readily captured (intellectually if not physically) and benefited immensely (Faculty Member Reflections).

It was claimed that “a significant number of academics” wanted assistance in this area, adapting new technologies to meet specific learning and teaching needs, particularly in the physical sciences.

...There were clearly a significant number of academics who wanted this kind of service to be in place, that wanted to do more, wanted to learn, wanted to have the support of people who were a bit more expert than they themselves had time to be in adapting the technology to meet specific teaching and learning needs. At that time, it was very much focused on how you could use digital media, multi media what with, what advantages it could provide you with and so there was a lot being done in physical sciences to make it, make complex simulations and complex animations easier to understand and more visual, more dynamic, and those sorts of things and it grew from there (Central Services).

Toby was the first director of this newly created central unit, until he left for Regional University in 1994 (discussed in greater detail in the next chapter). His role as director of the Learning and Multimedia Unit was to encourage the university to embrace multimedia technologies in its teaching, with the expectation that faculties would in time adopt elements from this unit within their own faculty domains.

He was the first Director of the Learning and Multimedia unit, LAMU. So he, in a sense the university embracing multimedia to use it as teaching, he looked after the group as they were getting that going. And I guess his charter was essentially to have LAMU running as a support there of the staff, and then to encourage faculties to pick up the bat (Faculty Representative).

The extent of this unit's influence was a contested issue on campus. One source claimed that this unit brought about significant cultural change across the university.

LAMU is an important change agent in creating a climate and culture whereby more of the institution's teaching materials are made electronically more accessible whether through local or wide-area networks (Faculty Paper 2).

Another source argued that its influence was limited to impacting upon a select few individuals only.

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<sup>25</sup> Web-based online learning technologies were not available at this early time.

The establishment of the unit itself I don't think had institution-wide impact. I would have thought that, and this is not to in anyway to sort of denigrate the energy that Toby and others put into their leadership of that unit, they undoubtedly developed networks with individuals in certain faculties, but in a way, only the kind of influence that an individual can have. I mean there is a limit to the number of people we can interact with. And I would have thought that in Toby's case, and in other people that were given the job of leading that unit, they established some strong links with certain individuals, but it tended to be I would have thought influence on individuals (LATET).

More pervasive university-wide change in this area did not occur until 1996 with the employment of a new Vice Chancellor.

## **'One of the Best Universities in the World'**

In 1996, Metropolitan University employed a new Vice Chancellor from another Australian University (Senior Management Document I) who introduced a new university vision. He was held widely by the majority of respondents to have brought about significant university-wide change at Metropolitan University. Cecil initiated a number of reforms, the broadest and most enduring of which involved a fundamental shift in the way that Metropolitan University thought about its own identity relative to other universities. The following quote from a senior manager is illustrative of Cecil's impact, and is supported by other internal documents (Senior Management Document A, C and D).

Oh he was an extraordinarily significant person because Metropolitan University was in very, very good shape when he took it over from Roger, but I guess Roger left a very, very strong university and Cecil would be the first to recognise that. But I guess in a word, he wanted us, the shift was that we wanted to go from wanting to say that we were the best university in Australia, to wanting to say we're one of the best universities in the world, that's what Cecil basically said, that was the challenge of his Metropolitan University Initiative, as he put it. And he just got people to sort of I guess, lift their gaze, lift their ambitions in all sorts of ways (Senior Management).

One of the key means by which Cecil was able to bring about this shift in thinking was through benchmarking the processes, systems and performance of the university with other leading universities that Metropolitan University aspired to emulate.

Benchmarking is a big thing for the university, as depicting yourself as being one of the leading universities in the world, you know as the sort of rhetoric, and that this university has the high moral ground that we aim to pitch ourselves, not against the other universities in Australia, but against the world. We don't want to just say 'oh we're the best of the riff-raff around here, but we try and pitch ourselves on a world scale and become one of the best'. So we sort of aim up. That was Cecil's vision (Central Services).

Strategy 4.2: Systematically monitoring standards and quality against the best that is thought and known and practised in the world, and institutionalising international benchmarks, and

institutionalising international ‘best practice’ as the University’s quality norm (Senior Management Document C).

The Vice Chancellor’s rationale for benchmarking and emulating other leading international universities was to re-position the university and improve its international competitiveness.

Already, every well-managed university around the world is actively positioning itself to operate in an increasingly competitive global environment...For universities operating in such an environment, international visibility, recognition and status are likely to be major determinants of long-term success. Responding to such developments, Metropolitan University has made internationalisation an overriding imperative in recent years. The University is seeking to benchmark itself primarily against first rank international universities rather than domestic competitors (Senior Management Document C).

Shortly after beginning at Metropolitan University and introducing his benchmarking initiatives, Cecil established a new formal network of VCs from various “research-intensive” universities across the globe, including several Australian University Consortium members (Metropolitan University, Suburban University, and City University<sup>26</sup>). This new institution created a vehicle through which member universities could re-position themselves within the global education sector.

Researcher

...Could you tell me how you think Metropolitan University sees itself, as far as its culture, and how that influences a lot of its senior decision making?

Respondent

Oh yes, certainly the single most important element of how the university would see itself is as a university of high international standing, that’s the most important word in our lexicon I suppose, of international standing. Sometimes our previous Vice Chancellor used to say “by 2020 we’ve got to be one of the great universities of the world”. But I, you know, in a broader sense what that means is that we want, and it’s part of the whole rationale of International Consortium, we want to be seen as of equivalent standing or better than universities like US University, or North American University or Scottish Uni or China Uni or whatever, or within Australia, City University. And that’s the single most important thing that in terms of the quality of education and the quality of research, we would want to be seen as you know, an outstanding university in international terms (Senior Management).

## **‘Mainstream the Digital Revolution’ or be ‘Left Behind’**

Cecil’s employment as the new Vice Chancellor at Metropolitan University led to further changes in the use and adoption of educational technologies across the institution. These changes began with Cecil’s public claims that the university was situated in the midst of a broader digital revolution that would create a revolution in the higher education sector.

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<sup>26</sup> A pseudonym given to another Australian university, not studied in this research project, which was both a member of the Australian University Consortium and the newly established International Consortium.

Then the next big change was when Cecil became Vice Chancellor of Metropolitan University. And he came in with ideas of, he was a visionary, and he was a great proponent that, for the idea that multi media and digital technologies would revolutionise higher education (Central Services).

At an internal university teaching conference, Cecil argued that the significance of this revolution was “as big a revolution as writing”. Many respondents noted Cecil’s insistent slogan that Metropolitan University needed to “mainstream the digital revolution” into its classroom-based teaching in order to “be the best”.

I think he was a very impressive speaker, and at the end of each year he would, well it started under him, a sort of internal university conference, which looked at the way we do things in teaching. And it was the first one of those where he said, the importance of digital revolution and how we should be mainstreaming it. He even made a comment that he thought that what was happening in the digital area was a bigger revolution, or as big a revolution as writing. So he was saying “this is really important guys, you’d better get on board and we’ve got to do it well, because we don’t do online teaching like other places do, but we’ve, we’ve still got to be the best and we’ve got to have good technical support for what we do do in our sort of classroom-based teaching” (Faculty Representative).

Cecil appeared to be convinced that online learning technologies, of which learning management systems were a small part, could give traditional campus-based universities a much needed competitive advantage to stave off strong perceived competition from virtual higher education providers. In justifying this competitive threat to the internal university community, Cecil argued that online learning was cheaper, and produced higher quality learning for students who had grown up with computers.

Traditional campus-based higher education is going to need all the competitive advantages it can secure. The ‘digital revolution’, by transforming the way knowledge is stored, accessed, disseminated, analysed and presented, is confronting campus-based universities with enormous challenges relating both to the costs and quality of higher education. Operating largely via the Internet, pursuing global economies of scale and securing efficiencies of delivery offered by new digital technologies, ‘virtual’ alternatives to traditional universities are likely to achieve a price competitiveness that traditional campus-based delivery arrangements will be unable to match.

Arguments about quality will not automatically favour the traditional providers. The ‘digital revolution’ is not only redefining the cost of teaching and learning, but also challenging some of the most cherished pedagogical assumptions that have underpinned the traditional idea of the university. As new technological and pedagogical developments create rich on-line learning environments characterised by sophisticated simulation, access to the most advanced databases and highly interactive links to outstanding academic instructors, on-line learning may become a preferred option for generations socialized into ready acceptance of the ‘virtual’ as an environment for a wide range of sophisticated human interactions and transactions (Senior Management Document C).

These arguments were not only circulated among the senior management of the university, but were also communicated to staff in the faculties.

I think he believed that this was the way of the future and he is one of the people I’m talking about who have heard argue that online education offers the possibility of a much better educational

experience than face to face. In fact I have heard him say on a number of occasions, “it can offer our students an infinitely rich learning environment” (Education Research Centre).

It is accepted by the leadership of the university that teaching and learning can be improved through the application of high-technology, and that the application of high-technology is necessary if not sufficient for curriculum improvement. This is a notable feature of the University’s current Strategic Plan, and is not a matter of debate (Faculty Paper 1).

Cecil’s desire for Metropolitan University to “mainstream the digital revolution” thus appeared to have been driven by a fear that they could be “left behind as a university” if they did not adopt emerging online technologies used by virtual providers. This fear of falling behind was noted in interviews with faculty staff, as well as a number of senior management documents.

He had a vision, I think somewhat before his time maybe, but he really had a clear vision that unless we moved into an online environment, unless we took up these initiatives, we would be left behind as a university. Now whether that vision was correct or not, it was nevertheless very clearly stated and very strongly stated in a number of forums (Faculty Representative).

The best campus-based universities will survive and thrive in the new environment, but serving only a small proportion of those seeking higher education around the world, and to survive they will have to ensure that the campus experience they offer remains rich and rewarding as newer, non-campus alternatives gain in sophistication, quality and recognition (Senior Management Document C).

Strong campus-based universities will survive and thrive in the new environment, but only by embracing the ‘digital revolution’, and mainstreaming the ‘virtual’ to enhance the campus experience (Senior Management Document D).

Metropolitan University seeks to be one of the world’s finest universities. It has recognised that strong campus-based universities will survive and thrive in the new environment only by embracing the digital revolution, by capturing all the pedagogical richness of the new teaching and learning technologies and modalities (Senior Management Document G).

Cecil’s fear of being left behind as a university, just like his desire to be one of the best universities in the world, was also underscored by broader economic conditions in the higher education sector at large. Following a reduction in Federal Government grants to Australian universities, and a subsequent increasing reliance on fee-paying students, particularly from overseas, Cecil was under pressure to locate additional sources of funds for the continued viability of the university.

Researcher

In his own, it’s probably hard to get inside his mind, but when you say left behind, what is the fear of being left behind?

Faculty Representative

I think he was aware that an increasing privatisation of university of funding was on the cards and that therefore we needed to be in a position where we were attracting students, whether they were in Australia, international students or students in an online environment. And he saw that as crucial to, you know the continued viability of the university, given DEST and the withdrawal, Canberra’s withdrawal of funding, changing the funding models.

The trigger event that ultimately mobilised these latent influences into a particular fear of falling behind appears to have taken place during Cecil's participation in International Consortium. Some time during or after 1997, the VCs of International Consortium discussed the merit of setting up a new collaborative online learning joint venture, International Consortium Ltd. This joint venture was proposed as a means of targeting full fee international students across the globe through an online mode of delivery (Senior Management Document C). It was through participation in this network that Cecil realised Metropolitan University needed to 'catch up' with other large, respected universities in this new institutional network.

I think probably that push was really driven by participating in International Consortium. And because International Consortium at the time was looking at setting up International Consortium Ltd, which then was set up, it was really that international market place, rather than the domestic that I suspect Cecil had his eyes on. He was seen, he spent a long time overseas and setting up International Consortium, and he was seeing what was happening in the big universities elsewhere. And I suspect that's where he was looking and saying "well you know we need to get, we need to catch up, we're slipping" (Senior Management).

## **Catching Up**

### **DEVELOPMENT OF MULTIMEDIA FUND**

A number of institutional initiatives were introduced at Metropolitan University after Cecil began in 1997 to 'catch up'. One of the earliest and most cited of these involved setting up the Development of Multimedia Fund in 1997 to encourage individual teaching staff to introduce new multimedia technologies into their teaching to "mainstream the digital revolution". Many of these new projects increasingly made use of the emerging World Wide Web.

And so he put in place an annual fund which ranged from \$1m to \$4m a year, which was made available on a competitive basis to academics of the university. So any individual teaching staff member or academic teaching staff member, could propose a 1 year project to develop a teaching intervention that involved multi media that would be reviewed, and evaluated. And they would get anywhere from \$10,000 to \$50,000 to get services, to pay for services and whatever else was required. A lot of it involved programming, a lot involved the media production, of course the web was growing in people's minds as the place to be for all this (Central Services).

The Learning and Teaching Educational Technologies Committee (LATET), a committee of Academic Board, was charged with the task of evaluating individual grant proposals each year. This committee was made up of academic staff from various faculties of the university to assess the academic dimensions of the new technologies. The actual funds however, were distributed through the Vice Principal of Central Services.



Now LATET has been around for a long time, and LATET was the committee that was involved in the original strategy of disseminating project funds from the Development of Multimedia Fund distribution. That was administered by Central Services, but LATET was charged with selecting the best of the projects that were to get support, and the Vice Principal of Central Services would distribute the monies based on LATET recommendations (Central Services).

The Development of Multimedia Funds were taken “off the top” of the university budget by senior management, prior to allocating funds to the faculties. These funds amounted to a total of \$12.5 million over a period five years, and funded over 200 projects. The exact number of projects varied between respondents, as indicated below.

I think that the university wanted to kick start the process of developing multi media. So in 1997, the Vice Chancellor persuaded the university to take money off the top, and you’ve probably heard about these LATET grants which were awarded. So over the period of five years around, \$12.5m was taken off the top of the budget at the university level, and was made available for competitive grants. That funded 235 projects (LATET).

Between 1997 and 2002 the University provided funds in excess of \$12 million for over 250 projects to develop multimedia materials (Senior Management Document G).

During this time, approximately one third of the academic staff at Suburban University who felt the impact of this initiative introduced these new multimedia technologies into their teaching.

I think if one looks at the LATET granting scheme, because I happen to have the data for it, and you look at the numbers of individuals that were at least named on those grants, I think the total came to something like 400, 500 across the university. And that’s substantial. It’s not all, it’s not even a majority, it’s a substantial minority isn’t it of academic staff at this university. We’ve got a few thousand, well academic staff I guess we’ve got about 1,500. So you’d be looking at maybe about one third of academic staff had some connection with the LATET project of some sort (LATET).

The scale of this central university funding was significant when compared with other available funds at this time. Consistent with Cecil’s intention to “be one of the best universities in the world”, he ensured that the quantum of funding for “mainstreaming the digital revolution” was greater than any other Australian university at that time.

If you look at ASCILITE<sup>27</sup> for example, you’ll see there’s quite a lot of innovation around Australia generally. I think Metropolitan University was by far the most well funded (Central Services).

Further to this, it was claimed by one respondent that Metropolitan University’s Development of Multimedia Fund was equal to the amount offered nationally by CAUT (the Committee to Advance University Teaching), an agent of the Australian Government.

I think the numbers were that the first year of universities supporting multimedia development was \$1m, then \$3m. \$3m was about the same as that offered nationally for CAUT, so it was a lot of money within the university (Faculty Representative).

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<sup>27</sup> Australasian Society for Computers in Learning in Tertiary Education

In attempting to justify the scale of these funds, one respondent argued that Cecil's intention was not to merely fund the development of multimedia products, but rather to train staff at Metropolitan University in how to use them in order to re-position the university (and catch up to their international peers).

The notion had always been that we were part of a revolution in higher education, the first real revolution, and it was to do with information and communication technologies, and that we'd better be at the leading edge. We want people who are learning. So a lot of the money that was invested was not so much to generate sort of multi media products or whatever, it was to train up the people, you know that was the hidden agenda, you know. It's good to have the products and so on, but we wanted people to learn how you use these things (Education Research Centre).

As a result of the scale of this central funding, teaching development grants became increasingly popular among academic staff, promoting both further publishing, and in some cases, academic careers.

Now one of the interesting things I suppose is that while we were funding multi media development in the university, which is what we did tend to call it at the time, suddenly you had a parallel between research funding and funding for teaching. So teaching development grants were good things to win you know, good for your CV. You could bring in money as a teacher you know, other than EFTSU type money, so that was good. And the projects that lent themselves to a research / evaluation component meant that people could publish. So there are a handful of people in this institution who I would say have made reasonably viable academic careers out of being seen as an IT teaching expert you know, a bit of a guru in pedagogy, particularly with regard to IT (Education Research Centre).

The important symbolic message that this funding was argued to have sent was that "the business of teaching is taken seriously by the university", given a dominant research culture at that time.

Whether or not this was an intentional outcome was argued by one respondent to be a matter of speculation.

One of the important signals that it gave to the university was that the teaching business is, the members of the university, is that the business of teaching is taken seriously by the university. I think that was important in some ways, maybe the use of technology in teaching was a bit of a handle to hang that on, that could have been true. But on the other hand I think it was also a timely one (LATET).

It was perceived by one respondent that Cecil's decision to support innovators in departments through the Development of Multimedia Fund was also influenced by the devolved historical structures and culture of the university. Whilst this strategy led to a significant number of projects and broader symbolic change, it was simultaneously argued by many respondents (5) that this same strategy ultimately led to too many specialised projects.

Going back to your question, the rationale then, was very much the history, the culture of the place was very much from this supporting innovators in departments, allowing them to do their thing, and see what would happen. Over a period of something like three or four, probably four years, this \$13m, it would appear that they didn't progress like they should have been funding innovators at the start, but then looking at something more scalable, collaborative or later, they didn't seem to get out

of the mindset of. They pumped out too many specialised projects I think. They didn't sort of adjust the strategy over the time as much as they could have (Central Services).

One of the senior executives in the university proposed that it was in fact that same devolved historical structuring of the university that had made the Development of Multimedia Fund appear so appropriate in the first instance, and ultimately caused difficulties in transforming teaching across the university.

What was disappointing about that was not the quality of what was developed with that funding, but that a lot of it was developed very specifically for particular subjects and were not on any sort of platforms that were easy to translate across departments and faculties. That we had the problem of any large and devolved university, and that is that we have all sorts of, there's a great deal of devolution in terms of the nature of email, student platforms all sorts of things. And I think the decision was made in the end that that \$12.5m, while it has enabled a lot of terrific things to happen, it certainly wasn't helping to transform pedagogy more broadly (Senior Management).

This Development of Multimedia Fund was ultimately ceased in 2002/3 following a review of that scheme which recognised the above mentioned dissemination shortcomings (LATET Evaluation).

A number of things happened around 2002, 2003 and there was a cessation of the Development of Multimedia Fund, and there was also I suppose a review of the experience of that, of how that worked (Central Services).

## **METROPOLITAN ONLINE AS EMERGENT STRATEGY**

One of the unintentional outcomes from the Vice Chancellor's Development of Multimedia Fund was the development of Metropolitan University's first learning management system. One respondent claimed that Metropolitan Online arose out of an unsuccessful Development of Multimedia Fund application that later found central support through other means.

Metropolitan Online really started when a group of academics who had been unsuccessful in their applications for the Development of Multimedia Fund, were looking for other ways in which they could do their project, and found an ear, a supportive person in Information Services, and set up (Central Services).

This platform was set up sometime between 1998 and 1999 when the internet was still in its infancy. In search of additional subject income, an innovative solution was sought for housing new student-developed websites. With the assistance of Rachel from Central Services, an automated solution was developed to deal with a number of enrolment and other technical difficulties, which was also made available to others across the university. An edited account of this development from one of the authors appears below.

In our faculty Teaching and Multimedia Unit, we needed to generate some income, so we thought we'd set up a couple of subjects. So this was in, this must have been in 1998 or 99, so it's early days or fairly early days of internet use around the campus. And so we had 2 subjects...which were going to get the students involved in using the internet and sort of show them how they can use it within

their studies as a sort of support mechanism. And each of those subjects required the students to develop websites and web pages at least, and we needed somewhere they could put them...so that people see them...So we set that up on a Unix Server...And the first time we ran the subject, it ran but it was a real headache just managing all these student accounts...So we went to the, what was then called IS, Information Services, which is now Central Services, and we talked to Rachel there and said “this is what we’re doing. Is there anything you can do centrally to help support that sort of use of technology in the network?” She said “yes”, and she talked to us about what we needed...The next I heard was some other academics came and said, “Tyrone, we want to come and talk to you about what you’re doing online, we want to talk to you about Metropolitan Online”. And I said, “what’s Metropolitan Online?”, because I hadn’t heard...And it turned out Metropolitan Online was what we’d been playing with... And so it became, Rachel sort of took it over in a sense, of making it assist us, a university-wide facility...And so we used it, and obviously other people had interest in similar things, and it just grew from that (Faculty Representative).

Once Metropolitan Online was made available to other academics, it was adopted widely by other faculty academics and became the default learning management system for the university, although some faculties were still using their own learning management systems at the time. Among the many claims made about the functionality of this in-house platform was its simplicity, provided academics were “prepared to write web pages”.

But it gradually caught on and became the default learning management system for the university, it’s still running now. And people will have to port across, and its beauty was its simplicity, very simple to use, anyone could pick it up. And as long as you’re prepared to write web pages, that’s the catch of course, you have to use Dreamweaver or something like that to create web pages...people did some clever stuff with it (Central Services).

Another major benefit of this platform for academics was that it reduced the “administrivia” of course management, despite its claimed lack of pedagogical sophistication. This platform was adopted widely across the university with over 1900 subjects using it at its peak (ERU Evaluation), despite it receiving minimal resources or internal promotion.

And it certainly was a huge boon to our academics in that it helped to reduce the, what I’d call “the tedium of the administrivia of online course management”. All of the things about enrolments and the changes of this and that, it was never wildly sophisticated in its pedagogical capabilities, but it never said that it would be. I mean it was set up to, to meet a need and it did that extraordinarily well. And it was resourced with minimal, minimal resources. I mean you know it was really just basically a couple of people who did all this work, and academics were extremely responsive and extremely grateful for this. And considering it was never marketed or pushed in any particular form, it actually did very well from its rate of penetration (Central Services).

## **RESTRUCTURING**

The next major institutional change affecting the adoption of learning management systems at Metropolitan University began with the restructuring of several prior existing units. The Learning and Multimedia Unit was combined with other groups into the Multimedia Group, which was then later restructured into Central Services under a new senior university executive.

But then LAMU and other media type departments in the university were all put together. That was when the film & TV unit and photography all came together into the Multimedia Group...And they keep, they keep reshuffling, so MG is an amalgamation of different units. And then we had 2 or 3 years ago, we had a restructure of that area. So there's sort of a library and everything came within it. And then there's Central Services set up with a Deputy VC or Deputy or Associate VC, one or the other looking after it all (Faculty Representative).

One of the people who went through this restructure claimed that the process began in 1999-2000 and finished in 2001, and was far reaching in its scope. The Multimedia Group, Library and IT Services were all later combined into a common Central Services, integrated by a business management group. This restructuring ended in 2001 with Stella's appointment as Director of Learning and Research Support, following her strong background in education.

In the year 2000 I was actually appointed Director of Libraries, and I'm not quite sure if that was the right date actually. I think it was 99, I can't remember back. When we took under this restructure, because the Vice Principal Information who sat across these three areas had been the University Librarian, and so her job was then too huge, so I was appointed the Director of Library. Then we went through an internal restructure and a whole new set of departments were set up, so that the Library *per se* didn't exist anymore, IT Services *per se* didn't exist anymore, and the Multimedia Group didn't exist anymore. And we had five new departments plus a business management group that sat through the whole division. And I applied for and got the position of Director of Learning and Research Support, because I had, whilst I was an academic, completed my masters in education...and completed my PhD, but also that was in the field of education. ... So for the last four years, prior to this year, I was Director of Learning and Research Support. We actually began that department in 2001 (Central Services).

Following these reforms, a new senior executive from another university was employed to "take on" the Division. The net impact of these reforms was a new consolidated divisional structure operating within a more specialised domain, integrated by a business management group, under the authority of Emily, a new external senior executive appointment.

...[I] Took on a broader role at a DVC level at a smaller university where I had all the functions and services outside the faculties, and then was asked by Metropolitan University if I'd like to come here and take on Central Services, which was going back to a more narrowly defined area (Senior Management).

The new Central Services structure was carried out at Cecil's initiative, and was charged with the responsibility of "getting the learning management system sorted out".

The learning management strategy that came in place in the last, since Central Services was set up three, it's probably getting onto four years now ago, and it was charged with basically getting the learning management system sorted out...And it was Cecil's initiative to pull them all together because of the nature of knowledge, spreading across all spheres. He'd pull the library and certain technology and educational services together, and they should meld, they should you know, come up with integrated multi-disciplinary solutions...(Central Services).

Further (hearsay) comments were reported by faculty staff during the restructuring of Central Services, which suggested that Metropolitan Online was "essentially never part of the plans". It was

proposed by one staff member that this view may have been reinforced by a lack of university resources allocated to its operation, evidenced by a dedicated budget line item. Although comments of this nature (i.e. hearsay) are often not included in narratives of this nature, they were reported by a credible staff member and do not undermine other evidence already presented.

I mean there're no allegations of impropriety or anything. It was a comment I heard from the person involved during the process of restructure they had recently, which was along the lines of saying "well Metropolitan Online was never" what was the word, "never part of, essentially never part of the plans, it wasn't sort of there in any university's"...I thought well the structure of Central Services has changed a lot recently, and there's a new head there, who came in post Metropolitan Online, essentially not really understanding what is this monster called Metropolitan Online and why are people so passionate about it. And I think, maybe I shouldn't be mentioning these things, but I think looking at what happens, she's looked back and said "well Metropolitan Online has been going all these years but has never been an item which the university has said, 'we want to have it'" (Faculty Representative).

## **EVALUATIONS OF LEARNING MANAGEMENT SYSTEMS**

After the restructuring of Central Services, members of that unit were involved in evaluating various learning management systems for the university. This evaluation process, despite being described by respondents as rigorous in its assessment, was criticised widely for the length of time it took for the university to ultimately make its final decision. This evaluation process was however, frustrated by a number of significant moderating influences.

### **First Evaluation**

Sometime during 2001, the university committed to adopting a replacement learning management system that was not developed in-house. The rationale given for this change was that the university wanted to carry out more sophisticated pedagogical tasks that were beyond the capacity of Metropolitan Online.

And it was actually in 2001 when the university first looked at the possibility of having an enterprise learning management system that was not home-grown...because we had our home-grown Metropolitan Online... But it became obvious that if we were going to be able to do these sort of "clever things" that we needed to do pedagogically, that Metropolitan Online, whilst it had been an extraordinarily faithful servant, would not take us into that next iteration or level of sophistication, perhaps I should say. And we started looking around at opportunities, and we needed, we knew we needed like a separated data base you know for course content and all of that sort of thing, that was one of our drivers (Central Services).

Another respondent at Metropolitan University, when asked why the university had chosen to move away from Metropolitan Online, argued that the university was not in the business of developing software.

This university's not in the business of developing major software systems...And it's not our business; there are plenty of systems out there that are in the business, you know millions of dollars to get them to where they are. What's the point for us trying to replicate that (Central Services)?

Following this decision to replace Metropolitan Online with another learning management system, Stella and Oliver (perhaps with the assistance of others in Central Services), proceeded to conduct an evaluation of other available platforms. This evaluation included consultation with the academic community to determine their requirements for such a product (Central Services Paper 1). Whilst in the middle of this evaluation during 2001, before a final decision had been made, the Senior Executive of the university made a decision through the Resources and Planning Committee that the university would copy the decisions of other International Consortium universities and adopt WebCT, because Metropolitan University was an International Consortium member university and the majority of other International Consortium universities had adopted that particular platform.

...But we went on quite a long journey then...It was a very, very stumbling approach, in that we just started to do an evaluation process, and started to engage the academic community, when a decision was made by the senior executive of the university that because we were an International Consortium participant, that because Web CT which, had had its genesis at North American Uni, that because the majority of the people in the International Consortium group were using that, that we would go that way. And so we sort of stopped the evaluation process because the decision had been taken (Central Services).

The senior executive knew that Central Services was in the middle of this evaluation as they were developing an options paper for the Resources and Planning Committee, a committee of Academic Board. These senior executives, most likely driven by Cecil who had earlier constructed the International Consortium network in 1997, "rode across the top of it" because of mimetic pressures emanating from this new institutional network.

Researcher

And did they know that you were in the middle of an evaluation?

Central Services

Well we were, well yes there was, there was an, I mean we were preparing something for our Resources and Planning Committee, which actually was an options paper. And that paper did get put up, but at that point, because the International Consortium was being bedded down and so on and so forth, that decision sort of rode across the top of it.

The nature of the first intended evaluation involved identifying Metropolitan University's usage requirements, and assessing the extent to which these could be satisfied by the various learning management systems in the marketplace. Following senior management's decision to adopt WebCT however, Stella and her team then directed their efforts toward implementing this management decision. They later concluded however, that WebCT was unsuitable for their university, given its size, complexity, devolved nature and infrastructure.

Central Services

So we decided that if that was to be, then what we would do was investigate that product and see what it could offer us. Because at the point of us doing the options paper we'd, all we'd done is to say that these were the sorts of things we were trying to achieve and that these would form the basis of our evaluation of whatever was in the market place...But I suppose in a nut shell the way it went was, given that we were given that decision, we decided we would try and do the very best we could to make this work, but once we started looking at the product, we decided that it really wasn't, in it's current iteration, it wasn't, the current release, it wasn't suitable for a university of our size, complexity, devolved nature and the infrastructure that we had...

Researcher

Do you remember what year that was?

Central Services

Yes that would have been, I'm pretty sure that was still 2001. I think it was our first year that we were together as a department; I know it all came very quickly.

After concluding that the original WebCT Campus Edition wasn't suitable for the university, Stella and her team then recommended that the university wait for WebCT's updated platform, Vista. This new version, it was hoped, would allow the university to conduct the kind of sophisticated pedagogical tasks that they were originally seeking in a replacement learning management system.

But it was about 2002 that we were in a situation where we knew that we'd have to wait for the new completely re-architected, if that's such a word, version of Web CT...a completely new concept of how they would organise their product, and so we decided that [WebCT] Campus Edition was not suitable for our needs. We were waiting for their new product, which was called, it started with a 'C', and then it changed to Vista...And our advice to the university was we should wait for the more sophisticated version, because it would allow us to do some of the innovative and sophisticated things pedagogically that we'd been used to doing in our own environment, not only through Metropolitan Online but through some faculty developed tools as well (Central Services).

This recommendation was accepted, leading to the university waiting for this update. As the release dates for Vista were further delayed, and problems found with early test sites, Stella wrote a paper to the Resources and Planning Committee in mid 2002. In this paper, she noted the risks of going with "an untried and untested product" in their particular university context, and recommended against the university adopting WebCT Vista at that time. This recommendation was ultimately accepted in 2002, leading to a second round of evaluations.

So that decision was accepted. So we trod water, or I don't know what the past tense of that is, we just waited for a little while until we could see how Web CT Vista was developing. But, like a lot of completely revolutionized products, it was, well it, the completion dates kept being pushed back and back and back. And there were some test sites, and then obviously a lot of problems were found with those, so the general release started getting pushed right out. And I wrote a paper for our Resources and Planning Committee about the risk associated with going with an untried and untested product with a student cohort as large as ours, and as complex and diverse as ours. And that was accepted. ... And so that would have been probably mid 2002 actually when I come to think about it (Central Services).



Although this first round of evaluation did not ultimately secure an appropriate learning management system for the university, the quality of work completed was praised by others in the university, particularly their thorough understanding of the educational implications of adopting these systems. This observation is understandable, given Stella's strong background in education, along with others in her department.

So I think the first report was actually very good. I think there were people, even though it was Central Services, there were people in there who had a very good understanding of educational implications (Education Research Centre).

## **Second Evaluation**

Following Stella's paper being accepted by the Resources and Planning Committee on the risks associated with the university adopting WebCT Vista, Central Services was given 12 months to carry out a second evaluation, along with modest funding to commission the Education Research Centre within the university to assist in this process.

That's when they decided to give us 12 months grace, gave us a small amount of money to carry out the evaluation, and that's when we commissioned the Education Research Centre...And so that would have been probably mid 2002 (Central Services).

At the request of Central Services, the Education Research Centre has conducted a detailed review of the possible options (ERU Evaluation).

Tim and Barbara from the Education Research Centre were commissioned to undertake the second evaluation as the Division did not want to be seen to be too involved, given their participation in the first evaluation exercise. The nature of this evaluation was framed as an academic issue, elevating the need for evaluation by the Education Research Centre in this area. These decisions appear to have been the subject of deliberate and calculated planning by Stella, given that Central Services already possessed the necessary skills to carry out this evaluation themselves.

...We commissioned them, Central Services actually commissioned them to undertake this evaluation report for us separately, because we did not want it to be seen that Central Services was just pushing. We thought it was an academic issue and that's why we engaged the Education Research Centre to do this for us. We felt that their credibility in this space was far higher than ours, because that, you know educational evaluation was a critical role that they play, and our expertise was in the technology. And even though in my group I had people, academic staff and people with educational design and that sort of experience and knowledge, we felt it was better to divorce it. So we actually commissioned them to undertake this study. And it was that study that was presented to various university committees: the Resources and Planning Committee, the Systems Strategy Committee, Academic Board and so on (Central Services).

Given that Tim and Barbara did not possess strong technical evaluation skills in relation to these products, they were specifically asked to comment on why they believed the Education Research Centre was invited to assist in this commission. Tim argued that he believed Stella wanted this

evaluation to be conducted on a pedagogical basis in the hope that an open source solution might be recommended. Oliver and Nathan (along with Stella and many others from her unit) then assisted indirectly “because of the politics” involved in this institutional evaluation and decision.

Oliver was very much a part of doing this, but simply because of the politics of it, he’s not a co-author if you see what I mean. And Nathan was a very good behind-the-scenes advisor to our thinking. So Stella wanted a pedagogical focus and I think that Stella herself was probably well disposed to an open source solution, and I think she knew that if she could give us the brief and weigh the possibilities, that we’d reach the same conclusion, just my hunch, which is what we did right (Education Research Centre).

Stella claimed that although she and Oliver worked closely with Tim and Barbara they did not try to influence their recommendations. Assisting this group was a university-wide evaluation committee, made up of a number of high profile and experienced academics in this area. This group included Luke, Stuart, Raymond, Jill and several others.

... And so we set up a proper university-wide evaluation committee. It was chaired by our Deputy Vice Chancellor Academic, Luke. Had very, very high representation of knowledgeable academics, knowledgeable in this online learning field. It also included the chair of an Academic Board sub committee which looks into teaching and learning with educational technologies (Central Services).

These assembled parties then put together an educational framework to evaluate available learning management systems, including Vista, Blackboard, and open source (non-proprietary software). Evaluation of these programs was also assisted by trials conducted by Oliver with a range of interested academics. This evaluation group were impressed with open source Courseware as it was seen to fit within both the educational framework setup earlier, as well as the broader university environment following extensive consultations with internal stakeholders.

This group put together the educational objectives for any system that we might want to choose, and looked at also the possibility of looking at open source as well as proprietary products. We looked at a range of options including Vista and its market competitors, main market competitor Blackboard, but we also looked at what Stanford was doing with an open source learning management system called Courseware. And in fact we were very taken with Courseware. We thought that it really did, it captured the imagination of a lot of people who were involved in the process because not only was there the evaluation committee, but there were loads of focus groups held and discussion forums held and so on. And there was a lot of buy-in from the academic community because I think philosophically, there was also a feeling that open source fit the framework within which we were working very comfortably (Central Services).

On our current assessment, Coursework, the system developed at Stanford, is the most appropriate: it is well-presented, easy to use and has more advanced functionality than the alternatives. It has been designed for an on-campus learning environment, and is supported by the expertise and resources of an outstanding institution (ERU Evaluation).

The extent of the analysis went beyond the merely educational however. It was claimed that they also looked at the technical and economic issues associated with an enterprise-wide learning management system, including speaking with people at both Metropolitan University “and beyond”.

So we put a lot of time into thinking about the educational, technical and economic issues associated with LMS, enterprise-wide LMS, and we did that, novices to the world of LMS at the time...But we just applied good research thinking skills to the issue. We talked to a lot of people around the university and beyond the university (Education Research Centre).

The review has examined educational, technological and economic considerations...While technical matters are not elaborated on in the report, they underpin the decision making process that is presented and technical reports were prepared on the three systems which were trialled. Advice was sought from other universities, both within Australia and in other countries, including Canada, the United States, New Zealand, Sweden and Portugal. In Australia, we consulted staff in universities that have chosen WebCT or Blackboard for their LMS...A number of interviews were conducted with stakeholders in the University – academics, technical staff and developers (ERU Evaluation).

Within Australia, reviewers visited a number of universities who had chosen WebCT or Blackboard as their learning management system, including Technology Savvy University who had completed an exhaustive technical review of the different systems at that time, and Redbrick University.

...We both talked with people from Technology Savvy Uni who were very keen on Web CT, and who were terrifically helpful to us ...Again, they said they'd done a much more exhaustive sort of review in the sense of minutely detailed comparisons of functions in different systems (Education Research Centre).

We've had a lot to do with Technology Savvy Uni, we ask their advice a lot. We're always interested to know where these sorts of, you know the university-wide tools, where else they're being used. And so there was a lot of negotiation and sharing of information between Technology Savvy Uni and Redbrick Uni and Sandstone University, and indeed universities world wide were contacted about, understand to see what their experiences of the learning and management systems have been...(Faculty Representative).

In addition to informal relationships between staff at Redbrick University and Metropolitan University, there was also evidence of more formal relations between these two universities. For example, at least one member of Redbrick University played an active role in the broader LMS evaluation team at Metropolitan University.

I mean it was dominated by members of the university. But I think reference was made to, I'm pretty sure we had a member of at least Redbrick University on that. We do have outside members, that is members from outside the university on a couple of the IT committees within the university, the Systems Strategy Committee, but I think we did make some use certainly of other universities' experience, clearly (LATET).

Oliver also visited the USA and came back "converted" on open source. It was claimed that his views had a significant influence on the final recommendation to go with open source.

The rigour of the broader evaluation process was affirmed by all respondents interviewed, as well as being stated clearly in the final report.

I think the LMS, I think we agonised endlessly over that, which one we should have. So I think there was a heap of evaluation done (Faculty Representative).

We have consulted widely and endeavoured at every point to keep key members of the University informed about the progress and direction of the review. We believe the decision-making process has been thorough, diligent and transparent (ERU Evaluation).

The recommendation for the university to adopt open source was written up in the ERU Evaluation report, and was subsequently approved by “all the relevant committees”. When this recommendation finally reached the Vice Chancellor however, it was rejected and sent back to the committee who changed their minds.

But he also I mean, the decision about [the] learning management system really all hinged on Cecil too, so it’s an example of how powerful the Vice Chancellor is, because our recommendation for an open source system was accepted by all the relevant committees and got up to the senior executive and Cecil just said, “over my dead body”...and sent it back to the committee who then surprise, surprise, changed their minds (Education Research Centre).

It was claimed that Cecil was “nervous” about adopting a non-commercial courseware management system, given the well known failure of Leading Technology University to implement its Peoplesoft enterprise system. Cecil’s risk-averse decision making was also driven by a perception that Metropolitan University was falling behind other respected universities in not having adopted a sophisticated university-wide learning management system.

Yes, look I think he thought it was too much of a risk, right. He thought Metropolitan University was already behind in not having a sophisticated learning management system. We had our local one, it had a lot of you know supporters, but it was pretty primitive, we’re told by the technical people, and he thought we were already behind, that this was a risk, and he wasn’t prepared to take it (Education Research Centre).

It was also argued by that same respondent that Cecil was committed to particular political views that also influenced this final decision. Further information relating to the nature and influence of these views was not provided by this respondent.

He was absolutely committed to certain political positions favouring free market economics and so on, so he thought that MIT for instance, in making all of its course, you know, course materials available online for anyone who wanted to use it free, he called that an act of vandalism, because he would have seen it as a socialistic sort of dangerous thing, undermining commercial developments in the area. So that was also a big part (Education Research Centre).

The commitment to pursue a vendor product was also seen by senior management as one way that Metropolitan University could catch up, given that “everyone else had moved on and we hadn’t”.

So I suspect the motivation on his part was “we decided we needed to do this and we kind of stuffed around all this time and we still haven’t got a decision, so I just want to get on with it”. So I suspect it was more in that vein. And he could see that everyone else had moved on and we hadn’t so, I think it was more that sort of a motivation. But again, he wasn’t somebody who took long to get on with things. I mean if he had something to do, he wanted it done (Senior Management).

Following Cecil's rejection of the open source recommendation, the ERU Evaluation report was then subjected to due diligence by a firm of independent auditors. These auditors supported Cecil's earlier decision, giving it a degree of external legitimacy, and recommended that Metropolitan University adopt Cecil's recommendation for a product with lower perceived risk.

...A firm of independent auditors were engaged to undertake due diligence of that decision. And on balance, the outcome of that was that they felt the Courseware, because it hadn't been used, they didn't feel it was robust enough in that it hadn't been used in multiple situations as large as us, because Stanford is quite small compared to us, and they felt that really we would be better at this point going with a tried and tested vendor product (Central Services).

When questioned about this practice of independent evaluation, Stella claimed that Council had a special committee set up to review major expenses for the university.

We're very, very keen to undertake due diligence in this university, and our Council has a committee that looks at major, major expenditures for the university, and makes sure that it gets independent advice on these before it moves ahead (Central Services).

Following the auditor's recommendation that Metropolitan University adopt a vendor product, the choice for the university was limited to three main products, Topclass, WebCT and Blackboard.

After going through a tender process, Blackboard was finally chosen as the platform of choice.

And then the question was well should it be Web CT, Blackboard or Topclass? Because there was already a Topclass installation on campus, and so they were looked at. But in the end, it was really, Topclass didn't submit to the tender, but Web CT and Blackboard did, and we ended up choosing Blackboard (Central Services).

Metropolitan University's decision to adopt Blackboard over WebCT was justified on several grounds. None of these were claimed to be pedagogical in nature however, given that both platforms were seen to be "pretty much on par" in this area. Among the different arguments in favour of Blackboard were that it would allow greater "extensibility" for interested academics to continue customising software solutions, superior service support and a lower total cost of ownership.

There were a few, it was a cluster of things, and none of them really had anything to do with teaching or learning, or the pedagogical functions in the product, they were pretty much on par. I guess speaking broadly and generally, it came down to, and not in any particular order, the extensibility of Blackboard, because they had well established APIs, building blocks, and this comes back to this emphasis on development, that we needed an extensible system. And also the fact that Blackboard had people in Australia who could provide support, and people in Metropolitan University as well which Web CT didn't, which they've since rectified...And the third factor was the total cost of ownership, there seemed to be a difference there (Central Services).

Other senior people involved suggested that the ease of use of the Blackboard learning management system for lecturers and students, particularly in large first year classes in Commerce, was a critical criterion.

And I guess...in the end, my own critical criteria in recommending a decision was that we have the biggest subjects in the university in first year Commerce, and I wanted the lecturers in those first year subjects, they were the most important people in the university, in my mind, for this decision. I wanted something that they would find easy to use, and their students would find easy to use, because I didn't want them, they're under such pressure in terms of delivering really good education to huge groups of students (Senior Management).

The “extensibility” of Blackboard as the core learning management system for the university has actually allowed the university’s original interest in open source to continue, albeit in a different capacity. Since deciding on Blackboard, Metropolitan University has joined SAKAI, an open source initiative similar to that recommended to the university as part of the second evaluation. These two decisions, conceived as competing alternatives only months earlier, are now held together as part of the university’s strategy for encouraging academic experimentation and sharing within the university environment.

And we’ve joined SAKAI, so that we can still acknowledge and recognise the unique, but within a framework so that we can share resources. So we’re starting to look at our learning object repositories, establishing that in a way in which certain objects can be shared across multiple subjects, and re-purposed (Senior Management).

## **IMPLEMENTING CHANGE ACROSS THE UNIVERSITY**

Once Metropolitan University decided to adopt Blackboard as its central platform, a range of various strategies were employed to encourage adoption among the various devolved faculties. A listing of these strategies can be found in Figure 21.

One of the strategies instituted by Cecil during his time as VC, already discussed earlier in this chapter, was to encourage benchmarking across the university. This tool led staff to compare themselves with other universities that Metropolitan University wished to emulate, leading to the development of a reputation-based mandate for change across a broad range of areas, including the adoption of an appropriate learning management system under the rationale that the university was ‘falling behind’.

**Figure 21: Strategies Employed to Encourage Adoption at Metropolitan University**

Strategy	Supporting Quote
Benchmarking	<i>He was quite big on benchmarking and that's something now we all have to do. Is sort of find out what other universities are similar to us and how we compare with them (Faculty Representative).</i>
Strategic plan	<i>The university's come up with a strategic plan which involves innovation in teaching and learning, particularly online learning, well particularly technology-driven, which includes the online learning environment. I think it's probably got pretty strong support by the deans and the leadership within the faculties (Central Services).</i>
Financial incentives and disincentives	<i>I mean we provided a series of financial incentives to faculties and to departments, in terms of very significant amounts of money that went depending on how well students thought they were being taught, which was very controversial at the start, and then it became widely accepted (Senior Management).</i>
Involving key university stakeholders	<i>And so one of the things they learned from that process was to involve the people that really matter from the beginning. They've had focus groups, pilot groups, all the kind of things you do (Central Services).</i>
Senior executive sponsorship	<i>Oh I should just say because of governance, it's very important that this project, the roll out of Blackboard is overseen by a very high level steering committee, and the sponsor for that is the Deputy Vice Chancellor Academic (Central Services).</i>
Senior executive appointments	<i>There's an Assistant Vice Chancellor called, Assistant Vice Chancellor Teaching Learning and Equity, and that person has specific responsibilities, not yet appointed, but that person will have specific responsibilities to do with implementation of Blackboard (Senior Management).</i>
Promotions criteria	<i>And one of the continuing challenges that I have, because I'm in charge of promotions, is making sure that our promotions criteria are very, very plain about the importance of teaching and how you would demonstrate that. Last year for the first time, we promoted someone to Associate Professor purely on the basis of teaching (Senior Management).</i>
Training and support	<i>Our two academic developers have put together training plans for each faculty, and they've done that in partnership with the faculties to work out what support can come from the faculties in this area, as well as what support we'll provide centrally. We've also been putting together a series of self help tools on web sites and a whole range of initiatives (Central Services).</i>
Training local champions	<i>What we've looked to, and I mean what I've done everywhere in any IT implementation is look for the local champions. They're the ones that really make the difference. So find those individuals out in the departments that are enthusiasts and that are positive supporters and that really, and they can be beginners, or they can be very advanced. You know you get enthusiasts at all levels (Senior Management).</i>
Teaching quality surveys	<i>For faculties...if you're looking at how things happen in the university, a lot can be tracked back to the Teaching Quality Surveys, and they have questions worth looking at that. Questions on the use of technology...There were a few technology questions that have been put in, come from, the purpose was lost, and the seeds are in, in time you know, the meaning of the question was lost, but they still persevere. And "has this subject used technology" is one of the sort of guiding measures of the policies that make every subject go online (Central Services).</i>
Management directive	<i>But there was a university directive... in the last say three years or so, there was a real push from the top that all subjects would have a web presence (Central Services).</i>
Retiring systems	<i>And that system is not going to be offered beyond the 31st March, so those people that are using Metropolitan Online know that they need to migrate their subjects from Metropolitan Online to the LMS, or they'll be left without their online component of their subject (Central Services).</i>

Strategic plans were also formulated at the top level of the university, with support sought for their implementation from the deans of the faculties. Coupled with these plans were a range of coercive financial incentives and disincentives that took a variety of forms. For example, early multimedia funds were eventually “devolved” to the faculties for their appropriation in ever increasing amounts, to encourage ownership of faculty-based online learning initiatives. Financial penalties were also used to hold the deans of faculties accountable for implementing university plans. The following dialogue with one respondent illustrates the use of this mechanism.

LATET

I think the targets, the process goes so far, and so we have a strategic plan, a vision statement, strategic plan, operational plans, and you look at that each year. And you say “look how am I going to write a performance indicator that says at the end of this year, I will have achieved something”. Well we went through one exercise and said “by the end of this year, two thirds, I forget what the proportion was, but lets say two thirds of staff in all departments will have material on, available for web delivery”. Now you know I, “and if not, then the dean of the faculty will be penalised”...

Researcher

... You mentioned some kind of disciplinary action against the deans in some ways should people not adopt...

LATET

It was financial, incentives and disincentives...

Another key strategy employed was to involve key university staff in both the evaluation and implementation processes, creating further normative and mimetic pressure to adopt. These key people sponsored the implementation process from the top, involving senior university managers, to running focus groups and pilot groups that involved a range of faculty staff. Other staff also noted that Metropolitan University intended to appoint a new Assistant Vice Chancellor position to lead the learning management system implementation.

A range of university-wide policy initiatives were also put into place at Metropolitan University. To address the dominance of research values over teaching values at the university, the criteria for promotions were adjusted to recognise the increased importance placed on teaching, of which learning management systems were a subsidiary interest. A host of training and support programs were put into place for the faculties, sometimes in specifically targeted ways.

A few respondents spoke about the need to identify and train “local champions” in each faculty. These interested individuals were encouraged to model the desired practices sought by the university at a local level, creating further mimetic pressure within the particular disciplines of the faculties.



Teaching quality surveys, used in many Australian universities, were another means by which the management of Metropolitan University was able to encourage adoption at a local level. Several technology-related questions were added into these student surveys, creating a normative pressure for local teaching staff to adopt new technologies within their courses.

Finally, there were a couple of more particular strategies employed to encourage more resistant staff to adopt the university learning management system. One recent strategy involved denying staff using Metropolitan Online access to this system after March 2006, to “migrate” them across to the new learning management system. A less successful initiative employed some years ago involved issuing a directive to the university that all university subjects would have a web presence. It was argued by some respondents however, that this strategy encouraged a superficial response.

Central Services

So it was adopted fairly widely, well beyond just the innovators and the early adopters, but of course at a fairly procedural level. It’s a basic web site, your subject is about this, that’s web presence...

Researcher

As a compliance?

Central Services

Yeah, that’s right.

Not all staff at Metropolitan University supported the decisions of the executive however. A range of tactics were employed by various staff, illustrated in Figure 22, as a means of resisting various university decisions. Management’s response to this resistance, particularly in relation to Metropolitan Online, is found in Figure 23.

Three respondents spoke about the politics surrounding Metropolitan Online, particularly the contested central support of this program. The university “knocked back” funding each year to support Metropolitan Online, leading one compassionate central staff member to manipulate her internal budget in order to continue its funding support. The university eventually responded to this practice by “sidelining” this staff member.<sup>28</sup> Many other university staff expressed a degree of public scepticism towards university plans to replace Metropolitan Online with an alternative learning management system.

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<sup>28</sup> Further comments were made about this incident ‘off the record’, but are not able to be reproduced in this study, due to their sensitive nature.

**Figure 22: Staff Resistance at Metropolitan University**

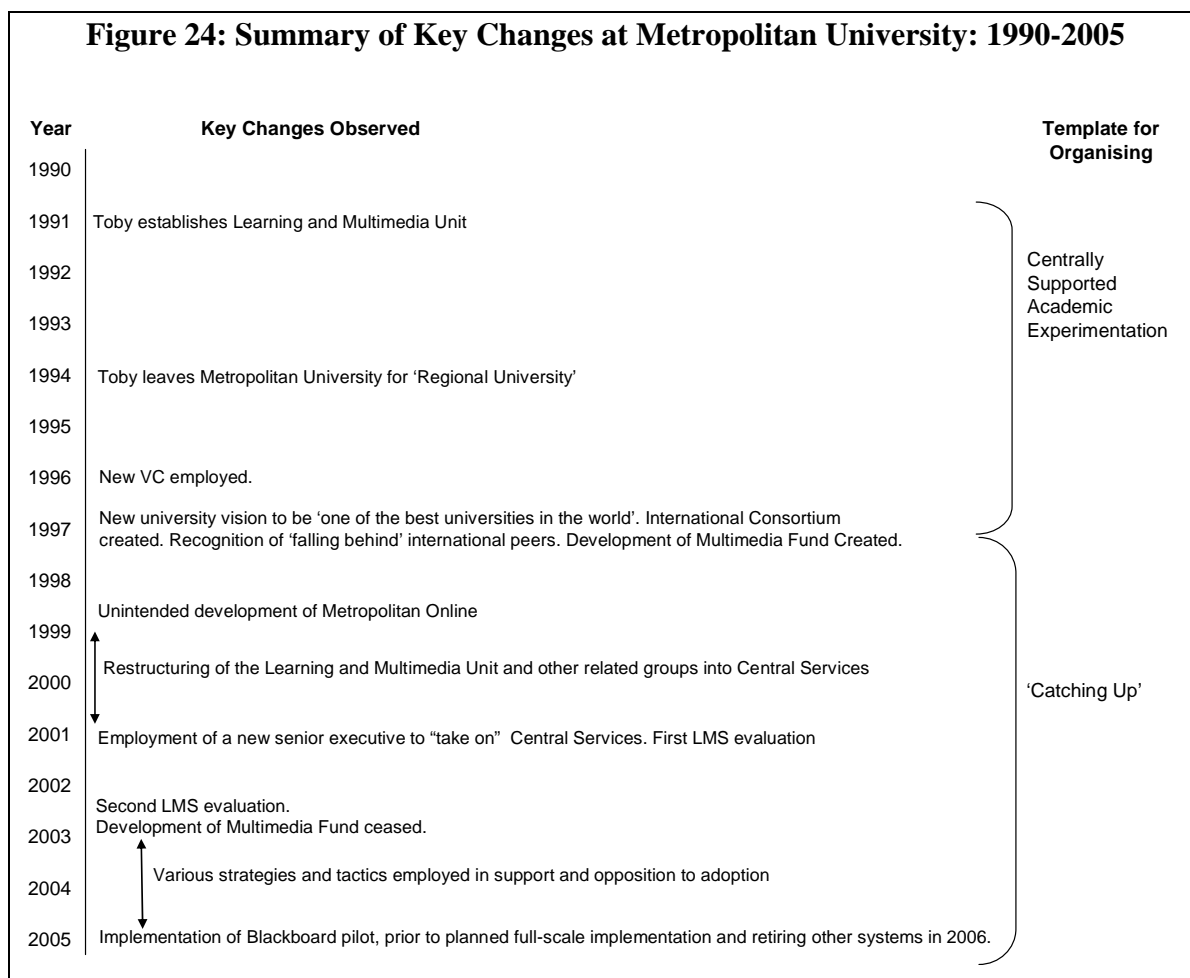
Tactic	Supporting Quote
Public scepticism	<i>It was quite a strong feeling when we were talking about this new learning management system coming into place in the last 2 years, people saying “why, we’ve got Metropolitan Online? It does everything we need”. So there was a sort of natural hesitancy to say “why are we doing this, we don’t need to” (Central Services).</i>
Manipulation of central budgets	<i>So she manipulated her budget to make sure that it could be kept going at essentially zero cost to the university, in that it didn’t have to say, in that the university gets together at Smallville each year to form its budget, and people put in what they need and they get allocated chunks of money. So she never had any money, she asked a few times, and never had any money allocated for Metropolitan Online, so she had to keep finding enough to keep it ticking over (Faculty Representative).</i>
“Behind the scenes” assistance	<i>Oliver was very much a part of doing this, but simply because of the politics of it, he’s not a co-author if you see what I mean. And Nathan was a very good behind the scenes advisor to our thinking (Education Research Centre).</i>
Selecting a politically acceptable review team	<i>It was put to us they actually wanted the kind of lay person’s perspective, that they would provide all sorts of technical advice to us and back up and in fact we worked very closely with Oliver really, but it was presented to other people in the university as, in this way, as being conducted by people with in some ways a kind of naive perspective, technological terms, but who were asking the questions about educational implications... We were quite outside all of the battles that had gone on. We didn’t know about them, we hadn’t been in on it. And yes, I’m sure that was seen as a big advantage, but there were a lot of power struggles about technology in this university at the time, there still are. I mean not just this, this was actually a small part of those things to do with the bigger systems (Education Research Centre).</i>

Staff resistance was also involved in many of the decisions relating to the second evaluation exercise. The decision to commission the Education Research Centre appears to have been a calculated political decision which gave the appearance that Central Services were not directly involved in this second evaluation, despite their indirect assistance to these academics. The Centre’s selection was also likely to have been politically credible, given its lack of involvement in both the first evaluation exercise and other conflict surrounding broader university systems projects, such as the introduction of new finance and HR enterprise systems.

**Figure 23: Management’s Response to Staff Resistance at Metropolitan University**

Tactic	Supporting Quote
‘Knocked back’ funding for Metropolitan Online	<p><i>The staff have been crying out for it and saying “look, can we have more development?” The response has always been “I’m not funded for this, I can’t, and we do what we can”... If she had money, even a small amount of money...she would have done a lot more at making the interface better and adding functionality that staff were asking for, but each year she got knocked back so you know (Faculty Representative).</i></p>
Sidelineing staff	<p><i>Faculty Representative</i>  <i>I’ve heard things that probably shouldn’t be on tape about what’s happened to people who helped keep, or helped get Metropolitan Online going, that they don’t seem to have been well rewarded by the current administration.</i></p> <p><i>Researcher</i>  <i>What, they’ve been sidelined or something?</i></p> <p><i>Faculty Representative</i>  <i>Yeah...</i></p>

Figure 24 summarises the chronology of broad changes at Metropolitan University, and attempts to group them according to relevant templates for organising. It is quite clear from Figure 24 that the shift from ‘centrally supported academic experimentation’ to ‘catching up’ was preceded by the employment of a new VC at Metropolitan University. Cecil introduced a new vision for the university that encouraged staff through benchmarking initiatives to construct their institutional identity in terms of their relative competitive performance with esteemed peers. Despite Cecil’s convictions that online learning was a superior form of education that was part of a broader revolution in higher education, it was ultimately his creation of the International Consortium network that led to his realising that Metropolitan University was ‘falling behind’ its international peers and therefore needed to ‘catch up’. After employing a number of different institutional change mechanisms, Metropolitan University is expected to encourage the majority of its teaching staff to adopt Blackboard in Autumn 2006, following pilots during 2005.



The next section of this chapter will identify various external and internal sources of influence affecting these changes at Metropolitan University, followed by a discussion of the impacts of these changes on a range of organisational variables.

## Summary of External and Internal Sources of Influence

### MAJOR EXTERNAL INFLUENCES

A number of external factors acting upon Metropolitan University were noted in passing throughout this chapter. These influences included the activities of other universities, from coalitions of universities (e.g. the Australian University Consortium and International Consortium) to various independent local universities (e.g. Redbrick University); the Australian Government's reduced

levels of funding to the higher education sector; and the emergence of new digital technologies. In addition to these particular external influences, there was a range of other direct and diffuse external influences emanating from outside the university that different respondents thought were significant in explaining change at Metropolitan University. An indicative range of these additional external influences is illustrated in Figure 25.

Several comments were made by respondents in relation to the literature in support of online learning. Although it was acknowledged that there were admittedly few studies on the impact of online learning technologies (e.g. learning management systems) on learning outcomes, there was nevertheless strong pressure from the literature that this was “just the way education was going”. Another respondent observed that some of this pressure appeared to emanate out of some sections of the education profession who sought to decouple effective student learning from independent charismatic teachers. This shift, they argued, actually helped to support the interests of the Australian Government.

There is a kind of ideology there in some areas which sees online learning as offering enormous scope for what they called “independent learning”. And that’s a very tangled ideological sort of thing, because a number of the people in our field don’t want to believe that a lot of effective learning depends on individual dynamic teaching...So some people in our own professional areas would really love to take teachers largely out of things altogether and make the students independent learners. And they actually see the well, what do we call it, the technologically assisted program learning or whatever, they see that as a way of doing that, of all the business of getting students to take responsibility for their own learning becoming less dependent on teachers...That has actually played into the hands of the people in Canberra who want to save lots of money. It’s a weird conjunction, but I think it has had something to that effect (Education Research Centre).

The Australian Government also contributed to this general pressure through questionable rhetoric in support of online learning technologies reducing the costs of higher education. Together with the provision of various CAUT and AUTC grants, this encouraged the development of an association between innovation in teaching and new technologies that appeared to encourage “quite a few” early adopters at Metropolitan University.

So the government indirectly, in trying to stimulate thinking about teaching, and trying to make a profile of teaching, locked that into a model in which many people see that as use of IT. So in other words, innovation in teaching or improvement in teaching means use of IT in many people’s minds, which is an equation that I deny, as you can see from my tone you know...So I guess the government indirectly, indirectly gave a big push to that (Education Research Centre).

Government funding was obviously the CAUT, in the early days, that was quite important, in the 90s. That fired-up quite a few early adopters (Central Services)

**Figure 25: Major External Influences at Metropolitan University**

External Influence	Supporting Quote
Online learning literature	<i>There's been very few studies done on the impact of all of these things so on learning outcomes, and that's a common criticism, but nevertheless that's not a reason not to do it, because of all of those other reasons: marketing, signalling. It's just the way education's going and it's a bit like swimming against the flow (Faculty Representative).</i>
Australian Federal Government rhetoric	<i>I mean there's a lot of rhetoric which has come out of the Commonwealth Government, various stuff which I'm afraid I view very cynically. I think that's very much to do with the vision of doing things much more cheaply than traditional teaching... We've, from that source, I think very little sceptical analysis... there's too much of just the simple minded you know to'ing and fro'ing between the extreme sides I think. So yes, the Commonwealth Government, DEETYA/DEST whatever it's called at any particularly time, some parts of it anyhow really pushing this as a solution to the funding problems associated with mass education, yes definitely (Education Research Centre).</i>
Australian Federal Government grants	<i>I think they gave grants, and one of the criteria would have been innovation in teaching practice, and that came to be read as online learning. So if you had a technologically dense type innovation, you could apply for a CAUT grant or an AUTC grant and your chances of being funded were improved. So I guess from the Canberra point of view, that would have been one avenue through which they were stimulating the adoption of online learning (Faculty Representative).</i>
Corporatisation of universities	<i>The timing is with the corporatisation of universities in my view, where the corporate management and the financial model has been moved into the university as well. The introduction therefore of enterprise-wide systems where we try to glue together the educational objectives together with the business objectives (LATET).</i>
'Downtown' corporate influences on Council	<i>And at this university, one of the drivers for an enterprise system was Council's dissatisfaction with the quality of financial reporting it was getting... And these people were coming from downtown and they were directors of big public or private companies, and they were used to far more sophisticated financial and other reporting than they were getting from the university. And I think in fact it is probably in our documents somewhere. But there's no question that that was the case (Central Services).</i>
Other universities	<i>... We're looking at having to look at every dimension of the university, from the way we handle research grants through to you know, HR functions, the whole caboodle. And the student system's been the most difficult by far because we wanted to do it properly and not to make mistakes that other universities have made (Senior Management).</i>
Software vendor marketing activities	<i>I mean the bottom line with LMS's is that there're only two vendor products in the marketplace that have any market share of any substance, that's WebCT and Blackboard, and they've see-sawed back and forth, so you didn't have much choice... I think WebCT... has probably had a better marketing presence in Australia than their competitors. ... So if you thought LMS, you thought "oh WebCT is what they're talking about". So it became a Hoover. It became an association of the brand name with the product (Central Services).</i>
Professions	<i>You know by a particular date, the [name deleted] was going to come here and either accredit or not accredit our course, and we knew they wanted us to have a learning management system in place, and we knew that we had to convince them that it was going to work (LATET).</i>
Domestic student expectations	<i>So I think it's been more driven by social change and the, the commercial opportunities that people were looking for I don't think ever really materialised, and they became fairly irrelevant. People had to get on the web because their students demanded it, and not because their head of the department said they had to start making money (Central Services).</i>
Emerging new digital technologies	<i>... I think it was anticipating that the internet was going to become a very powerful communication medium, and that if universities are in the business of communicating information, then we really need to know how this works and how we can use it... I mean our job is to deliver the best possible experience for our students isn't it? And I think if we weren't making use of multimedia and online technologies, we wouldn't be doing that (LATET).</i>

At a similar time, other respondents noted an increasing “corporatisation” among universities that led to an interest in broader enterprise-wide systems. At Metropolitan University, these systems were of particular interest to members of Council, who were accustomed to more sophisticated financial reporting as part of their public and private company experiences. As a result of Metropolitan University’s very late adoption of a university-wide enterprise system, it was able to observe and learn from mistakes made by other universities.

Metropolitan University’s prior successful implementation of a very large enterprise system, at a time when other Australian universities had made costly mistakes, was also argued to have created an expectation that the new learning management system would be managed in a similar manner.

...I had just done the university systems project, which was a major implementation and enterprise system, and for the first time, the university had done a very large project professionally...So the implementation went very well, and we did all the proper things, like proper documentation, change management procedure, all the things you need to do, professional project plans and all that kind of stuff. So the LMS is coming along in the train of that. So there was an expectation that it would be managed in that way (Central Services).

Another external factor that was noted by some respondents was the marketing activities of some software vendors, the success of which created associations between some brands and the broader technology. This factor may have contributed towards an early belief in the suitability of WebCT during initial evaluations at Metropolitan University.

Finally, respondents also noted the impact of other significant external influences on faculty-level decisions. Accrediting professional associations required some courses to have a learning management system in place prior to the development of the university system. Other faculty-level decisions appear to have accommodated perceived student expectations for web-based interaction. It was unclear however, the extent to which this perceived student demand helped to initiate early adoption, reinforced later adoption initiatives begun elsewhere in the university, or was simply rhetoric used by early adopters. For example, Emily argued that student demand “drove” later university adoption of Blackboard, particularly where students had an earlier experience in a prior subject.

I guess what we’ve found, the first time we were involved in this, the uptake was huge. And we found it was actually the students that drove it, because they had one subject where it was being used well and then they’d ask all their other lecturers “why aren’t you putting things up on, you know the learning management system, because we think it’s great?” So that actually pushed, you know that kind of student push can’t be underestimated really (Senior Management).

## MAJOR INTERNAL INFLUENCES

In addition to the above range of external influences acting upon Metropolitan University, there were also several significant internal influences. Many of these influences were described in the previous narrative, and are summarised in Figure 26.

**Figure 26: Major Internal Influences at Metropolitan University**

<p>Institutional identity:</p> <ul style="list-style-type: none"><li>• An old university with a conservative and decentralised culture</li><li>• A large campus-based institution located in the suburbs of a major Australian city</li><li>• A research university and member of the Australian University Consortium</li><li>• Strong ambitions to acquire and maintain a superior institutional reputation in the international higher education domain</li></ul> <p>Institutional history</p> <ul style="list-style-type: none"><li>• Past institutional behaviour shapes the internal conditions influencing later round behaviour</li></ul> <p>Key actors:</p> <ul style="list-style-type: none"><li>• Independent academics who were interested in teaching and new technologies</li><li>• A highly ambitious and powerful VC and senior management</li><li>• A new internal appointment to the newly created Learning and Research Support (LARS) group who had a strong background in education</li><li>• Various members of past and present central education and technology units, such as the former LAMU and ITS teams, and current LARS and Central Services groups</li><li>• Members of the Education Research Centre</li><li>• Members of LATET, a sub-committee of Academic Board</li><li>• Some members of Faculty-based multimedia groups</li><li>• University Council</li></ul>
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Respondents at Metropolitan University described their institution as a very old university that was both conservative and highly devolved/decentralised. The university is a very large campus-based institution, located in the suburbs of a major Australian city. Much of the identity of this university

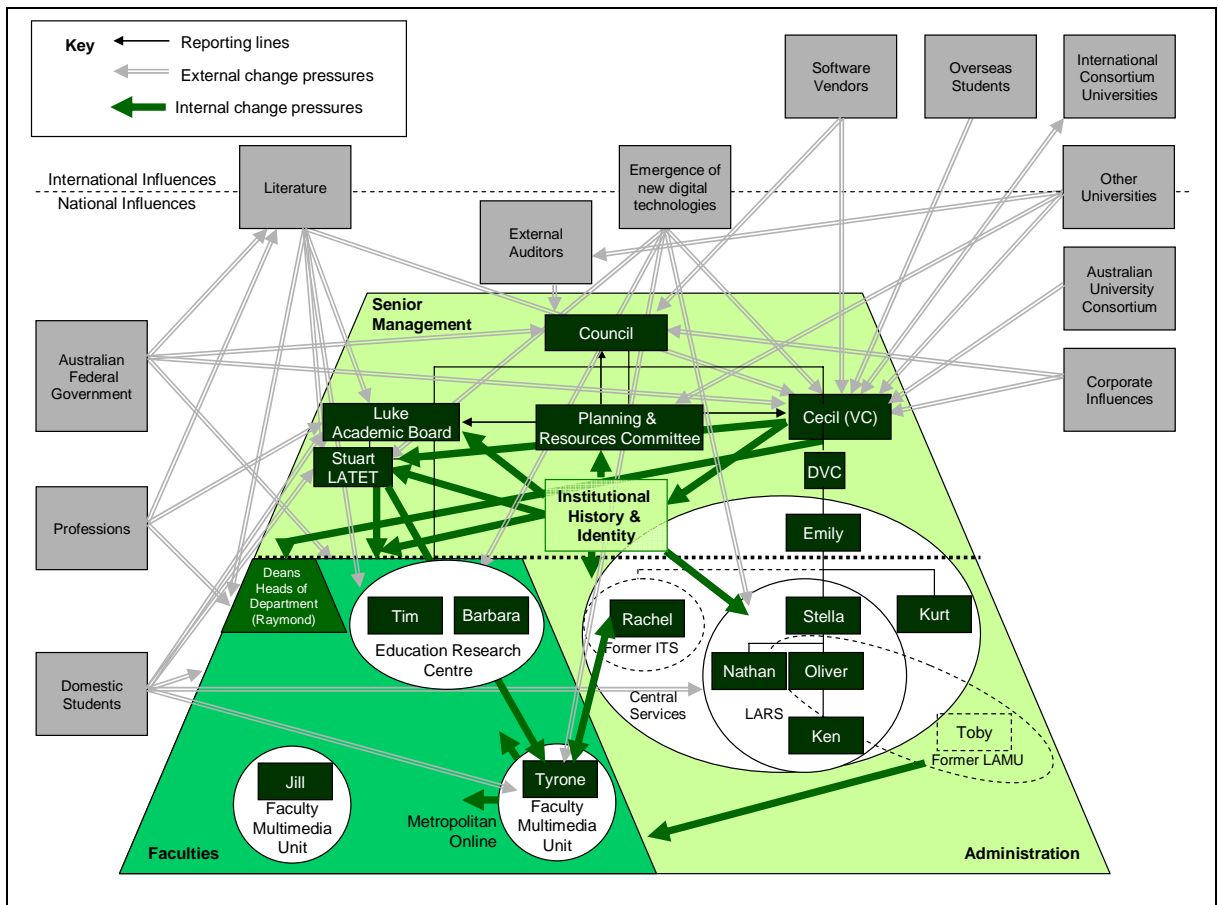


is also caught up with its membership of the Australian University Consortium, along with other universities like Suburban University who see themselves primarily as research universities.

Metropolitan University was very ambitious to acquire and maintain a superior international reputation, driven by a highly ambitious and powerful VC and senior management. Constraining and enabling the VC's decisions was a set of past historical structures and behaviours, labelled institutional history in Figure 26. This included a culture of decentralised decision making among the faculties. A number of other actors also played significant roles in enabling and constraining various university decisions and processes, and are also noted in Figure 26.

These internal and external factors affected different actors at different times. An attempt to illustrate the operation of these influences on different parts of the university is shown in Figure 27. This figure summarises the different internal and external factors observed by respondents at Metropolitan University. The coloured trapezoid shape represents Metropolitan University, broken down into further sections such as Senior Management, Central Services, Education Research Centre, LATET and Faculties, as well as other nominated heads of authority. Figure 27 also attempts to illustrate the location and relationships between different parties involved in changes and decisions discussed throughout this chapter. The key at the top of Figure 27 distinguishes between the different kinds of internal and external influences at work.

**Figure 27: Internal and External Forces of Change at Metropolitan University**



Drawing on the above figure, a number of observations can be made about the nature of the evaluation and adoption processes at Metropolitan University. First, there were a significant number of external influences acting upon multiple staff members at Metropolitan University. These influences ranged from impersonal literatures and rhetoric in support of online learning, to more direct relationships with other universities. Many of these influences were discussed in greater detail in Figure 25.

Second, there were also a range of internal influences at work within the university, also described throughout this chapter. These influences included a number of strategies and political tactics such as restructuring departments, funding of various multimedia grants, and developing strategic plans and incentive programs for Deans and Heads of Departments. Also significant were attempts by Cecil to manipulate Metropolitan University’s institutional identity through benchmarking programs with other successful universities, culminating in the construction of the International Consortium. The institutional identity and history at Metropolitan University were claimed to be

significant in explaining the devolved nature of some university change processes and behaviours, such as the Development of Multimedia Fund, and may have been significant in helping some staff members to resist successfully some central university decisions (e.g. Stella's recommendation to the Planning and Resources Committee that the university not adopt WebCT, and Rachel's support for Metropolitan Online).

Third, Cecil's central role in these evaluation and change processes across the university can be observed from both his position across several important reporting lines, as well as his attempts to influence internal university changes and learning management system evaluation decisions. Given his central role in the university, it might be possible to hypothesise that his conviction of the merits of online-based learning, and his rather strong views about particular learning management systems might be partly related to the intensity and multiplicity of external influences acting upon him during his time as VC. Some of these external influences include the emergence of new digital technologies heralded as a revolution in higher education, perhaps in conjunction with an associated literature in support of these broad claims; the decision of the Australian Government to reduce university funding causing him to look for alternative funding sources; and a range of corporate influences on the University Council.

Finally, external universities played an influential role in internal evaluation processes at Metropolitan University. "Other universities" were influential as both examples to avoid, such as Leading Technology University, as well as examples to emulate, such as the International Consortium. Some universities, such as Redbrick University, were even involved in the internal evaluation processes through representative individuals at formal evaluation meetings. Furthermore, the extent of influence these universities exerted on relevant parties appeared to partly turn on their access to the relevant personal networks of those involved. For example, the universities involved in International Consortium that Cecil setup, and those that failed in very public ways known through his various VC connections, seemed to be most relevant in his decision making. "Other universities", such as local universities, Redbrick University and Technology Savvy University, as well as other universities overseas, seemed to be more relevant to those parties conducting evaluations of the actual technology.

The final section of this chapter will explore the impacts of these changes on different university outcomes.

# Impact of Changes at Metropolitan University

The previously discussed changes that have taken place at Metropolitan University have had an impact on the university in a number of different domains. Each of the main domains raised by respondents is briefly discussed in the next section.

## ORGANISATIONAL RESOURCES

Senior staff at the university claimed that making or saving money was never part of the original rationale for adopting a university-wide learning management system, as it is “very expensive to do properly”.

We want students to have access to the best in terms of materials and educational experiences. You know it’s certainly, it certainly hasn’t been argued through in terms of how much money the university might make or how much money it might save because we realise actually that if you’re going to have online modules or entire subjects, they’re actually very expensive to do properly. You know it’s not a cheapy (Senior Management).

Metropolitan University is streamlining access to learning materials across the University community with the \$2 million implementation of a new learning management system (LMS) (Senior Management Document H).

Despite the university allocating some \$12.5 million dollars over five years to the Development of Multimedia Fund, and \$2 million dollars to the purchase of a new Blackboard learning management system, the most significant costs were actually in staff time. Many of these actual costs however, were rarely measured.

We can upgrade our system here which is basically, which is licensed from another country. We can upgrade it in 45 minutes, but it takes us six months to work through the 3,000 people who interact with the system to train them. Now that’s, they’re clinically trained staff all over the state, ...and there are a lot of people that are not, for whom using the system like this is not their major purpose in life you know... So the implications for us making a change on all those people are, will take a long time. Now all of those things have a cost to them, and I don’t think we ever go back and look and say well ‘what did it really cost’, if that sort of makes sense (LATET).

The ‘real’ costs are seen to include items such as ‘porting’ over of integral elements of current systems; academic staff time for migration of materials, training and development; provision of local technical support; and customisation to meet teaching and learning needs (Central Services Paper 1).

Staff training was not the only area that required extensive time commitments. Educators using various forms of online learning were advised by two faculties to be careful about the amount of work that this particular mode of education could generate, relative to traditional face-to-face teaching commitments.

I think what we often advise people who are coming to our group say “well we would like to put this online” say “well, are you ready for the amount of work that this could generate for you. I mean it’s

a wonderful opportunity, but be realistic about what you can offer to students, compared with your own commitments” (LATET).

As things stand at my university (and I suspect, at most others), there is little professional incentive to prioritise innovation and excellence in an area so demanding of time and expertise as digitally-based education. The generally accepted rule of thumb suggests that something between 300 and 500 hours of preparation are required for each hour of educational multimedia product (Phillips, 1996, p.48), a ratio of preparation to teaching far in excess of that required to be an excellent face-to-face teacher in a traditional setting, and a very useful professional investment when devoted to research and publication (Faculty Paper 1).

Although learning management systems do sometimes require more staff time, it was argued that there are cases in which it is not only very cost effective, but also enables some forms of learning not possible to accomplish without it.

I’ll give you an example of that ...Say we get [name deleted] to give a lecture. Now he may say to me “look Raymond, I can give my students a much better lecture-tutorial on [course name deleted] than anything you can do in multi media”. “Absolutely, I quite agree with you”. “Now how many students can you do that to?” And they say “well let’s say ten”. And I say right “can I book you for thirty repeats of that tutorial next semester?” And now given the, so the answer is simply no he can’t do that. Can he produce a, at least some of that material which helps the students to get to the point where they can understand what he’s talking about when he gets there? Then that’s a valuable addition to the way in which students can learn (LATET).

Common to all comments in relation to cost was an assumption that the additional costs outlaid for learning management systems were worthwhile in light of producing “better” education experiences.

I can guarantee without even looking at, you point to me any implementation, your learning management system did not save money, it cost money. I would be absolutely stunned if you could find me one that was a cost saving, because you’re doing all the things that you used to do before, and now you’re doing some other things ...And as an academic, I can probably do a bunch of stuff I probably couldn’t do before, but by the way, I also have to do a bunch of administrative stuff I didn’t do before that I don’t like. That’s the cost of giving the students a better experience in a sense (Central Services).

## **LEARNING AND TEACHING**

Respondents were asked about the extent to which various online learning initiatives, whether conducted within the Metropolitan Online platform or other learning management systems, had an impact on student learning and/or academic teaching. This was a particular area of interest in this study, given that the educational merit of these technologies was used as a key justification for adopting these technologies both at Metropolitan University, and across the higher education sector more broadly.

Learning management systems were advocated by different academics at Metropolitan University for a range of popularly cited reasons. It was argued for example, that these platforms reduced

paperwork for large classes, provided an environment in which international students could ask questions comfortably, promoted ease of communication with students, and was even claimed to introduce more variety, thus increasing student attention.

Well in the large classes it's possible to do things that you couldn't do in a paper-based environment because there'd be too much of a paper flurry. I think for our international students, we find with the ability to, through the online, we have an online tutor which is a specific small program that we developed, international students are more likely to ask questions in this environment than they are in a face to face environment, in part for cultural reasons. It's easier to communicate with students, you know you've got the whole cohort, and you're saying something or writing something that's going to the whole cohort at once, so they've got the opportunity even if they aren't at the lectures or they aren't at the tutorials, they know that they can go to the web site and that system of communication. I think it gives, I think they think it gives a sort of variety into the, it adapts to the various learning styles of the whole range of students in your lecture. It breaks up lectures, gives more variety, and therefore increases attention, and hopefully therefore learning (Faculty Representative).

It was also claimed that as a result of these new learning management systems, students had much greater flexibility of delivery.

They provide opportunities for students to get the content, interact with the content, work with it at times that are convenient to them, in places that are convenient too. I mean flexibility of delivery, if you like, is it seems to me what the online technology then have the potential to provide, the flexibility of delivery (LATET).

In some faculties, it was claimed that students grew in their confidence of their existing knowledge, an important attribute in some professional applications.

So one of the things they really enjoyed which, I guess more than I thought they might, was the use of formative questions...So we try to set questions which not only can you get this right or wrong and get some feedback, but then ask our students "how confident do you feel about this answer before you submit it?" And one of the things that often happens is that they, although they, their actual knowledge may not increase that much, the confidence with which they can assess that knowledge increases. And in a training like [name deleted], this is really very important. They really have to know what they know and know what they don't know. And so for, it's not a matter of persuading people, themselves, that this is a good argument for something that's correct, they actually have to know, and they have to be as correct as they can (LATET).

Not all respondents were enthusiastic about their university's adoption of a proprietary learning management system. Three respondents with educational backgrounds noted that the new Blackboard platform, argued to be typical of most learning systems, was "fairly banal pedagogically". These respondents were instead more supportive of the unsuccessful open source recommendation that would have allowed greater flexibility to meet the needs of expert academics within the university.

I think the university made a bad decision because the university had invested a lot over recent years in growing up people with expertise in using ICT. So we funded so many damn projects, we've got so many experts around the place. And the problem with most learning management systems is that they're fairly banal pedagogically. So we have now this disjunction if you like, between what our

experts want to do, and what the learning management system, once it's implemented, Blackboard learning management system, will be able to do (Education Research Centre).

One of the difficulties that academics expressed in relation to this issue, however, was a lack of evaluation evidence in support of improved student learning. This issue was raised earlier by a faculty representative in Figure 25. The final report of a formal investigation into learning outcomes following the Development of Multimedia Fund concluded similarly that objective measurement of learning outcomes as a result of "mainstreaming the digital revolution" was difficult to assess.

Objective measurement of learning outcomes is extraordinarily difficult to achieve and most common benefits related to perceived value by students. Overall, the findings suggest that learning outcomes for initiatives vary from modest to ambiguous (LATET Evaluation).

Rather than benefiting student learning, adoption of these programs was claimed to have had a greater impact on the university's reputation.

Getting into these things was to position the university at the leading edge, and I think, I mean it's a bit like [name deleted], you know positions itself as a school on the leading edge of laptop programs. And along with that comes a whole lot of problems, and arguable as to whether your learning has improved, but it positions you as an innovator institution, a leader. You can do it because you have more money than others, so it differentiates you I guess (Central Services).

It was argued that ultimately, measurement of any improvement in the university's reputation or student learning was not possible, despite the analysis of many indirect measures.

...We measure costs with a micrometer, and we measure the benefits with a divining rod... it's absolutely true! I mean most of the benefits we talk about in the university are intangible benefits in best sense of the word...And for the LMS, that's really hard, because most of the things you can measure don't matter much. You can measure how many students use the system or how long it took them to get assignments back, they're all nice things to know, but as an academic, you know that that's not really the critical thing. How do you measure the fact that they're learning better? You can't do that in a system sense (Central Services).

Without a capacity to measure student learning, many academics resorted to evaluations of student satisfaction in relation to these technologies. In cases where these were conducted at Metropolitan University, students "were really very positive".

...In evaluations that we've carried out on that system, they all say that it's valuable, that it helps them, that at one stage at least as part of the focus group discussions, one of the researchers threw in a question at random but she thought it turned out to be very inter... "The [name deleted] is seeing this as quite expensive to maintain, they're thinking of switching it off actually, so we need to get some feedback from you". Well students were bereft at that thought. "No, no, no, you couldn't do something like that". Their reactions were really very positive (LATET).

In addition to arguments that using learning management systems had improved the student experience, others argued that these technologies actually enabled new forms of teaching not possible before the introduction of this technology. Peer review among students and the enabling of

discussion around contemporary articles related to particular disciplines were argued to be especially significant in this field.

One of the things that has clearly been established for the last ten years is that people are actually finding new ways of teaching with technologies, not just technology being used to do things better, but they're actually teaching in new ways, and they're doing things that they weren't able to do before without online technology. And these are particularly in the area of things like peer review amongst students...And that can be facilitated with technology and you can do it with large numbers of students in a way that simply wasn't possible before if you're just working with paper, just the logistics would have been too difficult. The other thing is that people can make their teaching a lot more contemporary, a lot more immediate. In Commerce, they use newspaper articles from that day, that morning's news or perhaps the day before, and because it's all electronic it can be presented to the entire class, and it can be presented to tutorial groups on the day and discussion about the application of particular theory, economic theory that they're looking at can be looked at, or re-evaluated in the context of that particular news item or the whatever it is it's developing in the news (Central Services).

## **ORGANISATIONAL LEARNING**

Another impact that was raised by respondents was the extent to which Metropolitan University was able to learn from its experiences in the past at a collective organisational level. One respondent claimed that although universities were ultimately in the business of learning, they were particularly poor at sharing such knowledge within the organisation.

We've had universities such as ours, which are very large and complex, there've been lots of good ideas and lots of leaders in different places, and how to harness that capability and learn from that at a whole-of-university level, which is just about organisational learning really. Universities aren't very good at that, surprisingly. They're probably one of the worst (Senior Management).

The Development of Multimedia Fund, discussed earlier in this chapter, encouraged significant individual learning and experimentation with multimedia technologies, many examples of which were placed on the web. One significant criticism that arose consistently in relation to this strategy, however, was difficulty disseminating this learning to academics and students not directly involved in this granting process. A formal evaluation of the impact of the Development of Multimedia Fund found a number of unanticipated learning outcomes however. These outcomes included generating groups of collaborators, new research directions, research publications, increased awareness of multimedia and staff promotions, and promoted educational journals as a legitimate academic research output.

Nathan may have told you about his grant in analysis and publications that came out of it, because he and I were trying to find a way in which we could measure what exactly has been the impact of that and the influence. And it's done things that we hadn't expected, like generate groups of collaborators who otherwise wouldn't have spoken to each other. It's generated new research directions, and it's produced publications in some faculties. It's raised awareness of multi media as a staff development promotion criteria in the university. It's, has raised awareness of impact factors and educational journals, and encouraged people to publish about education as a legitimate type of research (LATET).



There was also evidence of organisational learning from the prior enterprise systems implementation in both finance and HR under Kurt. It was argued that since these implementations were successfully completed, the team responsible for the evaluation and adoption of the University's learning management system learned from this project and worked hard to involve internal university stakeholders from the beginning of the project.

...The LMS learned from my project I hope, but also because it was there. And I kept emphasising that it's really important to get the stakeholders on side at the beginning. So when we selected the enterprise administration system, I involved right from the very beginning, the people that are currently using the system in the selection process. And the other thing that we involved is we set up a very good governance structure with the executive steering group that included two deans and the Chair of the Academic Board and so forth (Central Services).

Finally, there appeared to have been a degree of organisational learning from Metropolitan University's two previous learning management system evaluations. These prior experiences are claimed to have shaped the way it is now conducting its current implementation of Blackboard.

...The strategy was all about individuals being innovative with technology and exploring what could be done with it, and then learning from that how it goes forward. And I think that what we learnt is being acted on via the way in which we are implementing the learning management system. We are doing it in a way that we can continue to develop and add new tools so that we are not totally dependent on a proprietary system that is largely designed for the North American market (Central Services).

## **LEGITIMACY OF ADOPTION**

Metropolitan University's adoption of Blackboard as its core learning management system, along with its membership in the SAKAI Open Source initiative, enjoyed a fairly high degree of legitimacy. One senior manager of Metropolitan University claimed that most people supported the final decision, whilst acknowledging that a few did not. This consequence could have been the result of a number of different mechanisms. The final decision to allow the university access to the SAKAI open learning initiative within a vendor-supplied learning management system could have been seen as a way to satisfy multiple competing stakeholder groups, thus guaranteeing greater support for the final decision. The fact that so many senior and faculty staff were also involved in both the evaluation and decision making process from the earliest stages could also have assisted to talk "people around". Finally, the conduct of an external due diligence assessment of this decision could have given an additional degree of external legitimacy to this decision making process, even if it was subject to pressure from the Vice Chancellor. It was therefore claimed that "people felt that in the end we'd made the right decision".

And I guess one of the reasons why we went down the Blackboard road in the end was that we received reassurances about how useful Blackboard would be in enabling different areas of the university to talk to each other so to speak, in terms of the new developments that they were undertaking. We also took out a license to this, what's it called SAKI or whatever, that enables our real sort of cutting-edge people to still have access to what is going on. So yeah, it was a difficult decision and one that in the end was made, there was a decisive decision to make it, but I mean it took a number of people to, it took a while to sort of talk people around, but we did a very careful sort of due diligence on it, and people felt that in the end we'd made the right decision. Some people don't, but most people do (Senior Management).

Three respondents disagreed with the university's substantive decision on cultural and pedagogical grounds, indicating a lack of internal support and hence legitimacy among a portion of the university community. Disagreement was based on the claim that the new Blackboard-SAKAI system would be able to support the many faculty experts funded by Cecil's earlier grant scheme (discussed in the previous learning and teaching section). It was claimed that most learning management systems were "fairly banal pedagogically", and the "extensibility" of Blackboard to customise home-grown innovations was more limited than earlier thought.

What seduced us about open source was the capacity over time to build pedagogical tools from what we already had, to build them into a learning management system, and integrate them seamlessly you know. And clearly you can't do that with Blackboard, despite the building blocks architecture it's known as, no it's not a simple matter as far as I understand it (Education Research Centre).

Despite these limited criticisms, the final decision of the university appears to enjoy fairly broad support, now that it has been made after many years of deliberation.

## **PACE OF ADOPTION**

Metropolitan University was a relatively late adopter of a university-wide learning management system, given that respondents claimed that most other universities had a commercial learning management system in place at the time of the university's second evaluation.

Most other universities by the time we were doing this review, had in fact decided on one of the commercial LMS', and had them in place (Education Research Centre).

Whilst Metropolitan University was a very late adopter of a university-wide learning management system, its profile of adoption was very different at a faculty level. In keeping with their autonomy, faculties collectively adopted five different platforms across the university during the university's deliberations, many of which were developed in-house.

We in fact had, or have, about five in the university. So it's not as though we don't have one, we've got lots of different ones, many in-house developed (Senior Management).

Following a period of organisational restructuring, implementation began during 2005 with a pilot program, with a university-wide implementation scheduled for first semester 2006.

Well that, because of various I guess directional changes in the top and in the division, or in the central unit, it didn't really get off the ground until actually, literally this semester or last semester, was when we finally implemented Blackboard in its first pilot form, the first semester this year. There's another pilot semester this year and then it's going forward to the full university next semester, sorry first semester 2006 (Central Services).

The response of the university to this implementation project has been assisted by "early enthusiasts" who have acted as local champions for this technology. One respondent claimed that the "uptake was huge", with all 150 pilot subjects for second semester 2005 filled.

So you know getting those early enthusiasts testing it out, making it work, and then spreading the word. We had no trouble filling the 150 for second semester, there were enough people out there. Some departments we had to do a bit of prodding. But then they provide the exemplar, they model the behaviour, they do all those things that management-speak talks about. But they engage, their students engage, and then, and you get, I guess what we've found, the first time we were involved in this, the uptake was huge (Senior Management).

The decision to pursue Blackboard and SAKAI, when criticised, was done so most often on the grounds that the university ultimately took too long to make a final decision. It was even suggested that an inferior vendor-based learning management system decision made seven years earlier would have been preferable to waiting as long as they did for the recent Blackboard-SAKAI decision.

LATET

Well I think that my view is of the whole thing was agonised over by too many people for too long. I would have made a decision seven years ago, and I would have done it. I mean that's in fact what we did. This faculty withdrew from the university's process because we had a course to deliver. Now I think at that time the university could have made that or a similar decision and bought a system which did 80 percent of what they wanted and got onto it then. Now they didn't do that, for a variety of reasons I suppose. ...Now I think in fact it would not have mattered if they'd have simply made a decision seven years ago and gone and done it.

Researcher

So an inferior product but brought in early so they're doing something?

LATET

Well it would have evolved. And they could have bought WebCT or Blackboard.

## **STABILITY OF ADOPTION**

Given that Metropolitan University has only recently adopted Blackboard and become a member of the SAKAI Initiative, it is difficult to evaluate the stability of this decision. It is possible to make inferences about the likely stability of this decision, based on observations of the means by which these initiatives were put in place.

As discussed earlier in this chapter, one of the change strategies employed by the architects of this project (Emily, Stella and Kurt) was to involve as many of the key stakeholders in these decisions as possible, including representatives at the highest level of the university. Having participated in making this decision, these same representatives are unlikely to change this decision in the short term.

Three other mechanisms that are likely to cement these changes are illustrated in the excerpt below. The significant amount of grant money offered to train staff, technology-related questions added to teaching evaluation surveys, and adoption targets allocated to the deans are all likely to make changing this adoption decision more difficult.

Yep, well three things to that answer. The first is it had a lot of grant money for people developing new IT-based solutions to pedagogical problems, that was the first thing. So that was like, if you like, the top level support. The idea being that train up these people and there'd be some trickle down effect you know. ...The second thing was that on our quality of teaching evaluation, getting down to more mundane matters, but on our quality of teaching evaluation, we added questions which said, and which asked the students to report on, "web-based materials were helpful in this subject for my learning" or whatever right. So, yeah two questions were added which directly probed, the thinking being that if they're on the questionnaire, it will drive behaviours accordingly ...Now the layer up from that is that deans had targets for their faculties you know, a portion of subjects have got on Blackboard, or I forget the precise indicators, but you know you can get a feel for what they were. So deans had quantity performance targets (Education Research Centre).

Finally, the decision to "retire" alternative platforms like Metropolitan Online, discussed earlier in this chapter, was likely to reinforce further the adoption of Blackboard as the central learning management system within Metropolitan University.

This chapter describes the processes of institutional change around the introduction of a new learning management system at Metropolitan University. It does this by introducing the reader to Metropolitan University, the evidence used to construct this case, the university's relative size and scope, structure and key relationships, as well as its institutional history and identity. The relevant processes of institutional change are described in detail, illustrated by liberal quotes from respondents and various internal and external documents in order to ground this case study. Finally, the impact of these changes on a number of relevant organisational domains are noted and explained.

The next chapter explores the process of institutional change at this study's final university case study, Regional University.

## **CHAPTER FIVE: CASE STUDY THREE – 'REGIONAL UNIVERSITY'**

The previous two chapters described the process of institutional change around the introduction of new learning management systems at Suburban University and Metropolitan University. This chapter introduces Regional University, the evidence used to construct this case, the university's relative size and scope, structure and key relationships, as well as its institutional history and identity. Following this discussion, the process of institutional change is described in detail, with reference to liberal quotes from respondents and key documents, used throughout to illustrate and ground this case study. This chapter concludes with a discussion of the organisational impact of these changes across a range of different relevant domains.

### **Nature of Case Evidence**

This case study has been compiled on the basis of nine in-depth interviews and 33 internal and external documents. Following the critical theory research paradigm, discussed in chapter two, this case does not pretend to represent the only “true” account of historical events described at this university. Rather, it is argued that this case study is itself a social construction, formed by the researcher after the collection and analysis of the identified case evidence. The construction of this case however, is argued to be valid, based on the quality of the evidence collected during the research process, and the way in which this evidence was analysed. Further discussion about the quality of these case studies is also found in chapter two.

Figure 28 indicates the major actors described throughout this case. These actors were classified as ‘Senior Management’, ‘Teaching and Educational Technologies Unit (TETU)’, and ‘Faculty Representative’, following their relative employment status in the university. Respondent quotes are normally denoted by these classifications in order to preserve individual respondent anonymity, except where the narrative of this case requires further detail. In these select instances, an alias name from Figure 28 has been used.

**Figure 28: Regional University ‘Actor’ Profiles<sup>29</sup>**

No	Classification	Actor <sup>30</sup>	Background Information <sup>31</sup>
1	Senior Management	Bart*	Vice-Chancellor prior to Xavier
2		Xavier*	Former Vice-Chancellor
3		Fergus*	Current Vice-Chancellor
4		Sashi	Former Deputy Vice-Chancellor
5		Anthony*	Former Head of the first Countryville campus in Apple
6		Richard	Director of Information Technology Services
7	TETU	Toby	Foundation Director of the Teaching and Educational Technologies Unit, formerly at Metropolitan University
8		Melissa	Former senior manager in the Teaching and Educational Technologies Unit
9		Belinda	Senior academic in the Teaching and Educational Technologies Unit
10		Brian	Academic in the Teaching and Educational Technologies Unit
11	Faculty Representative	Rob	Dean of one of the faculties, and a leading academic in the online learning field.
12		Capernicus	Leading academic in the online learning field, formerly in one of the faculties.
13		Bruce	Academic in one of the faculties

Key: \* Denotes an actor not directly interviewed for this study.

Figure 29 illustrates the various internal and external documents collected and analysed in the construction of this case. Documents are referred to by their classification to assist the interpretation of this material by data source.

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<sup>29</sup> The term ‘actor’ was used instead of ‘respondent’ in this case because some people noted played a significant role as actors within Regional University, although they were not directly interviewed as part of this research.

<sup>30</sup> All names noted in this table are alias codes to protect the true identity of the institution and its past and present employees.

<sup>31</sup> Some of these titles and descriptors are alias codes used to protect the identity of the institution and its past and present employees.

**Figure 29: Regional University Document Profiles**

No.	Classification	Author/s	Year <sup>32</sup>	Description of Document	Qty
1	Senior Management Document A	Fergus	2002	Regional University strategic plan	1
2	Senior Management Document B	Senior Management	2004	Regional University teaching and learning plan	1
3	Senior Management Documents C-G	Senior Management	2000-2004	Annual reports produced for external stakeholders of the university	5
4	TETU Document A	TETU staff	2003	TETU's strategic plan.	1
5	TETU Document B	TETU staff	2004	Information package for new teachers at Regional University	1
6	TETU Document C	TETU staff	2005	Report of TETU's activities to the university	1
7	TETU Document D	TETU staff	2004	Newsletter of the unit's activities	1
8	TETU Document E	TETU staff	2005-2006	Advice to staff using WebCT	1
9	TETU Website	TETU staff	1997-2005	Various details relating to the operation and performance of TETU.	1
10	Faculty Member Reflections	Melissa	2003	Critical reflections of a TETU academic on the events surrounding the university's adoption of WebCT towards credit in a postgraduate university subject.	1
11	Library Document	Library staff	2000	Annual report on the activities and performance of the Regional University library	1
12	Technology Adoption Report	Various faculty representatives	2002	Final report of a university leadership program to increase the rate of adoption of new technologies across the university.	1
13	Faculty Thesis	Faculty representative	2003-2004	Doctoral thesis completed by a faculty representative on relevant areas for this study.	1
14	Faculty Papers 1-14	Various faculty representatives	1997-2004	Refereed journal articles, conference papers and non-refereed papers on academics' experiences with online learning and various learning management systems at Regional University.	14
15	University Website	Senior Management	2004-5	Selected information gathered from the university website	1
16	Government Report	Australian Universities Quality Agency	2005-2006	Report of an external university-wide audit	1
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<sup>32</sup> The year of publication for some documents have been broadened to reflect either uncertainty around the exact date of publication, or to protect the identity of the university.

# **An Introduction to Regional University**

## **SIZE AND SCOPE**

Regional University is a small to medium sized ‘New University’ with several regional and city campuses. Regional university also has a significant number of postgraduate and international students.

## **STRUCTURE AND KEY RELATIONSHIPS**

Similar to Suburban University and Metropolitan University, the Vice-Chancellor (VC) at Regional University is the chief executive officer in this university. The VC is assisted by a team of Deputy Vice-Chancellors (DVCs) and other senior managers, who take responsibility for a range of institutional portfolio. Council direct a number of other important committees, such as Academic Senate. As is common with most universities, the actual research and teaching is conducted at a faculty level. Assisting the faculties in these functions are several central units such as the Teaching and Educational Technologies Unit (TETU) and Information Technology Services (ITS), which are ultimately accountable to the senior management of the university.

Unlike Suburban University and Metropolitan University, Regional University is not currently a member of any comparable consortium or formal grouping of Australian or international universities (Government Report). Although Regional University does have a number of international research and teaching affiliations and relationships, including an overseas campus, these relationships do not shape the identity or decisions of the university in the same manner as the previous two case studies.

## **INSTITUTIONAL HISTORY AND IDENTITY**

Respondents at Regional University noted that the culture of their university was a significant influence on some of the events that have taken place in recent years. In concert with many other Australian universities, there was a tension between the institution’s teaching and research values. One of the stark differences between Regional University and other Australian universities such as Suburban University and Metropolitan University however, is that teaching has been historically valued by the senior management of the university since the university’s formation.



We were probably the first University in the country to have compulsory tertiary education training, and we've also had, always a strong emphasis on teaching as a promotion, a significant promotion criteria so people can go to every level of promotion with teaching as their first efforts...It doesn't mean that at the promotions level you can not be a researcher as well, like those days have passed, but it certainly means that it's highly valued (Faculty Representative).

Unlike many other Australian universities based in regional areas, Regional University does not consider itself a primarily distance education-based university. This institutional identity could be argued to be at odds with its practice of using technology to reduce face-to-face lecturing at many of its Countryville campuses (discussed later in this chapter). This view may represent an attempt by the university to secure the reputation of a more traditional campus-based university, perhaps against a background of failure of many online universities, discussed in chapter one. Whatever the reason for this potential contradiction, senior management stressed that additional technologies were used in a supportive capacity to the primary aim of conducting classes on a face-to-face basis.

...This is not a distance learning university; it's a face-to-face university. All of our e-learning, our online learning, all of the things we've used to support teaching, are there to enhance the outcomes for our students and they're not there to replace the lecturer (Senior Management).

In describing the distinctive culture of their organisation, two respondents observed that Regional University was not a devolved university led by strong faculties, but had a more centralised approach to institutional decision making.

It's fairly small, it's very used to centralised procedures. It doesn't have that, very strong separate faculties. There's much more of a cooperative sort of feel. So you're able to make central approaches without great resentment. Not to say that there isn't; there's always that push-pull between central-decentralised sort of processes (TETU).

Finally, Regional University has attempted to construct itself as an innovative university, particularly in relation to new technologies (Technology Adoption Report). Part of this identity most likely began with its institutional specialisation in science and technology academic disciplines during the university's early history.

The first three decades were ones of growth from a restricted applied science and technology base to a broadening of the curriculum to disciplines ranging across the academic spectrum (Senior Management Document D).

Later Vice Chancellors appeared to capitalise on these technology origins in their attempts to position this newer university away from the competitive threats of other Australian universities, particularly the Australian University Consortium to which Suburban University and Metropolitan University both belonged.

...If you look back at the leadership of this place, what happened was we had some, when we were still, this was a university college of [name deleted] ... So up until that point we had, we weren't very innovative, we were pretty small we had sort of half time Vice Chancellors and then Bart was

appointed who was quite a visionary. And he started, he saw through the University becoming independent and set quite a nice scene as part of that, because the argument was we were good enough now to stand on our own, and so there was a lot of belief in the place of that time. And then we had Xavier as Vice Chancellor. Now Xavier, over the time that he was here, developed the vision and the trajectory of this place and...he was a teacher, he was an ex-Director of Education overseas, and he was on the Education Commission in Australia, so he had a strong healthy view about the importance of teaching. But not only that, he had two other views that he pushed, one was that our University should be able to be, should continue to innovate, and not be intimidated by the Australian University Consortium or anybody else. We had our own culture and our own future and innovations had to be a major part of that. So it was important to try out ideas. If you fail, well bad luck, but it was important to try out ideas. And secondly, he built a vision around innovation and technology (Faculty Representative).

Xavier was argued to have been particularly instrumental in pushing Regional University towards the adoption of new technologies, beginning with the use of email throughout the university in the mid 80s.

Xavier made Regional Uni embrace email in the mid 80s, and it put us streets ahead. Because Xavier just knew you're not you know, you can't deny the 'march of progress', and so you've got to be e-aware and e-capable, so Xavier was right on that (Senior Management).

## **Centrally Supported Academic Experimentation**

In support of earlier claims that Regional University had developed a strong innovation culture, particularly around technology in teaching, a research thesis examining aspects of Regional University observed that the university had recorded one of the highest adoption levels of computer-based education initiatives among 28 surveyed universities in 1992.

An early study found that over 90 academic staff at Regional University engaged in some form of computer-based education during 1992, one of the highest involvement rates for academic staff amongst the 28 universities surveyed (Faculty Thesis).

The extent to which these technologies would have inevitably changed university teaching was thought to be less likely however, given the patchy nature of adoption among a number of leading academics.

I 'spose the online was always there anyway. It would have happened one way or another. But it wouldn't necessarily though have made any changes to the way people teach. Although of course there are pockets. There are of course your leading lights, and there are a number of those sorts of people...So I think there's quite a long history if you like, at that particular institution, of using technology in teaching (TETU).

The Faculty of Education were singled out by several respondents (4) for their innovative use of technology in teaching. For example:

...Within the Faculty of Education there are a number of people who were doing quite innovative things, and I think that faculty probably stands out (TETU).

The Physics Faculty was also cited for their development of a multiple choice quiz program, later adopted by a number of other faculties.

...There is a system called Harry, which was, generated multiple choice quizzes and that, which sprung up in the Physics Faculty I think, and then quite a number of other faculties were using that system to distribute multiple choice questions and that sort of thing (TETU).

A common motivation among many of these interested academics was a fascination with the way in which new technologies could assist students to learn in new ways.

So but we at that stage, we could see as an institution the value of use of technology, the way in which it could, the affordances of the technologies had the potential to really allow kids to generate new ideas and give them ways to express them in different ways and that's what we were trying to think about (Faculty Representative).

Not all faculties were as advanced as the Faculty of Education and Physics however. One respondent originally from the Faculty of Arts argued that most academics in that faculty did not integrate new technologies into their teaching as a result of a lack of access.

At that stage many of the staff there did not have a computer on their own desk, so many of them had little to no skills at all in using computers, but if you did you usually had quite basic word processing skills. Like, you know I had worked with Year 6 kids who were more skilled than some of the academic staff at the university, which was just part of not having access...I'm not saying that everybody was at that stage but there, the vast majority were not skilled computer users and were not integrating technology in any great way into their teaching (TETU).

A more significant institutional commitment to the adoption of various educational technologies arose out of several initiatives that involved teaching across multiple locations.

## **'Multi-Location Teaching'<sup>33</sup>**

### **THE AUSTRALIAN DISTANCE EDUCATION CONSORTIUM**

Following the Dawkins reforms of 1988 (Dawkins, 1988), there was a rationalisation of distance learning across the higher education sector into eight officially recognised Distance Education Centres (Senate Employment Education and Training References Committee, 1994). Later in

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<sup>33</sup> A grounded in-vivo term generated by Toby to describe the nature of educational delivery across multiple campuses. This term was used to differentiate Regional University's teaching model from 'distributed learning' models used in the US, which were argued to have a distance education connotation.

January 1993, The Open Learning Agency of Australia Pty Ltd (OLA), a consortium made up of eight Australasian universities with expertise in distance/flexible learning, began operations supported by Federal Government funding (Senate Employment Education and Training References Committee, 1994). Sashi claimed that Regional University was expected to host OLA, but ultimately lost out to Metropolitan University. Instead, funding was given to Regional University to help set up the Australian Distance Education Consortium (ADEC). ADEC was operational between 1994 and 1997, and was intended to develop and provide online education for professional education using a range of technologies.

Although I came in just at the time when the government had given, had decided to set up a number of, well we had a number of Distance Education Centres and the government had decided to set up Open Learning Australia...Regional University was at the head of the queue to be the foster home of Open Learning Australia, but in the end politics won out and it went to Metropolitan Uni, and I think as a consolation prize Regional Uni was given some funding to set up something called ADEC...Anyway it was meant to be a consortium of Universities that developed online education for professional education (Senior Management).

ADEC is a consortium of eight universities in Australia and New Zealand collaborating to deliver professional education at a distance. Originally using television, video and print as the main delivery vehicles, ADEC providers are increasingly moving to the internet and CDROM (Faculty Paper 8).

Regional University was subsequently given \$2m by the Federal Government to build a production studio for ADEC, partly for “political reasons”, due to high interest rates and unemployment in key federal electorates.

\$2m was given by the Federal government, with an equal amount matched by the university, to build this studio and production facility...The Feds offered grants at that time for political reasons as their political constituents were recovering from high interest rates and unemployment (TETU).

When asked whether Regional University was “first in line” because of the university’s historical reputation for using new technologies, Sashi replied that it was driven by Xavier’s strong belief in the need for the university to embrace new technologies, and his political connections that gave the university access to these opportunities.

No I think it was all politics. I think it was the Vice Chancellor at the time, Xavier, was a very forward looking man, he knew this was the future. He knew he didn’t know a lot about the technology, he didn’t know how to clear, didn’t have a clear set of objectives, I think except that he had big picture vision and he knew that you had to be in it (Senior Management).

Another respondent claimed that Xavier’s “big picture vision” was driven by two main concerns. The first was a fear of being left behind by Ivy League universities who might pursue distance education strategies and take some of Regional University’s local market.

Xavier was concerned that students might pursue distance education with the Ivy League universities (TETU).

The second proposed rationale for ADEC was that it was as a “Trojan horse” (Faculty Member Reflections) to encourage university staff to improve their teaching.

His comment to me at the time was “...if nothing else, it will get the buggers to lift their game” (TETU).

Toby arrived later at Regional University from Metropolitan University in 1994 and joined the Teaching Media Unit, responsible for managing the video conferencing and distance learning operations at ADEC.<sup>34</sup> Four staff at Regional Uni claimed that Toby played a significant role at this time, bringing with him many leading ideas in online learning from his experience as the Former Director of a central university multimedia unit at Metropolitan University. It was claimed that once the internet became more popular, the technologies employed in this venture became redundant.

We were through the 80s, we were and probably halfway through the 90s, I think this University was advancing and so we were trying out a lot of new ideas. Toby came to work here and he’s done some wonderful stuff at Metropolitan University. When he came here, he carried a lot of that would have gone to try to implement the sort of ideas that he was working on, but also the rest of the world were starting to think about, in as sample ideas. We started what was called the ADEC program, which was a bit of a failure, but it was distance learning using video as a major component, and there were a lot of partners through the country. And then the web hit and then that really became, a lot of that became redundant (Faculty Representative).

Another respondent who was involved more closely in ADEC, claimed that one of the reasons ADEC ultimately failed was because the universities involved were competing instead of cooperating with one another.

ADEC went on, and yeah limped along, and it never really got off the ground, partly because the universities were supposedly collaborating but each of them was also holding their cards close to their chests because it was also the time of competition between universities (Senior Management).

The business model setup for this university consortium also suffered from insufficient Federal funding and the development of policies in isolation.

I mean it was just silly, I mean the politicians do lots of really dumb things. They set up several, there were several different initiatives running at that time and if they had put, you know, a significant investment behind one initiative we might have actually got somewhere, but they did what they always do, which is give \$3m to OLA, and \$1m to ADEC, and you know another and everybody was supposed to be self sufficient within three years...Anyway there was an awful lot of navel grazing and an awful lot of incredibly I think, unproductive activity, because the government was providing money and every now and then would pop up with policies in isolation, but the whole infrastructure thing was a major problem in that (Senior Management).

One of the unviable assumptions underlying these business models was a belief in the myth that online education would be cheaper than face to face techniques and would “revolutionise

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<sup>34</sup> Refer to the previous chapter of this thesis for further background on Toby’s influence at Metropolitan University.

education”. Despite many staff in universities knowing this was not true, they did not challenge this myth as it was not in their institution’s financial interests to do so, given the current environment of reduced Federal Government funding.

Now the myths about the government was definitely pushing the fact that this would be cheaper. You know you could set people up in front of TVs all over the country and you could do a lot of teaching. I mean it was absolutely ludicrous. And of course the problem is that the universities, nobody was going to stand, well a few people would stand up and say “no, no, you’re wrong, this isn’t cheaper” in the early days. But in fact you would have been pretty suicidal to do that, because when they were dishing out the money, basically you told them what they wanted to hear, so you could get some money. And so I think the politicians were saying that it would save money, it would revolutionise education. We talked about flexible delivery, you know we could have it on at your place, in your time, all of which was true. I mean you can do a lot of that stuff, but it’s not sufficient, and there’s an awful lot that goes into that (Senior Management).

## **THE COUNTRYVILLE CAMPUSES**

Although the Australian Distance Education Consortium was claimed to be “a bit of a failure”, it was not without benefit to Regional University. As a result of this earlier experience, the university was able to set up some internal facilities, creating the opportunity to acquire and service another permanent campus in Lincoln, as well as satellite campuses in Serento and Kantalla. These campuses could not have been served so successfully, particularly Serento, without access to new technology acquired through the university’s concurrent participation in ADEC.

...Regional Uni at the time was able to leverage that opportunity to develop some very good facilities for its own local use...So I think Regional Uni came out of it reasonably well, with a nice little arrangement there, which then made it possible also for us on a quite different political tack, you know. There was a desire for a campus in Lincoln, Serento and Kantalla, and so we did those as you know with a lot of help from virtual learning...Serento really was a big success story and that was the isolation I think, and there was real need down there. And it couldn’t have been done without the technology that we had at the central campus, which was in fact an indirect offshoot of these stumbling attempts in the early 90s to set up (Senior Management).

The origins of the first Countryville campus began prior to ADEC in 1992, when Lincoln Council suggested the idea at a regional development council meeting attended by the VC in 1992.<sup>35</sup>

The Vice Chancellor of Regional University announced plans in December 1992 to offer two undergraduate degrees in the Lincoln area, a Bachelor of Arts and a Bachelor of Commerce. The idea of a regional campus came at the instigation of Lincoln council at a Countryville Regional Development Council meeting which the Vice Chancellor attended earlier in the year (Faculty Thesis).

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<sup>35</sup> One of the primary sources used for the background and some quotes for this section was a PhD research thesis on the origins of these campuses.

It was claimed that even though Lincoln (local government) Council proposed the idea of a regional campus, Xavier saw this as an opportunity through which he could secure increased external funding for the university at a time when funding for higher education was being reduced.

The reduction in funding for higher education during the 1990s was driven by increasing political and economic pressure for accountability and quality assurance. One area in which growth funds were available was for the provision of satellite campuses, allowing improved access for rural students to higher education and an expectation that the students would be retained in the local community (Faculty Thesis).

He knew where all the hollow logs were, because he had been involved in the political arena...He knew that there was money in offering a campus away from the central campus. This is why Apple was set up, to attract those funds (Respondent quoted in Faculty Thesis).

The Apple campus was setup as a pilot project to convince the Federal Government of the merit of another university campus in the Countryville region. It did this by providing evidence of strategic planning through the formation of a partnership network with the local TAFE, the State Department of Education and Training, and three local councils. Demand for courses was tested with first and second year subjects offered at Apple, requiring students to complete their degree at the Regional University main campus in Regionville. Transition arrangements were also finalised between TAFE and Regional University, allowing TAFE students to matriculate into the new courses. Regional University lecturing staff travelled to the Apple campus to conduct lectures, although this was supplemented by some video conferencing among staff. These arrangements were maintained until funding was approved to establish a more permanent campus in Lincoln.

Okay '92, which is well before my time, the university set up a trial campus, a pilot campus in Apple which tended to just have a fairly small number of students, and those students would do first year there and then come to the main campus to complete their degrees. Now most people travel to Apple to do the lectures. There was some video conferencing going on but a lot of the work I did was with that early video conferencing, getting people a bit more used to using it and improving their teaching techniques for using it. But '92 was when it started and Anthony.....was a person who really kept it moving and kept it going despite very small amounts of funds until eventually and the university worked very hard from a number of areas to get funding to eventually have a proper campus in Lincoln (TETU).

After successful trials at the temporary Apple campus for three years, the Federal Government in 1996 approved \$6.62m to be made available for a new permanent campus in Lincoln, and two smaller satellite campuses in Kantalla and Serento, to be opened in 2000. A further \$5.8m in Federal Government funding was also provided through TAFE Commission resources to encourage cooperative partnership in developing these regional centres. Finally, an additional \$3m was provided by Lincoln Council to meet infrastructure costs, with additional costs being met through other funding provided by Kantalla and Serento Councils.

In 1996 Regional University received substantial Federal Government funding to expand its offering through the establishment of access centres and remote campuses in the Countryville region (Faculty Member Reflections).

Various explanations were offered for the Federal Government's generous funding for these new campuses, with most acknowledging a concern for equitable access to university for students from the country.

...If you look at the government papers from around that time, and there's quite a number that say that they're targeting equity, they're targeting rural students. You know, they're trying to keep rural students in their communities and a way of doing that is to provide their tertiary education at the local, within the local district (TETU).

Some respondents (2) were more cynical, suggesting that this issue was really driven by marginal seat politics in various Federal Government electorates.

It was the way the universities and the government worked, you know it's basically horse trading and it's got to do with marginal seats and public pressure...I think that Evangeline has always been a really strong supporter of Regional Uni and she's a very good local member. So this is not an issue about Evangeline, but I do think that the Liberals have been constantly worried about that seat. Down a bit further south Serento, I can't remember the name of it. I think it's also been a bit of a swinging because you know it's rural and you know it depends on whether there's a drought or ...So Regionville has never been a swing...well until recently, Regionville was a safe Labor seat so, if you wanted anything for Regional Uni, you know state or federal, it was kind of whistling into the wind a bit. But you know when you got more out into the, down that country area, both state and federal politics got a lot more interested. Besides...I mean, that's a cynical but reasonably accurate view, but at the same time it's also true that the local communities really, really wanted it (Senior Management).

In addition to securing additional funding for the university, the opening up of new campuses in the Countryville region was also a means by which Regional University could reduce competition from other universities in the Countryville catchment area.

The purpose is not only to gain students in these areas identified, but also to maintain a presence in the local community so that potential students will consider Regional University as their first option when choosing a university (Faculty Thesis).

The adoption of various networking and communication technologies, including alternative delivery methods using technology such as learning management systems, were identified early for the success of the venture. Changes were made to Federal Government funding legislation that allowed the university to apply for further funding to improve both the new proposed campus and its existing main campus. The pursuit of these funds and technologies were also argued to be a means by which the university could continue its institutional history of innovation through technology.

Networking and communication technologies were identified early as an integral factor in the success of the venture. Indeed the government expected an exploration of alternative delivery methods, including technology, before it would commit funding...Changes to the Higher Education Funding Act meant that capital funding could include costs for technology infrastructure and



courseware...The government's strong support in funding such arrangements meant that the university could not only apply for funds for the new centres, but could also get funding to improve the infrastructure of the main campus. This would be necessary to support new developments off-campus and to support the university's strategic move towards finding a niche in the area of telecommunications (Faculty Thesis).

One respondent closely involved in this decision, Sashi, argued that the Federal Government's funding decision was based on a belief that technology-enabled higher education would be both cheaper and better.

Now at the time also, you know there's a lot of stuff running around about the future of you know, everything's going to be online, it's all virtual, this will solve all our problems. And the politicians were definitely pushing the barrow that this will be cheaper (Senior Management).

Other documentary sources also noted that the Federal Government's belief in the capacity of computer technology to support the development of new satellite campuses was without empirical support.

The government identified new developments in computer technology as a way to support this move and provided funds for initiatives in this area, despite little empirical evidence of the benefit to higher education (Faculty Thesis).

As a result of these Federal Government changes, Regional University was able to build a private microwave network to promote videoconferencing and computer networking to all its campuses. The capital costs of this infrastructure were funded by the Federal Government with the ongoing costs funded by the university. Whilst the funding of equity initiatives was not atypical at that time, Xavier's decision to conceptualise the whole of that network within an electronic delivery framework that linked the campuses helped to avoid integration problems experienced by other universities.

So the Countryville network was a government supported initiative, and I think it was fairly typical of a lot of initiatives to actually take higher education to more rural and remote areas...And the clever thing that I think that the Vice Chancellor did at that stage, was to conceptualise the whole of that network, not as a whole bunch of regional outposts, but to actually to see it as electronic delivery from the main campus and then tutorial support. And I think that's basically the way it's sort of worked out. And I think that's probably very sensible in many ways, because then you don't end up with the problems of other institutions where you've got major campuses which you then have to link across (Faculty Representative).

The need to incorporate the use of ICT in this teaching became essential to provide the much-needed communication between the distant centres and the main campus (Faculty Paper 4).

Adoption of new technologies was "driven from above" by requiring that lecturers involved in teaching at both the main campus and Countryville campuses avoid duplication (and higher administrative costs) by not delivering their subjects twice.

Of course some of this was also driven from above. That's sort of coming from below. But from above, there was also this notion that if you were delivering a course, you know, so some courses were targeted for delivery to these remote campuses, the approach they took at Regional Uni, it was very strategic, was they said "Well, you're not going to deliver it twice. You're going to have to rethink the way you develop it, so that you manage your local cohort of students and your remote as one". And that was really significant. And that to me is probably the biggest thing that meant real change had to happen, because otherwise what you would have had is you would have had duplication of what's happening on local campuses (TETU).

It was also argued that there was also a secondary teaching and learning motivation involved in pushing the adoption of new technologies "from above". In a research thesis completed on the new Countryville campuses, it was argued that new technologies were conceived and pushed through various pilots and trials as a means of influencing campus-based teaching through the introduction of flexible delivery mechanisms.

Regional University...introduced a coordinated plan for staff development in this area and funded pilots for a number of subjects to trial the new technologies. This strategy influenced subjects and individuals, but did not influence campus teaching as much as the Deputy-Vice Chancellor had hoped. She saw the Countryville campuses as a way of encouraging flexible delivery, with its imperative of using technology to underpin teaching and learning (Faculty Thesis).

Various technologies were employed to avoid hiring additional staff on new campuses and duplicating teaching activities, including increased use of video conferencing (following the university's prior experience with ADEC), and the adoption of various learning management platforms.

...The idea was that they weren't going to have academic staff located in the new campus and the access centres, and that technology would support that implementation. And that's really what kick started I think, or what's helped move technology into the mainstream in this university, is having this new campus. They knew that they had to do some things differently. They couldn't drive to Serento because it's five hours away and teach there. They had to find ways of doing it so that brought in really, increased the use of video conferencing. As well as using, we actually started off with Topclass before we went to WebCT...(TETU).

One of the early imperatives for the introduction of the online/WebCT environment was that the University was opening new campuses and access centres away from the main campus. Methods of delivering to students at those centres needed to be found such that the students received a similar learning experience to those at the main campus, including having direct contact with peers and teachers. The outcome, now into the third year of the program, is that many different approaches have been taken, involving diverse teaching strategies including; the use of intensive sessions, videoconferencing, visitations and so on – but all have included the use, to varying extents, of WebCT (Faculty Paper 1).

Many of the subject developers trialled new methods of teaching and learning, in particular using WebCT, a course management system, with their on campus students prior to the opening of the centres in 2000 and continued as each year of the degree program was implemented (Faculty Paper 4).

One respondent explained that video conferencing was used primarily for delivering lecture content, whilst learning management platforms were used to support tutorial work.

So video conferencing was appropriate for lectures. Online is obviously more for tutorial and that sort of other work (TETU).

Whilst the university's prior experience with ADEC and the acquisition of new campuses in Countryville were both highly significant events in accounting for the adoption of new learning management systems on campus, there were other significant external factors also involved.

...There were a number of pressures coming onto us: the quality pressures, the need for people to be better at delivering. Did the students drive it? By and large no. Did the bulk of the academic community drive it? I would argue not. It was the leaders, the external pressure and the need for the university to maintain quality for its satellite campuses (Senior Management).

The claim that students did not drive the adoption of learning management systems in the first instance was not contested. Other respondents did claim however, that students were a significant source of pressure on later adopting staff, particularly after they were exposed to learning management systems in earlier classes. This student preference for learning management systems was argued to be a function of the high numbers of mature age and working students.

...There were other things, like you notice that other students started to say "Well you know, look I did this class here. I had it available and second session when I did this class, online material wasn't available". You have to understand...That's the other thing, looking at the student profile, I think we had over fifty percent were students working, either part-time or full-time, even while doing a full-time degree. We had a large percentage of mature age students. So things like, it wasn't just the remote campuses. Even on the local campus, students wanted to have that flexibility in terms of time and place. That was a real driver, I mean, it was so much so (TETU).

Xavier was credited consistently by the majority of respondents as being one of the leaders responsible for the university's involvement with ADEC, the acquisition of a number of Countryville campuses, and the push towards adoption of more innovative ways of delivering higher education. Together with the early adoption of technology by a number of innovative staff members, these events created an historical trajectory within which other staff at the university soon adopted various educational technologies, following early Federal, State and Local Government support, as well as later round student pressure.

Three other senior members of the university also played significant roles in these events. Sashi was credited with encouraging Fergus to continue supporting Xavier's prior work after he started as VC in 1996. Sashi was also involved in locating funding to support these initiatives.

...It was the Deputy Vice Chancellor, Sashi, who was responsible for the Countryville campuses. And she is the one who's really you know, she's the one who sold the idea to Fergus and who kept

being able to get funds to keep things moving, because as you know when you're establishing anything to do with technology, it costs a lot of money (TETU).

Toby was also recognised by many respondents for his strengths in implementing these decisions, both with ADEC and the Countryville campuses. Common to each of these three institutional leaders was a strong appreciation for educational technology and teaching more generally, that allowed Regional University to explore these unique institutional ventures.

Researcher:

So then the decision to open up those campuses without duplicating, like in light of the fact that it was such a technological university, wouldn't have been such a break from past patterns?

TETU:

Probably not, but you'd have to say crucial people that, Toby is, was no doubt recognised as the leading light in that area. You know, brilliant ideas in terms of the best way to implement these things, so it would have been him. We were lucky...again with Sashi. Sashi wasn't your, she'd come from the [name deleted] but prior to that, she had actually worked as an instructional designer in a distance education unit. So she had that understanding, which often people in those roles don't necessarily have. And you basically had a Vice Chancellor who was willing to put effort into teaching, which at that time, was actually quite unusual really.

One of the means by which Sashi and Toby were able to exert a focused and central influence over the technology decisions of Regional University during this period was through the establishment of the Teaching and Educational Technologies Unit.

## **THE TEACHING AND EDUCATIONAL TECHNOLOGIES UNIT**

During the year 1996, Sashi established a new central departmental group, drawing together staff from a range of different places, including remnants of the former Teaching Media Unit formerly involved with ADEC. The Teaching and Educational Technologies Unit (TETU) became involved in a range of educational technology projects and broader staff development issues across the university.

...She [Sashi] was also responsible for getting TETU established as a unit. So prior to that you know, different people in TETU were in a whole lot of different places in the university, and but as I said, I started after TETU had been brought together. So you know, although the staff development unit was added here after that, basically TETU was in this kind of structure when I arrived, but it has grown considerably as a result of Sashi being the Pro Vice Chancellor Academic (TETU).

Sashi was not only responsible for hiring Toby, but also appointed him as director of this newly established unit, given that Toby was well known in the field.

We were I guess very entrepreneurial in that we were, we were also doing external projects. And we got hived off in '96. We pretty much became a teaching and educational technologies unit, and that's when we were set up as the Teaching and Educational Technologies Unit. And we had a director

appointed who was Toby, who also was quite a known in the field of multimedia education and that sort of thing (TETU).

In his role as Director of TETU, Toby was able to give greater institutional legitimacy to the use of new technologies in university teaching.

Before Toby's arrival, there wasn't anybody centrally located. Now Toby just happens to also be a technology person...and those sorts of sets of skills I think, having the right person there at that time meant that that more formal recognition of the use of these tools can flow into the institution (Faculty Representative).

Melissa claimed that part of the rationale for the formation of TETU was to assist Regional University bring about broader institution-wide changes in teaching through the use of IT, both on and off campus.

It was recognised very early on by the institution that delivery of education to remote locations provided an opportunity to rethink the way some programs were delivered both on and off-campus. In 1996 the Teaching and Educational Technologies Unit was established to assist this change management process. Provision of a centralised support service has helped to drive institutional transformation by using IT as an impetus to rethink content and pedagogy and what comprises an effective learning environment (Faculty Member Reflections).

One of the means by which the Teaching and Educational Technologies Unit was able to bring about institutional change was through the evaluation and adoption of various learning management systems. These initiatives were preceded and enabled however, by a prior institutional commitment to 'flexible delivery'.

## **INSTITUTIONAL COMMITMENT TO 'FLEXIBLE DELIVERY'**

In 1996, Regional University incorporated the following definition of flexible delivery into its Academic Enterprise Agreements to encourage "enhancement of educational process" (Faculty Member Reflections):

"Flexible Delivery" means an approach to the delivery of education which allows duration and intensity; place, method and delivery medium to reflect the learning objectives, the needs of the student, the subject and course requirements and the judgement of the teacher (Faculty Paper 1).

It was not entirely clear which parties were behind this particularly initiative, however it was likely to have involved some of the leading individuals noted earlier in this chapter as having a significant influence on similar matters at this university. What was clear, however, was that this particular policy decision led to the need for TETU to investigate opportunities for learning management systems that satisfied the university's definition cited above of flexible learning. Members of TETU already had significant experience with the flexible delivery of various subjects following the

university's prior experience with ADEC and its Countryville campuses. Pressure to pursue these initiatives at this time was hastened by the university's decision to set an ambitious technology adoption target to drive action in this area:

By the year 2000, at least 30 percent of all undergraduate teaching – on and off campus – is likely to involve the use of specially designed learning resources (Faculty Member Reflections).

Following these early central decisions, TETU then became involved in a number of learning management system evaluations.

## **MULTIPLE EVALUATIONS OF LEARNING MANAGEMENT SYSTEMS**

### **First Evaluation**

During the next year in 1997, TETU participated in a working group with several interested academics who investigated the adoption of various learning management systems. This group attempted to create interest in this technology across the university, and organised a pilot study trial of Topclass, an early learning management system at that time. This trial involved the acquisition of a license for a limited number of students. One respondent argued that this approach was “fairly typical” of other Australian universities at the time.

I think that the approach that was made was, would be fairly typical. There were, there was an initial sort of working group of keen lecturers that wanted to get something happening, they got together. They looked at trying to, in those days I mean, their interest was to try and get some economies of scale by getting enough people interested in the one tool so they could get it up and running because this was a new budget line that didn't exist before, so it had to come from somewhere... That sort of got in, and I think it was interesting. And in Regional Uni's case, the first tool they put in was Topclass and they bought a licence for 500 students or something, and people started using and it was pretty clunky (Faculty Representative).

During 1997 TETU worked with several academic staff to trial a Learning Management System product called Topclass. This involved delivering real subjects online. This trial was conducted wholly within TETU with the software running from a TETU server, using TETU's own technical expertise (Faculty Member Reflections).

Belinda, an academic from TETU with an education background and significant consulting experience with educational technology, was the head of this newly formed working party. She noted that the recommendation to trial Topclass was based on the fact that it was both inexpensive and was one of the best available platforms at that time.

Well we set up a working party as universities do, and I was chair of that... I don't know how we decided on Topclass in the first place ... I think really that it was just you know, a couple of us looked at what was available, and at that stage there wasn't much available, but Topclass was very inexpensive, in fact it might have been free... WebCT wasn't very developed because we did give it some consideration but it seemed to be pretty clunky. It was designed by computer programmers; it

didn't have very good interface, you know those kinds of things, and so we went to Topclass initially (TETU).

Belinda later added that the working group's decision to recommend Topclass was also influenced by its small budget, and the need for their decision to be implemented prior to the opening of the new Lincoln campus.

Well the first one you know, was when we were first choosing one, and we had a very small budget to do that and it had to be implemented very quickly because of the Lincoln campus. So the Topclass problem came up. We knew we had to do something in a very short turnaround because we had a few months before the centres were opening (TETU).

Another academic from TETU claimed that Topclass was ultimately "a very poor application" and it was not really designed for academics or teachers. Adoption of this platform among Regional University staff during this first trial was quite limited, compared to other interested academics who experimented with other technologies.

...Initially we trialled a program called Topclass, and it was really just a very poor application. It was fine I think from the probably administration server side, it was fine. It had some bugs, but from the user side, so as an academic, as a teacher, it really was not designed for that. So we did a trial of that and we probably had eight or nine staff that used it, and it didn't actually, it might have gone up to 12, but it was miniscule. It was just, you know. We would have had more people with just standard websites with HTML and putting content on that, than we would have had in that (TETU).

## **Second Evaluation**

In 1998, just one year after trialling Topclass among a handful of academics, another evaluation decision was forced upon Regional University as a result of Topclass becoming too expensive following its sale to another proprietor.

But then Topclass was sold to an American, I'm not sure who it was but they, it was sold to, but they were obviously not targeting the education market. Then they raised their price phenomenally and just that was it. We had to re-evaluate and look and see what else was available (TETU).

Similar to the earlier evaluation, a working party was again put together for the purposes of evaluating available learning management systems. Membership of this decision making group was more extensive this time round however, involving additional people from the faculties, IT and the Library.

...We then put together a working group which had people, academics, IT, people from TETU, the Library and so forth, you know across, a university-wide sort of committee (TETU).

Late in the year a formal Working Party was established to investigate the offerings available and make a recommendation as to which system the University should adopt (Faculty Paper 1).

This working party was more formal than the last, and was actually constituted as a formal sub-committee of Regional University's Teaching and Educational Committee, itself a sub-committee of Academic Senate chaired by Sashi.

And then the next go-inners were people coming together with more formal representatives of the faculties for the people that were actually interested in using this form of delivery...And by this stage, you've got the working party sort of as a subset of Teaching and Education Committee, so it's a much more formal operation (Faculty Representative).

Belinda again chaired this working party, and had only three or four weeks to evaluate available learning management systems. The group were therefore split into smaller working groups to investigate various issues after identification of the main criteria that the learning management system needed to satisfy.

So yes, we set up a working party. We had representatives from faculties as well as you know, various stakeholders from the university. But I think we had a very short time frame, like three or four weeks...in which to... and so I was chairing that group which I split the people up into small working groups. And they went off and investigated different aspects after we'd identified the main criteria we felt that the software needed to fulfil (TETU).

When asked about the nature of the criteria used to evaluate platforms at that time, Belinda noted that various pedagogical and technological aspects were evaluated, including consideration of the needs of lecturers who would use this technology. Information Technology Services (ITS) were also asked to assist with an evaluation of the system.

...It's back in the murky past, but it would have been looking at the pedagogical aspects, the technological aspects, the ITS people would have looked at you know their side of things. But also looking at the kinds of things that lecturers wanted to do with the software that they felt they couldn't the way it was, so that we were looking forward as well as making sure that it met those kinds of basic needs (TETU).

As early as the beginning of 1998, Regional University began conducting trials to test the capabilities and feature sets of web-based course delivery tools (Faculty Paper 1).

The new working group ultimately recommended WebCT over Blackboard in December 1998, in what was acknowledged to be a very close decision. WebCT was ultimately chosen because of its commitment to pursue open source coding.

TETU:

And WebCT came up as the preferred option. And probably the thing, I think it was between WebCT and Blackboard, and the thing that pushed it to WebCT rather than Blackboard was that WebCT made a commitment to open source and Blackboard didn't at that time. It was a very...

Researcher:

So there wasn't much in it then?

TETU:

There really wasn't much in it, no.



Three respondents involved in this decision claimed that these early learning management systems weren't particularly well designed and built, yet universities felt "forced" to adopt these platforms to create the flexible delivery opportunities they sought for their students.

If you think back five years or seven years which is really when this came in, all of these tools were, sorry all of the WebCT type tools were embryonic. The builds were all suspect but the universities were being forced to move forward to provide some mechanism by which they could enrich the student experience either in terms of quality of deliver or the ability to deliver more widely than they could in a standard face-to-face arrangement. There was a lot of pressure for universities to choose these tools and I think if you talk to any university that used Blackboard, Web CT and similar products across that time, you'll get similar stories about the fact that they weren't well built, they weren't well thought out. The next generation of course have learnt all the lessons and they are much better, but I don't think universities really had the choice (Senior Management).

...I think the more interesting stuff in terms of the pedagogies come from other types of tools (Faculty Representative).

After the working party's recommendation was forwarded to the Teaching and Educational Committee, WebCT was later adopted by the university. Following this decision, large numbers of academics adopted this software in their courses.

And then it was made available and then pretty much, it just escalated (TETU).

In reflecting on the evidence gathered in support of this particular decision, it would appear that more institutional attention was directed towards the selection of the particular learning management system (e.g. WebCT), than how it would be used by faculty academics once adopted. For example, although many academics did adopt WebCT in their subjects following the WebCT decision, it was noted in one internal paper that academics had "mixed feelings" about its use as it was perceived to be difficult to learn and utilise in their courses.

The introduction of WebCT was met with mixed feelings by adopters...With the adoption of WebCT, some initial instruction was provided by TETU staff, but considerable effort was needed on the part of early adopters to familiarise themselves with a software package which was often difficult (Technology Adoption Report).

### **Third Evaluation**

In 2003, the university engaged in a minor "monitoring exercise" to keep abreast of developments in the field. A decision was not required at this point as it was primarily a research exercise.

...The next one came about more as a monitoring exercise, so that we could keep an eye on what was happening and make sure that we knew the field basically, so that was years, perhaps about 2003 I think and then...We weren't actually looking at that to choose one, we were just making sure we were aware of what was available and what they were up to. So we actually had used the criteria that we'd had before and added to it, and redeveloped it and built on it (TETU).

In documents supplied by Melissa, she noted two highly significant IT failures affecting the use of WebCT university-wide that same year.

In 2003 there were two major IT failures that affected the use of WebCT: The first occurred in the second week of session and resulted in large numbers of students not being enrolled in the online components of their classes; session teaching staff were also unable to be added to classes and teaching staff were unable to make modifications to online material...The second failure occurred mid-session and was the result of operator error and was compounded by poor procedures within the ITS group. This resulted in significant student work being lost (with no backup) and a major loss of confidence in a core system to support teaching and learning (Faculty Member Reflections).

Although not explicitly connected by respondents at the university, it is hypothesised that these high profile failures may have contributed to both the information evaluation in 2003, as well as a further more formal evaluation conducted the following year. At the very least, it is highly probable that these events were partly behind changes in the composition of the membership of the working party in 2004, following increased politics associated with the ownership and management of these core university systems (discussed next).

#### **Fourth Evaluation**

In 2004, Regional University conducted another evaluation of available learning management systems. It was decided that the university had to upgrade its platform and went about an evaluation using similar criteria as the earlier 1998 decision. One of the major differences from prior evaluation exercises however, was an expanded membership of the working group and an additional product to consider.

And then, then the final one was the one that we've just made the decision on now, so that went on last year where we went beyond just saying "we're monitoring what's going on", but we actually decided that we needed to upgrade what we had. And that we would again, we used the same criteria as before and built on it again, looked at any gaps that were in it, and had a very lengthy list of criteria. But a lot more stakeholders involved this time and, but because of the earlier monitoring we limited our choice to three. So we were only looking at WebCT, Blackboard and Jannison. And we were looking at Jannison because it was being used in the Faculty of Education for Research. So whilst from the previous monitoring we felt WebCT and Blackboard were really the only two worth considering at the time, and we added Jannison to that list because of the research use in Education (TETU).

One of the reasons for the expanded working group was the inclusion of more IT and "grass roots" people. When pushed whether this change in the composition of the working team was indicative of the university taking these decisions more seriously, it was countered that it was instead a reflection of power struggles around which department could claim ownership and management of the learning management system.

There were more IT people in it this time. I think there was only one representative, there were higher level people involved in it this time, more your grass roots people in the previous ones...I think it's also become a lot more political and there were power struggles going on about who would own it and where it would sit, and it was managed within the university (TETU).

These power struggles were claimed to have arisen as a result of an organised group of individuals informing senior management of the inadequacies of the current IT infrastructure, most likely armed with recent examples of two major WebCT failures in 2003. The claimed unintended outcome of this action was a loss of power for some individuals, even though it led to an improvement in the university's IT systems.

The University not only failed to recognise the scale and scope of its elearning and e-teaching involvement, it also failed to ensure its basic IT network infrastructure, which underpins all university systems. For those with a systems level view, it was clear that there was an urgent issue to be addressed but it seemed that no-one was willing to listen. Political change was effected through an organised group of individuals, who resolved to inform the institutional hierarchy that there were serious issues that needed to be addressed. This had the resultant, positive effect in terms of allocation of resources but the repercussions have been a grab for power by the group, who saw itself as badly maligned, 'the loser', in the process (Faculty Member Reflections).

Richard claimed that ITS were heavily involved in the assessment of the three tender responses, based on the sustainability of their products. The emergence of this new criterion may reflect increased caution across the university following prior IT failures affecting the use of WebCT in 2003. Also included were broader functional and integration evaluations which, together with the sustainability assessment, reduced the viable choices down to just WebCT and Blackboard again.

When we looked at Vista, when we looked at WebCT, we went out to tender and the tender documents were there, we took in the responses, they were reviewed at a professional level. For example, the IT component was reviewed by ITS or with architecture, the ability to integrate the abilities of ITS to deliver petrol at the pump sustainably for the next five years, and our recommendations were seen as key. If we couldn't do that, we may as well not even think about offering the functionality over the top. And concurrent with that, there was a functional evaluation, and there was a broader integration evaluation involving the library and involving other units which would have to use our student management area and so on, who would have to utilise the system. In all of those we came down to whether any of these systems would fit, two of them did (Senior Management).

The expanded working group decided in favour of WebCT's new Vista platform. Although this decision process involved a series of assessments against pre-agreed criteria, as well as trial exercises by each of the vendors, the decision was ultimately made on the basis that Blackboard "weren't interested".

I think basically that the Blackboard people didn't seem to want to treat us very seriously, and you know we had a whole lot of hoops that we expected them to jump over and they weren't prepared to, they weren't interested. They, you know we gave them some trial subjects that we wanted converted from WebCT into their platform and they simply didn't do them very well and appeared to be not making a great effort. And if we felt that that's their level of service in the beginning, that they weren't going to get any better. Whereas WebCT, you know the transfer of subjects from WebCT to

Vista you know was vastly superior which you would imagine you know, given that they actually had the coding for WebCT, you would imagine that they're going to be able to do the transfer easier but they were willing to bend over backwards I think to help us out to support it. So ultimately it came down to what we considered to be a worthwhile service. And Web CT were also increasing the number of staff...so that we knew there would be a balanced service and reliable service after we made a purchase (TETU).

Three respondents noted that the choice between Blackboard and WebCT was very close. For example:

...But really we found that the platforms were very, very similar and that what one offered one week we felt the other one would offer in the next version. They just seem to do this all the time and keep an eye on each other all the time so which you would expect (TETU).

And then even when I was working on the committee in that, was in 2001, 2002, they were still looking at upgrading to VISTA, which apparently they have just about done. Which I mean it looks okay but I don't think it really matters very much what you buy because they all do pretty much the same sort of thing (Faculty Representative).

The new Vista system is currently being implemented with a decision to "shut down" the prior WebCT Campus Edition by 2007.

The last year has been spent considering where we want to take,... the university's only recently made the decision to adopt the Web CT [Vista] system and that will be rolled out over the next eighteen months to two years with the expectation that sometime in 2007 Web CT Campus Edition will be shut down (Senior Management).

## **INFLUENCE FROM OTHER UNIVERSITIES**

One of the surprising findings that arose out of the study of Regional University's evaluation and adoption decision processes was a lack of interview respondent references to mimicry of other international or national universities, as found at both Suburban University and Metropolitan University. Regional University was admittedly not part of a formal consortium of other universities such as the Australian University Consortium or the International Consortium, as noted at the beginning of this chapter. Senior staff at this university (particularly at the level of the Vice Chancellor and senior management) may, therefore, have not felt subject to the same degree of institutional peer pressures as staff at some other universities.

For example, when asked about the extent to which the decisions of other universities were taken into account in the previously described evaluations, Richard claimed that Regional University didn't look at other universities as "you'll just feel good". He claimed that the university instead conducts a form of benchmarking that involves using audits from technology leaders, in addition to consulting industry experts.

Researcher:

...Something that other unis have spoken of, and it doesn't seem to be the case here as much as others, they've been influenced by what other universities have decided in relation to technologies or even broader decisions. Is that a trend that you've seen as well, that this idea of looking around at the pack and following the mob when it comes to these kinds of...

Senior Management:

We don't. We technically, we subscribed to CORDA<sup>36</sup> that's fair and reasonable and I think we'll always do that. We appreciate the things that they do for us, but the instructions on the floor here as far as technology is concerned is "Don't look at other universities, you'll just feel good". We are about benchmarking. We don't benchmark directly, that's expensive and often a misleading way of doing it. We actually use audits from leaders in particular areas in technology. For example our network is audited, it's been audited a couple of times by industry sector, industry experts. We utilise IBM, Deloitte and all these people who have a particular bent in a particular area. We get them in and tell us get them to tell us what we're doing wrong and how we should go about it.

When a similar question was put to Belinda in TETU who chaired the working group that evaluated and selected WebCT, she was considerably more open to the possibility of mimicry. In her response to the same question, she claimed that the working group that she led were aware of the decisions of other (presumably Australian) universities who had used WebCT.

Researcher:

As you were going through all these decisions, like through the process of evaluation, was the behaviour of other universities in terms of how they approach their different technologies relevant in making your decisions in this area?

TETU:

Certainly we kept in touch with other people who were moving from Web CT into either platform and talking to them.

It was difficult to determine just how significant the decisions of other Australian universities were on Regional University's own evaluation and adoption processes, given a lack of further evidence on this matter. Belinda and Richard provided the only known statements about this issue, and did so only when probed directly by the researcher. Given a lack of corroborating evidence, it is difficult to rule out the possibility that Regional University was not influenced by the decisions of other universities, particularly other Australian universities that had also adopted a learning management system about the same time as Regional University.

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<sup>36</sup> A reference to a particular commercial technology company that provides IT solutions to various enterprises.

One internal document made a similar observation about the difficulty of obtaining further corroborating evidence in relation to the evaluation and adoption of new educational technologies at Regional University.

Formal evaluation (particularly formative evaluation) was perceived to be lacking in some initiatives. The Project Team found it difficult to obtain documentation of various implementation processes and assessment of their success (Technology Adoption Report).

It was telling to find references in this same internal document to a fear of ‘falling behind’. The Technology Adoption Report was a joint-authored report to the university involving, among others, staff from TETU and the faculties. A major concern raised in their report was a delay in adopting some new technologies constituting a threat to the university’s reputation as a ‘leading edge’ adopter of new technologies. For example:

There is a concern among some academics that the university is ‘going too slow’ and has lost its ‘leading edge’ reputation (even though it is not yet seriously behind). ‘We talk the talk but don’t walk the walk.’ Examples were given of Endnote taking 9 months...the wireless initiative being up in the air...and Virtual Reality in teaching, which has been available elsewhere for the past 10 years (Technology Adoption Report).

The authors of this report also claimed that the cost of losing this reputation for technology adoption was a detrimental impact on the recruitment of both staff and students.

The widespread adoption of new technologies at Regional University would lead to a perception of the University as a technology leader. This may impact our recruitment of staff, and of local and international students (Technology Adoption Report).

## **ENCOURAGING ADOPTION AMONG STAFF**

Following Regional University’s decision to adopt WebCT Campus Edition in 1998, a number of strategies were employed by different parties to encourage adoption of these new technologies among academic staff. These strategies are indicated in Figure 30.

Industry audits, similar to benchmarking strategies employed at Suburban and Metropolitan Universities, were used by members of the ITS group to ensure that the university made appropriate use of emerging technologies. External consultants were occasionally brought in for this purpose. Senior staff with a reputation for using new technologies were also employed from other universities, such as Toby from Metropolitan University.

**Figure 30: Strategies Employed to Encourage Adoption at Regional University**

Strategy	Supporting Quote
Technology audits	<i>We are about benchmarking. We don't benchmark directly, that's expensive and often a misleading way of doing it. We actually use audits from leaders in particular areas in technology (Senior Management).</i>
Senior staff appointments	<i>...Regional Uni at the time was able to leverage that opportunity to develop some very good facilities for its own local use. And it was in that period I recruited Toby who really set up a good... So I think Regional Uni came out of it reasonably well, with a nice little arrangement there, which then made it possible also for us on a quite different political tack (Senior Management).</i>
Academic Staff Development Program	<i>...We also ran, we had in that TETU the Academic Staff Development Program. It was talking about concrete things, objects that they could use. But of course that gave us the opportunity then to actually talk about their teaching, and you know "Why did you actually want to put this stuff online?" "What were the issues around that?" So we used that, if you like, as a hook to, for a change management process if you like, to do with their teaching (TETU).</i>
Seminars	<i>We have a very active centre for education, central centre for education and development, which is really supportive of teaching that run constant seminars about you know, people's best practice (Faculty Representative).</i>
Hosted an educational technology conference	<i>The big, if you like catalyst, was in 1998 when we hosted the conference there. And we used that as an opportunity. We locally, through our staff development committee, a university-wide committee, we made funds available for you know, for anyone on campus basically, to attend that conference. We also, through TETU, we'd also have a very strong commitment to co-publishing. And so we, if you like, upped the ante with that, and encouraged, and if you look at those '98 proceedings, you'll see there are a lot of Regional Uni or certainly joint publications between us and academic staff. And that did provide quite a catalyst, if you like, if you're publishing about your teaching and that sort of thing (TETU).</i>
Recognition through awards and promotion	<i>A lot of them won teaching awards, a couple of them became TETU scholars and worked in here, were bought out of teaching for 6 months to work on different projects. They got recognition in various ways through the university. All of them who hadn't been confirmed, there were a lot of new staff amongst them, those two yet hadn't been confirmed in their positions, were all confirmed in their positions with teaching as their first priority rather than research (TETU).</i>
Local champions	<i>What we mostly watched I think was pressure from individual academic staff in the organisation who were seeking to have more angles by which they could impact upon their students, more ways of getting the message across, more ways of presenting in a way that was interesting and that kept the students' attention that you know, that was exciting and different. So we had a number of leaders, a small number of leaders pushing forward, and I think that was happening in all the universities...I would say the majority of academic staff were not leaders, they were pulled along in the process by and large (Senior Management).</i>
Management directive	<i>...They said "Well, you're not going to deliver it twice. You're going to have to rethink the way you develop it, so that you manage your local cohort of students and your remote as one". ...And that to me is probably the biggest thing that meant real change had to happen, because otherwise what you would have had is you would have had duplication of what's happening on local campuses (TETU).</i>
Enterprise Bargaining Agreement	<i>Both him [Fergus] and Sashi were very supportive and helped drive it from an institutional level. It was written into the E.B. for example, that all staff will you know, be involved, I can't remember, will use flexible delivery methods, if required (TETU).</i>

The Teaching and Educational Technologies Unit also played a significant role in encouraging staff to adopt new technologies. Apart from their central role in the evaluation of these technologies, they

also ran an academic staff development program, organised seminars, and encouraged people to publish their teaching activities in related journals. Regional University also hosted an educational technology conference for a large professional association in 1998, and encouraged local academics to attend and publish their experiences of using WebCT. The timing of this conference was highly significant, given that university-wide adoption of WebCT increased rapidly in 1999 following this conference, only one year after it was introduced.

A range of various mechanisms were also employed by senior management to ensure that interested academics who adopted new learning management systems were recognised by the university. This recognition primarily took the form of internal teaching awards and the confirmation of academic positions, a form of promotion. Once recognised by the university, these 'leaders' or 'local champions' then "pulled along" other academic staff.

In spite of resistance from many colleagues early in the project, participants in the BA in the Countryville area have not suffered the extremes of lack of recognition experienced or feared elsewhere. All Faculty of Arts academics involved in the original 1998-1999 group of subject developers, who applied, had their probationary contracts converted or achieved a promotion. In 2002 two subject coordinators won the Vice Chancellor's award for Outstanding Contribution to Teaching and Learning (Faculty Paper 4).

Finally, the senior management of the university, in particular Fergus and Sashi, also played a significant role in encouraging staff adoption. One of the primary ways in which this was done was to require staff teaching at both the main campus and various Countryville campuses not to duplicate their efforts through a management directive. This particular strategy resulted in the pursuit of alternative means of delivering subjects to these remote areas, particularly the increased use of video conferencing and learning management systems. These strategies were also reinforced through incorporation of these requirements into the university's Enterprise Bargaining agreement.

Relative to Suburban University and Metropolitan University, there appeared to be very little resistance among local staff to various strategies that encouraged staff to adopt new learning management systems. In particular, several staff noted the way in which academic staff embraced directives issued by the VC to convert subjects to online mode ("live") on the basis that "it's always seen itself as a leader in technology".

Oh yeah, I think I seem to remember the Vice Chancellor making this statement that X number of subjects will be live and people taking that seriously and making it happen. I just think that it's the way this university has been thinking for a while and it's been quick to adopt technologies. It's always seen itself as a leader in technology (Senior Management).



The fact that respondents claimed that the institutional identity of Regional University was also more centralised and cooperative would also account for why the university was able to push through many of these strategies without significant staff resistance. The only significant resistance found in interviews and internal documents related to either the opening up of new campuses in Countryville, or refusal to adopt WebCT following two major WebCT crashes in 2003 in which some staff lost months of work. Some staff involved in the implementation of new degree programs in the Countryville campuses stopped the decision making process in relation to the selection of various subjects that would be delivered in those degree programs. Academic staff who did not wish to use WebCT simply refused to adopt it in their teaching programs. Examples of these tactics are shown in Figure 31.

**Figure 31: Staff Resistance at Regional University**

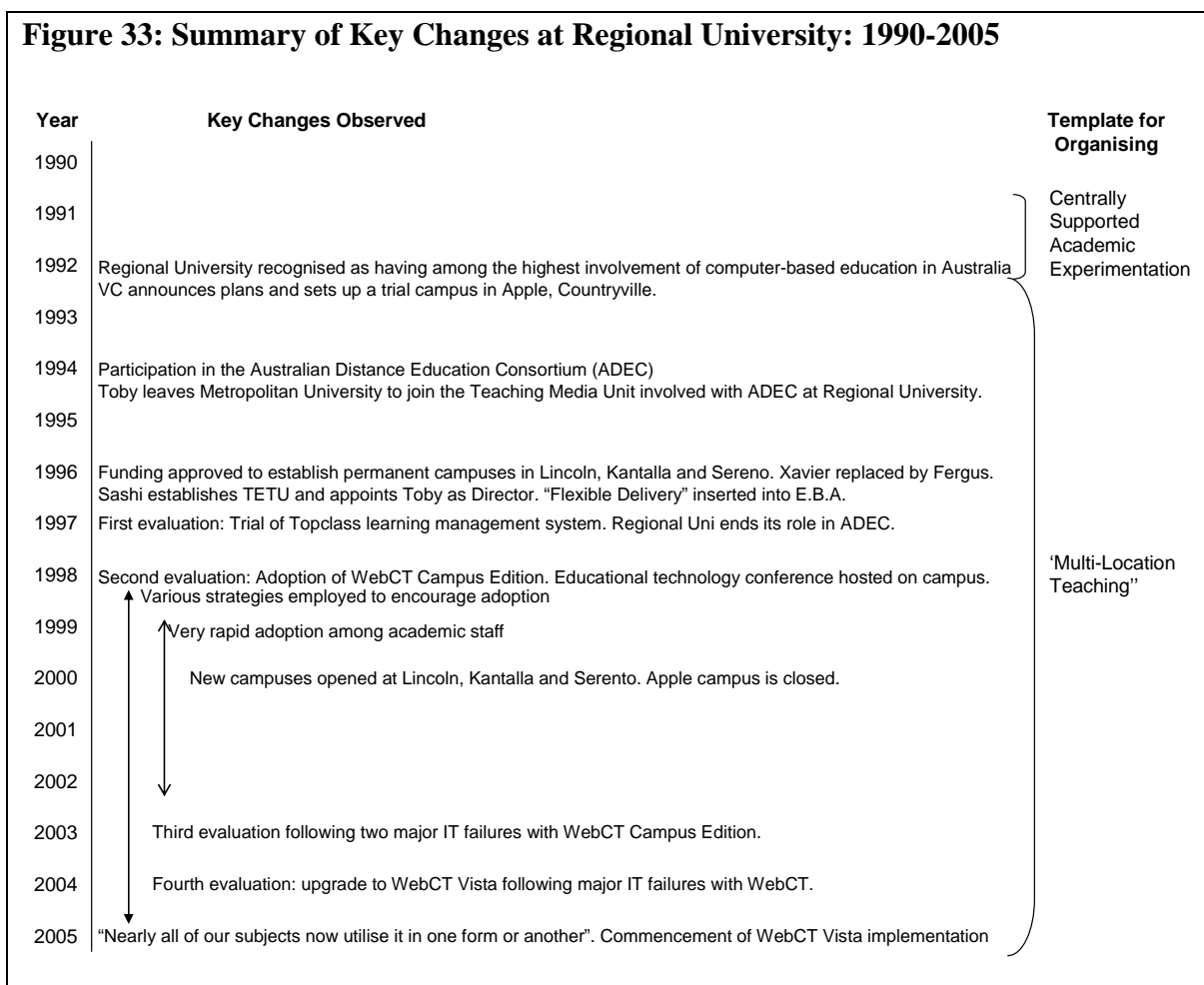
Tactic	Supporting Quote
Stopping the decision process	<i>It wasn't easy, it took two and a half years to decide which twenty subjects they would include in the new degrees, so you can tell from that, that there were some people who were quite resistant, you know which is quite a common way of resisting is to stop the decision process, or drag out the decision process for a long period of time (TETU)</i>
Refusal to adopt	<i>We still have staff members who don't want to use it because of bad experiences going back, but the reality is it's been 100 percent reliable for close on two years. It's been scaled up now. It's actually a highly responsive system; has been for close on two years (Senior Management).</i>

The senior management of Regional University responded to these two staff tactics with two tactics of their own. In response to the first issue, an external consultant was hired to help resolve which subjects would be included in the new Countryville campus degrees. Staff with serious reservations about the pedagogical limits of WebCT were given a “special dispensation” from the Vice Chancellor to use an alternative learning management system, particularly the Faculty of Education, who were able to argue the uniqueness of their research agenda. This second decision may have also been partly influenced by power struggles noted earlier in this chapter. Both of these tactics are illustrated in Figure 32.

**Figure 32: Management’s Response to Staff Resistance at Regional University**

Tactic	Supporting Quote
External Consultant	<i>One source was the assistance of a change management consultant who had been employed under a CUTSD grant to facilitate the working relationships necessary for the successful implementation of flexible delivery. In this sense she played a role that I have often played in the past: the Head’s ‘best friend’ (Faculty Paper 3).</i>
Special dispensation from the VC	<i>We have a special dispensation from the Vice Chancellor in the sense that we’ve argued part of our research agenda is around educational technology and that’s why we’re using it and doing it this way, because we’ve got some research wrapped up around it (Faculty Representative).</i>

A summary of the major changes and initiatives leading to the adoption of online learning at Regional University are found in Figure 33.



The next section of this chapter will attempt to illustrate the operation of a number of relevant external and internal sources of influence acting upon and within Regional University.

## Summary of External and Internal Sources of Influence

This chapter has described the historical adoption of various educational technologies and learning management systems in particular, culminating in the adoption of WebCT Campus Edition and then Vista. This history was affected by a number of significant external and internal factors, summarised in the next parts of this section.

### MAJOR EXTERNAL INFLUENCES

A number of external factors acting upon Regional University were noted in passing throughout this chapter. These included various policies of the Australian Federal Government, particularly in support of rural students in marginal electorates, complemented by the support of local government councils and TAFE. New staff from other universities, such as Toby from Metropolitan University, also played a significant influence. A range of other important influences noted by respondents at Regional University are included in Figure 34.

Respondents noted that there were a range of unrealistic claims being made in support of online learning and learning management systems. Some of these were disseminated through the general literature, others by the Australian Federal Government, and yet others through various software vendors. Despite many of these claims being both unfounded and vested with material interests (reduced public funding for the Australian Federal Government and increased sales for vendors), these technologies were apparently adopted by many interested teachers. Several respondents suggested that CAUT grants were very effective in encouraging adoption at an academic level.

The activities of other universities were also highly significant. Australian universities provided exemplars that were occasionally emulated by other universities. During 1996 in particular, there was a fear that US universities, enabled by the internet, might target potential students of Australian universities, causing a degree of fear in the sector.

...There was, I know quite a hysteria, it certainly was a big issue. I can remember in '96, it really really came to a head. And back then, they could see that this was a potential, that you could set up these virtual universities and that...It was probably used as a bit of an argument for, you know, why we need to look at quality in terms of our offshore delivery and that, but it wasn't really as strong as it might have been (TETU).

**Figure 34: Major External Influences at Regional University**

<b>External Influence</b>	<b>Supporting Quote</b>
Online learning literature	<i>Now at the time also, you know there's a lot of stuff running around about the future of you know, everything's going to be online, it's all virtual, this will solve all our problems (Senior Management).</i>
Australian Federal Government rhetoric	<i>You've got the various government reports that looked at the higher education and technology environment. There have been quite a few reports in that area. And I think they've always been looking at how interesting innovations are happening. I guess the government was keen to develop the international student market... Well the impetus for all of this comes from the government's push for all institutions to increase their percentage of private funding (Faculty Representative).</i>
Australian Federal Government grants	<i>So things like the CAUT grants that have occurred and the CUTSD grants that have occurred. You will find that many, not all of them, have some aspect of technology... By setting these things up and rewarding people, you're getting them to use the technology. And I think, with a certain amount of success... the CAUT rounds were one way of actually getting the teachers in the university using the technology, rather than the big grants that existed with CUTSD (Faculty Representative).</i>
Software vendor marketing activities	<i>The fad was pushed a lot by the technology suppliers. I think I've still got an ad somewhere where I think it was the early, some of the early training products in Australia were saying 'we've got this online training and it increases learning by 100%' or you know, rubbish like that. And they were very common, those sorts of ads and statements were very common by the people pushing the commercial product to try to support online learning... Then when the bigger, now that it turned into more commercial products like Blackboard and WebCT, those sorts of products came out, they continued that sort of line but in a much more circumspect way. That is, they weren't claiming those incredible learning outcomes, but they were certainly claiming significant successes beyond what one could believe by using their products (Faculty Representative).</i>
Other universities	<i>And of particular interest, I visited Southern Uni, and they had like a faculty service agreement system, and pretty much I adopted that for Regional Uni, in that we put it out to the faculties, that basically, we have this range of services, we can do web or whatever, we'll offer these hours to you as free, but you prioritise what you want to do with that time (TETU).</i>
Partnerships with local government, TAFE, and the Department of Education	<i>I mean we setup Lincoln, Kantalla and Serento as local partnerships with the local councils, with TAFE sometimes, I think a school's involved in Serento as well, it's across the road and so we use their library (Senior Management).</i>
Professions	<i>I think you know certainly because of ASCILITE we had a very strong support network outside of the university and had a lot of contacts with people who were involved in the field and so that would certainly influence what we were doing (TETU).</i>
Domestic student expectations	<i>... When I was teaching in the middle 90s, students didn't want to go online. I think as time's gone on, especially post graduate students, and undergraduate students who are working part time, require the resources so that they can then break the nexus of geography and time using the technology. You've now got players that have picked it up and now demand it as part of the educational environment. So students I think have been major players as well (Faculty Representative).</i>
Emerging new digital technologies	<i>And the, in a sense, the advent of the technology, well there's two things, the distance educational centre focused on pedagogy and management support of external students. With the advent of electronic networks, you have the possibility of not having to go through those formal Instructional Design structures. And so that meant that people could take individual initiatives... It's because of that, individual initiatives, things happened. Individuals set up their own web sites, they made them accessible to students, and so you actually had in a sense, a grass roots use of the technology as part of the teaching learning exercise (Faculty Representative).</i>

Some universities, like Regional University, appear to have been capable of distinguishing between the different business models required in these operations.

We talked to NextEd a few times at Regional Uni, and they gave us a very good, he gave us a very good analysis I think. He basically said, 'I'm not interested in your business model', and the business model that works for the private providers was low margins, high turnover, high volume, which was a business model that Distance Ed Uni was happy to take on, but not a business model that suited Regional Uni, and certainly wouldn't suit some of the bigger places (Senior Management).

Regional University also had a number of relationships with other government agencies. In developing its regional campuses in the Countryville area, several local government councils were involved in both initiating and supporting developments in their regions, in addition to the activities of TAFE and some local schools.

Professional associations also played a limited role in affecting adoption of the learning management system at Regional University. The ASCILITE professional association was argued in Figure 34 to have provided local staff with the opportunity to connect with other staff in the sector to know what they were doing. It is conceivable that this was one forum where the activities of other universities, particularly in Australia, were made known. Earlier in this chapter, it was claimed that a conference for a professional association held in 1998 at the University was instrumental in assisting many faculty to adopt.

The role of students demanding new technologies was also noted. Demand appeared to stem predominantly from domestic postgraduate students and undergraduate students who were working at the time, particularly following a prior experience of a learning management system. Early demand was driven by interested individuals who made use of newly available digital technologies.

## **MAJOR INTERNAL INFLUENCES**

Throughout this chapter, a number of internal influences were also noted. A summary of these influences are illustrated in Figure 35.

Respondents claimed that Regional University had a particular institutional identity that they thought was relevant in explaining some of the behaviour observed in their institution. For example, the university was relatively new, with a history of innovation using technology, stemming from the strategic decisions of previous Vice Chancellors. The adoption of technology in teaching was therefore accepted and even encouraged at both institutional and faculty levels. Regional University

was also located across several campuses in predominantly regional areas of the state, and made use of innovative technologies in its attempt to avoid duplication of resources across these campuses.

### **Figure 35: Major Internal Influences at Regional University**

<p>Institutional identity:</p> <ul style="list-style-type: none"><li>• A relatively new university with a more centralised culture and history of innovation using technology</li><li>• A small to medium sized university with several student campuses, predominantly in regional areas of the state.</li><li>• Face-to-face teaching is highly valued, in addition to research</li><li>• Strong ambition to thrive within its regional student catchment areas</li></ul> <p>Institutional history</p> <ul style="list-style-type: none"><li>• Past institutional behaviour shapes the internal conditions influencing later round behaviour</li></ul> <p>Key actors:</p> <ul style="list-style-type: none"><li>• Independent academics who were interested in teaching and new technologies</li><li>• A visionary and politically astute VC and senior management with backgrounds in education</li><li>• A new external appointment to the Teaching Media Group (renamed the Teaching and Educational Technology Group) with a strong background in educational technologies</li><li>• Various members of the Teaching and Educational Technology Unit</li></ul>
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Within their regional domains, the university displayed a strong ambition to thrive and succeed, particularly in the face of competition from prominent state-based universities located within nearby major cities. Despite senior management rhetoric to the contrary (e.g. Senior Management Documents C to G), the substantive domain of Regional University's competitive focus, as reflected in its reported institutional behaviour, was primarily regional and not national or international.

There were a number of significant actors involved and described throughout this chapter. Several previous VCs and senior management were quite visionary in their approach to institutional leadership, seeking to innovate in order to compete with other state-based universities in their

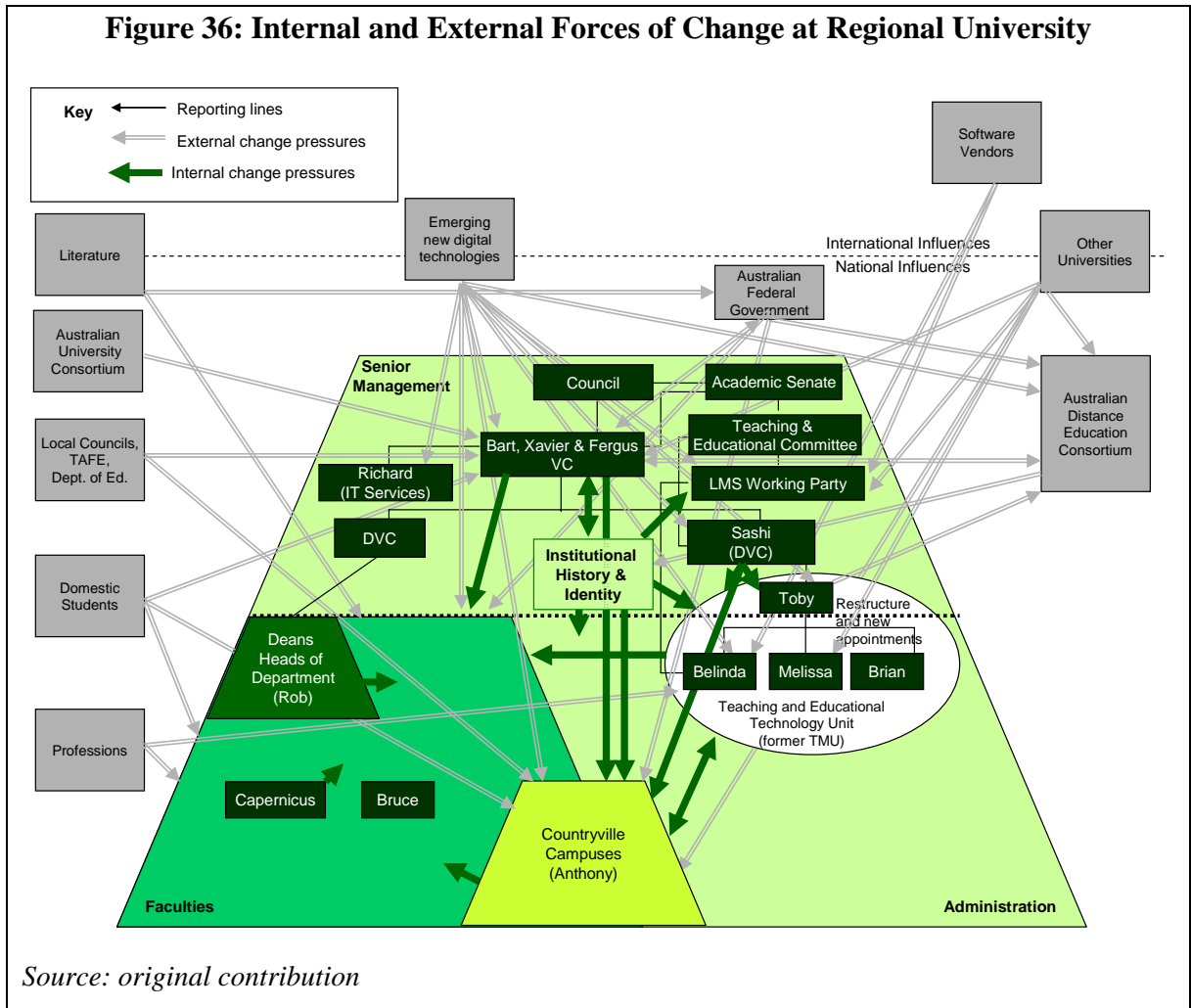
region. They were also politically astute, and were able to gain significant Federal Government funding for their new campuses at a time of declining funding across the broader sector. The senior management of the university also shared similar backgrounds in education. For example, Xavier had a strong background in educational leadership in Australia and overseas, Sashi had completed doctoral studies in educational psychology and technology, Toby was known for his educational technology background while at Metropolitan University, and Belinda possessed a strong background in education.

A number of interested academics were also responsible for experimenting with early technology and introducing it into their classrooms, creating pressure on other academics and the broader institution to adopt at a later time. This was supported by a new external appointment to the Teaching and Educational Technology Unit (Toby), in addition to several long-standing members of this unit who assisted the university to evaluate and acquire a new learning management system.

Figure 36 attempts to illustrate the operation of these external and internal forces of change on various actors at Regional University. The coloured trapezoid shape represents Regional University, broken down into several relevant units such as Senior Management, the Teaching and Educational Unit, Faculties, Countryville Campuses, as well as other nominated heads of authority. The key at the top of Figure 36 distinguishes between the different kinds of internal and external influences at work, in addition to the various lines of responsibility between key actors.

Drawing on this figure, a number of observations can be made about the nature of the evaluation and adoption processes at Regional University. First, there were a significant number of external influences acting upon multiple staff members at Regional University, particularly the senior management of the university. These influences ranged from impersonal literatures and rhetoric in support of online learning, to more direct influences from other universities and the Australian Federal Government. Many of these influences were discussed in greater detail in Figure 34.

**Figure 36: Internal and External Forces of Change at Regional University**



Source: original contribution

Second, there were a range of internal influences at work within the university, also described throughout this chapter. These influences included a number of strategies and political tactics such as assembling academic development programs, running seminars, establishing new expectations in enterprise bargaining agreements and even providing strong management directives. Xavier was particularly significant at Regional University in building a strong culture of innovation around new emerging technologies and using these in newly established campuses in order to stave off competition from other Australian universities. Part of this innovation culture around new technologies may account for the impact that emerging digital technologies had on so many parties within the university, as indicated in Figure 36. The more centralised culture of the university would have also allowed the VC to make rather strong demands on the institution that were largely complied with, such as the need to avoid duplication in conducting classes across multiple campuses.



Third, the initial drive for and location of the early learning management system evaluation and adoption activities were located within the lower levels of the organisation. These staff appeared to be subject to less external pressure to adopt a particular platform than similar staff at Suburban and Metropolitan Universities, although this claim was difficult to corroborate from the case evidence. This may be partly the result of Regional University's early adoption relative to many other Australian universities, and partly a result of a lack of membership in broader inter-university networks such as International Consortium.

Fourth, internal influences on early decisions to adopt Topclass and then WebCT at Regional University were at least as strong as external sources. These two sources also combined in different ways to influence adoption. For example, Regional University's prior history with ADEC led to the development of technology-based teaching strategies throughout its expanding Countryville campus network. The initial drive of several interested academics to experiment with emerging digital technologies also led to pressure on other academics to adopt, and the capacity of several members of the Teaching and Evaluation Technology Unit to support and encourage the adoption of these technologies across the campus.

The final section of this chapter will explore the impacts of these changes on different university outcomes.

## **Impact of Changes at Regional University**

### **ORGANISATIONAL RESOURCES**

Some respondents in senior administrative positions at Regional University noted that the decision to employ various technologies in the university's teaching programs, including the use of learning management systems, had led to reduced costs and improved flexibility. Coupled with the university's custom student administration and email system, Regional University claimed that it could now "delivery anywhere".

Has it brought business benefits to the university? Yeah, it's reduced our costs and improved our quality substantially on a number of fronts. It's increased our flexibility. This university can deliver anywhere, it can enrol its students anywhere. Our International Campus students enrol in our student management package, use our central email system and they use our online learning....So to me, that is, this is one of the few places that I have ever been involved in where technology has in actual fact

been used to boost business outcomes, quality of outcomes, reputational outcomes and succeeded (Senior Management).

One of the most significant areas of cost saving were associated with the university's multi-location teaching programs across its many campuses. The internet has been used to deliver weekly lectures to students on remote campuses, reducing inter-campus travel time and expanding the geographical reach of the university.

By 2003, lectures were being automatically recorded for delivery to students via the net, originally set up to reach twenty students in Serento. At this time, there was approximately ten (it's now up to about 70) hours of lecture material being recorded per week. Now, it is seen as a way to reduce costs and lost time travelling to other campuses. It is also a means by which the reach of the campus can be extended geographically (TETU).

Similar to the experience of Metropolitan University in the previous chapter, learning management systems have also allowed some faculties in the university to foster new ways of interacting with students that would have been prohibitively expensive without such technology.

...We've also got a couple of very sophisticated mentoring sites that we're using with our cohorts of graduates. So for example our physical and health education students, they've joined ...this web environment, this mentoring and peer support web environment from year two, and the fourth years mentor the second years out on their prac and through their program. And then once they get out in schools and start teaching, they have a peer support mechanism, on the site expertise from our staff. So we, a lot of people that are using the technology in ways that don't convert directly back to teaching in the true sense and that's, when people start to do that, that's pretty exciting because you really are starting to take the affordances of the technology and implement them and do things that you couldn't do before. And that's actually a way in which it does save a lot of money..., because if you put together a mentoring program for new teachers, and you've got to have people on the ground, that's a very expensive process, and so this is a mechanism that is very crucial (Faculty Representative).

Although the administrative costs of delivering education using learning management systems were argued to be lower, particularly for subjects taught across multiple campuses, some academics (noted below) involved in delivering courses with an online discussion component claimed that these programs were in fact much more time intensive. This additional academic cost, although written up in the literature, was not claimed to be appreciated by university administrators "because of their lack of understanding of pedagogy".

You've got to get some sort of interaction going and that's difficult. And one of the difficulties is that students, once they recognise that these facilities are available, become very demanding of interaction, particularly from lecturers. And lecturers don't want to spend 24 hours of their day responding to students online or on via email. ...I mean there have been a number of people that have written about it and so on, but it still is a very much a great expense of time is needed to run an online unit well, and I don't think administrators realise that, because of their lack of understanding of pedagogy basically (Faculty Representative).

Finally and perhaps most importantly, the academic must be aware that taking up such a challenge will involve them in an incredible increase in their work load and that their ability to cope with this

will directly impinge on the success of the exercise in terms of student to student and student to teacher interaction (Faculty Paper 7).

Some academic staff even went as far as to propose that staff making use of these technologies be granted lighter teaching loads in recognition of increased demands upon their time.

It is actually more demanding to teach online than in a face-to-face situation (Hasasim, 1993; Berge, 1995). It is demanding not only in terms of cognitive load but also in time required online. In universities this may mean that early adopters need a lighter teaching load to provide them with the time both for training involved and to provide time for significant access to the discussion forum (Faculty Paper 6).

## **TEACHING AND LEARNING**

Although WebCT was adopted widely across the university, there was little evidence of fully online courses, particularly in the undergraduate programs.

...We haven't got any undergraduate programs that are fully online (Faculty Representative).

Where learning management systems had been adopted, it was argued to be of greatest benefit to postgraduate students with many other commitments, rather than undergraduate students.

...So it's in my view I suppose, has been that the benefit for online learning has always been with those people where it's going to provide the most benefits, and that fits more with the mature age student who's got a job, who's got a family, who's got commitments, who hasn't got time basically, to come into lectures during the day or after work or whatever for hours and you know, listening to some demi-god rattle on for a couple of hours. I mean that sort of model has changed for post graduates I think, because of the technology (Faculty Representative).

It was also thought that international students were unlikely to prefer online methods, given their desire for participation in social interaction with local students.

I think in terms of its benefits I think again you've got to look at who you're talking to and who's using it. If it was, here's a real problem, we have students coming from overseas, international students, and they come over here ostensibly to get an education as well as to learn English...So they want to be part of a social group type learning situation. Yet when they come here [as] post graduate students, they might well be put into an online class or two which really pisses them off...because while they can do it, and they can come and see their lecturers and so on at any time, and there's obviously other facilities in the university where they can interact as well, they don't get that interaction that they thought they were going to get, and they paid an awful lot of money for. So talking to them, you might well get a negative reaction to online teaching and learning (Faculty Representative).

Earlier in this chapter, Xavier's intention to introduce new technologies to "get the buggers to lift their game" as part of a 'Trojan horse' strategy was noted. This plan appears to have worked in so far as the introduction of new technologies like WebCT has led to people thinking differently about their teaching.

...It wasn't the technology itself that made people change the way they taught but I think people engaged more in thinking about their teaching as a result of using technology, and that changed the way they taught and helped them to improve their teaching. But really it was because they actually investigated ways to improve their teaching and it wouldn't have mattered even if they had remained as a traditional teacher, I think if they had investigated their teaching in the same way, they would have improved their teaching anyway, with or without the technology. But certainly the technology was the kind, the thing that was exciting and new and gave people the push to do that, or permission to do that (TETU).

Although WebCT provided opportunities for people to reflect on their teaching, it was criticised by other academics for its "straight-jacketing of pedagogies". Three academics, particularly those in the Education Faculty, argued that they had some significant concerns with this platform.

Yeah, you know with a lot of these systems as you are aware, Web CT and Blackboard are North American developed systems and they have a particular North American flavour to them, not only in terms of nomenclature, but also in the straight-jacketing of pedagogies. The emphasis on testing and multiple choice testing, the linear approach to dropping in content, fosters I think a pedagogical approach that we would not support. It's the sort of approach that many lecturers have at just dumping content on the net, and Web CT and Blackboard are very good at enabling you to do that. You know, as soon as people see that they can put up their 100 megabyte Power Point, wonderful but pedagogically it's a stupid idea, in my view. So from an educational perspective, there are real problems with it (Faculty Representative).

Some of the above academics therefore noted that there was "enormous potential" to continue developing the educational contribution of these technologies.

I've taught in online learning and I've been a student here, I think it's got enormous potential still. We really haven't gone far enough with it and we haven't really realised the potential of it, but then as soon as I say that I sound like I'm feeding the fad (Faculty Representative).

It should be noted that although it was argued that university teaching had improved as a result of academics having to reflect on their teaching, following the adoption of WebCT, no respondents claimed that the use of this learning management system had directly contributed to improved student learning, apart from enabling some forms of learning not possible via more traditional means.

## **ORGANISATIONAL LEARNING**

There was scattered evidence available to suggest that Regional University was able to learn collectively from its various experiences and mistakes. For example, earlier in this chapter it was noted that the university was able to derive some leverage from its experiences and investment from the failed ADEC venture in the successful implementation of its various Countryville campuses. Similarly, two significant IT failures around the use of WebCT in 2003 were rectified with a third review of the available platforms, a significant change in the composition of those stakeholders

involved in the evaluation and management of the WebCT platform, and a subsequent two year period without any failures.

## **LEGITIMACY OF ADOPTION**

Regional University employed a number of different strategies to encourage its staff to adopt WebCT. One of these in particular, rewarded early innovators of this technology, instilling them with broad legitimacy across the university. These ‘local champions’ then created pressure for other adopters to follow as a result of their relative success.

I think eventually other people came on board because they started seeing the success of these people. ...A lot of them won teaching awards, a couple of them became TETU scholars and worked in here, were bought out of teaching for 6 months to work on different projects. They got recognition in various ways through the university. All of them who hadn't been confirmed, there were a lot of new staff amongst them, those who hadn't been confirmed in their positions, were all confirmed in their positions with teaching as their first priority rather than research, which is quite a novel thing in the university (TETU).

In contrast to the experiences of Suburban University and Metropolitan University, Regional University was also credited with a significant amount of external legitimacy by a respected field organisation through the award of two prestigious university mentions. These awards were given on the basis of the way that the university was able to construct the educational experience it gave to its students, partly arising out of its ability to integrate its student administration, email and learning management systems together. This recognition was claimed to have led to an enhanced reputation at home and abroad, leading to increased students and reduced costs.

Researcher:

Just drawing it together as you look back over the university's experience with I suppose grouping them together, given that you said the three systems really sit together here at Regional Uni, how would you assess the impact on the university of adopting those new technologies at an enterprise level?

Senior Management

Enormous, this university...won [name deleted]. When that happened, we were the only university that could pull a full e-package together that takes students from the beginning to end of their entire relationship with the university, both in a management sense and an academic sense. We knew that; we'd gone looking to see what else was out there. That reputation filtered overseas, boosted our international position, kept our numbers high, kept students interested, kept our costs low, allowed us to introduce far more quality in our teaching.

## PACE OF ADOPTION

Various respondents at Regional University claimed that their university was well ahead of most other Australian universities in their use and adoption of various learning management systems during the late 1990s.

I think Regional Uni was at that stage, in those earlier stages, was one of the leading lights...So you know, there weren't many people in '96 who were doing very much with technology in higher education, you know it was just starting to build up (TETU).

Another respondent argued that when Regional University was granted its awards, it was one of the leading Australian universities at the time. Part of this influence was again credited to Toby's influence. No corroborating evidence was found in support of the claim that other universities followed Regional University however, as was argued below.

Researcher:

So Regional Uni was actually one of the leading institutions at this time...

TETU:

At the time.

Researcher:

...that others tended to follow?

TETU:

I would say so...I can remember sitting and looking at the sort of people that we would get to talk to the people that do the review and that and you know, we had just so many good examples of people doing good stuff, and it was, you know, we were spoilt for choice in terms of, you know, innovative practice, because you've gone beyond the simple...And again, this is partly Toby's influence...

The pace with which academics at Regional University adopted WebCT was quite astounding. In 1999, just one year after the university discarded Topclass and settled on WebCT as its platform of choice, there were over 100 subjects using WebCT.

By the second year of WebCT, there were 100 subjects using it. Surveys were used to establish how it was being used, with 20 percent using quizzes early on, now at 40 percent. (TETU).

Just one year later in 2000, 213 subjects and 18,178 students were using WebCT. This increased to 844 subjects involving some 51,691 students by the year 2002, "nearly a 400 percent increase". This incredible uptake was perhaps a testament to the effectiveness of various strategies employed by the university to encourage this very result.

In 1999 through 2002 there was a rapid uptake by academics of the new learning management system: WebCT. This exceeded all expectations, as the previous trial of Topclass went no further than a handful of enthusiasts...In 2000 there were 213 subjects with an online component involving 18,178 students. In 2002 this had risen to 844 and 51,691, nearly a 400 percent increase (Faculty Member Reflections).

The number of academics adopting WebCT since 2003 has “stagnated” with nearly all subjects utilising it to some degree. The majority of these subjects were claimed to be underutilising WebCT’s functional capability however.

In the time since then, the actual use of WebCT has reasonably stagnated I would say. The numbers may be wrong. I would guess we’ve got 20 percent, maybe 30 percent of our subjects currently using 80 percent of WebCT’s capacity, functional capability, but we’ve still got a very large number of users. I mean all of our, I think nearly all of our subjects now utilise it in one form or another, but the majority of them would utilise only at a smaller level, between 20 and 40 percent of the product’s capability (Senior Management).

## **STABILITY OF ADOPTION**

Regional University’s adoption of WebCT Campus Edition and now Vista is unlikely to be threatened by other competing platforms. Adoption among academics escalated in 1999 in a way that was “self-perpetuating”, particularly when students began to reinforce the decisions of the institution and leading academics.

Yeah anyway, so yeah, it was ’99 and pretty much it just absolutely escalated, it just, academics took to it. And it was self-perpetuating too as it was, students became a driver, so there were, there was the, there were institutional pushes certainly, there were some faculties which probably pushed it harder than others (TETU).

These student pressures “percolated down” throughout the university in a manner that suggested that such an innovation was seen to be necessary to the education of these students.

I mean, I play tennis, and I can remember listening on conversations, you know, to parents talking about, they were actually talking about WebCT and about the fact that, that these materials weren’t available. You know, it was, you know, I just found this quite amazing. It sort of percolated down to that sort of level and understanding of the need for it (TETU).

Even two significant IT failures in relation to WebCT in 2003 have not threatened the use of WebCT across the university. Although adoption of WebCT was argued to have peaked about three years ago, prior adoption does not appear to have been effected. Other non-adopting staff members may still yet adopt in time, particularly if the prior mentioned pressures continue to bear down upon them.

...Take up on WebCT probably peaked about three years ago. We had, two years ago, two and a half years ago we had major loss of data base which lost a lot of support for Web CT. There are a number of reasons for that, bad project coordination, I think ITS was having its troubles back then, in between all of that or mixed in with all of that was the fact that Web CT was suffering under the strain of it, it hadn’t been scaled and grown the way it should have. In the last two years, most of those issues have been resolved. We still have staff members who don’t want to use it because of bad experiences going back, but the reality is it’s been 100 percent reliable for close on two years it’s been scaled up now it’s actually a highly responsive system, has been for close on two years (Senior Management).

This chapter has described the process of institutional change around the introduction of new learning management systems at Regional University. It has accomplished this by introducing the reader to Regional University, the evidence used to construct this case, the university's relative size and scope, structure and key relationships, as well as its institutional history and identity. Following this discussion, the process of institutional change was then described in detail, with reference to liberal quotes from respondents and key documents, used throughout to illustrate and ground this case study. This chapter then concluded with a discussion of the organisational impact of these changes across a range of different relevant domains.

This chapter concludes the discussion of three universities' experiences of institutional change around the evaluation and adoption of new learning management systems. The next chapter of this study shifts from a narrative case study form to a cross-case analysis of these universities, including the identification of relevant grounded theory from these cases.



# CHAPTER SIX: OBSERVING AND EXPLAINING UNCRITICAL EVALUATION

## Introduction

The changes described at Suburban University (chapter three), Metropolitan University (chapter four) and Regional University (chapter five) were complex and diverse. Although there were similarities across the three universities, each case had its own unique history and institutional context, involvement of different parties, employment and non-employment of various strategies and tactics, with diverse consequences experienced across a range of organisational domains.

Analysis of these cases was assisted with the use of grounded theory coding techniques, explained in greater detail in chapter two and the appendices. This coding was conducted using NVivo qualitative computing software, and progressed from early in-vivo codes that adopted the language of respondents from verified interview transcripts and collected documents, to axial coding that attempted to specify the various properties of these categories across relevant dimensions, to selective coding towards a core category that described the broader social phenomenon observed in this study.

The descriptive accounts of these cases in the previous three chapters were each assembled from codes belonging to five broad classes. These classes, described below, coincide with the four research questions and major research problem identified in chapter one:

1. Parties involved in and associated with various strategies, decisions and interactions (research question one);
2. Strategies, decisions and interactions relating to the process of evaluation and adoption of various learning management systems (research question two);
3. Consequences of these strategies, decisions and interactions on various university outcomes (research question three);
4. Influence of various internal and external factors (research question four); and
5. Grounded explanations specifically proposed by respondents to account for the evaluation and adoption behaviour described in selected Australian universities (research problem).

The next section of this chapter attempts to summarise the evaluation and adoption decisions of the three university case studies, within the context of broader university changes, as part of a cross-case analysis. In passing, this chapter will also address the four research questions for this study. At the end of this chapter, a grounded explanation, using the information in this chapter, will be presented to address the major research problem of this study.

Various contributions to theory resulting from this study will also be noted throughout this chapter. Appropriate references have also been made to the higher education literature. The judicious reference to other Australian higher education studies is argued to act as an additional source of validation for the findings observed in the three case studies. Further, limited aspects of institutional theory will similarly be discussed to assist in the interpretation and validation of this empirical research and grounded theory.

## **Comparative University Change Contexts**

In each of the earlier case studies, details of evaluation and adoption processes were laid out in narrative form within the context of broader change within each university. Various figures were used to summarise this information, including the construction of relevant chronologies of key university changes. Figure 37 attempts to compare and contrast these major changes observed in each university case study.

Prior to 1997, the research indicates that there was little activity associated with learning management systems in any of the three universities. Both Metropolitan University and Regional University supported innovation with emerging educational technologies at an individual academic level, primarily through the activities of central education units and complementary university level policies. Toby played a central role as Foundation Director of the Learning and Multimedia Unit at Metropolitan University, before joining the Teaching Media Unit at Regional University in 1994. Both of these central units enjoyed high level university support in assisting individual academics to experiment with educational technology.

**Figure 37: Comparative Chronologies of Key University Changes**

Year	Suburban University	Metropolitan University	Regional University
1990	Unsupported academic experimentation	Centrally supported academic experimentation	Centrally supported academic experimentation
1991			
1992		Toby starts Learning & Multimedia Unit	Trial campus setup in Countryville
1993			
1994		Toby leaves Metropolitan University	Toby joins Teaching Media Unit Regional Uni joins ADEC
1995			
1996		New VC with new vision.	Funding approved for 3 new campuses New VC. Toby appointed to head new TETU Trial of Topclass. Role in ADEC ended
1997	VC invited to join International Consortium. Realised Suburban Uni was 'falling behind'	VC starts International Consortium. Realised Metropolitan Uni was 'falling behind' Funding to encourage educational technologies	
1998	Former CEU 'disestablished'	Unintended development of Sandstone Online	WebCT C.E. evaluated & adopted Adoption encouraged across campus
1999	Susan appointed to head new CETU	New Central Services unit formed (Learning & Multimedia Unit subsumed)	
2000	Evaluation and adoption of WebCT C.E. Colin appointed to new PVC Education portfolio.		New campuses opened.
2001	Lisa appointed to new Learning & Teaching Unit Adoption encouraged across campus	Emily appointed to head new unit formed. First LMS evaluation	
2002		Second LMS evaluation. Adoption funding ceased	
2003			WebCT C.E. evaluated again
2004			Adoption of WebCT Vista
2005	Adoption of WebCT Vista	Adoption of Blackboard	Implementation of WebCT Vista

The Central Education Unit at Suburban University was involved in helping interested academics share their experiences with new technologies, but they did not receive the same level of senior executive support for their activities. This was argued to be a consequence of the Vice Chancellor's (Alfred) perception and construction that such technologies were part of 'distance education', and were thus inconsistent with his purported desire that Suburban University should be seen as a research university. This construction was enacted by members of the university as they were socialised into accepting this myth. This executive intention to construct a new institutional identity among university staff (Gioia, Thomas, Clark and Chittipeddi, 1994) and mimic the behaviour of those already in the top reference group (older prestigious research universities) to which they aspired to belong (Gioia and Thomas, 1996), has been observed in Europe and the US (Morphew and Huisman, 2002), as well as in Australia (Marginson and Considine, 2001: 217). Alfred's poor relationship with the head of the Central Education Unit, Norah, may have also affected this view.

In all three cases, significant change occurred in 1997. Worldwide, there was a significant and growing interest in the capacity to generate new wealth through the web, particularly from Wall Street (Cassidy, 2002). Universities globally were beginning to explore the extent to which new student markets might be reached through new online technologies. In Australia, these issues were the subject of major investigations by Cunningham et al. (2000; 1998) following a fear that some of Australia's higher education markets (both domestic and international) might be at risk from foreign web-enabled providers.

Regional University began trials of Topclass with interested academics in 1997, following its acquisition of a new trial campus and internal restructuring leading to the development of the Teaching and Educational Technologies Unit, headed by Toby. As a result of the university's prior experience with both its new campus and its failed experiment with the Australian Distance Education Consortium (ADEC), Regional University was able to acquire significant educational technology and expertise that was used within the context of its cross-campus teaching programs. Regional University later adopted WebCT campus edition as a university in 1998, and encouraged its adoption through a range of strategies and mechanisms.

Metropolitan University appointed a new Vice Chancellor (Cecil) in 1996 who initiated a great deal of change within that institution. Cecil encouraged the university to change its identity (Gioia et al., 1994) to be a world-class university (Gioia and Thomas, 1996) and "mainstream the digital revolution", another construction created and disseminated to university staff. Cecil sought to change the university's identity through benchmarking other institutions and building structures such as the International Consortium to support these initiatives. As a result of his interaction with the VCs of other International Consortium universities among this network of boundary spanning personnel, he realised that his institution was 'falling behind'. Cecil enacted this construction by attempting to 'catch-up' and mimic the decisions of these International Consortium universities to gain external legitimacy, by creating internal funding programs, such as the Multimedia Development Fund, and encouraging staff to experiment with emerging new technologies he believed were part of a revolution in higher education. He also restructured several internal administration units into a broader Central Services unit, before pushing the university to evaluate and adopt an appropriate university-wide learning management system. Metropolitan University finally adopted its first proprietary learning management system (Blackboard) in 2005, after faculty adoption of several other platforms for some years, including a custom program developed in-house.

The Vice Chancellor of Suburban University (Alfred) was invited to join the International Consortium that Cecil had set up in 1997. Alfred, similar to Cecil at Metropolitan University, also realised when he met with the VCs of International Consortium that his own institution was 'falling behind' and therefore needed to 'catch-up' by similarly mimicking the decisions of these other International Consortium universities. This was achieved by 'disestablishing' the Central Education Unit, appointing an external applicant (Susan) as Director of a newly created Central Educational Technology Unit, and requiring Susan to 'fast-track' the adoption of a new learning management system. Susan led the university into the adoption of WebCT in 2000, supported by Colin, who was an internal candidate appointed to a newly created PVC portfolio shortly thereafter.

The next sections of this chapter address the four research questions introduced earlier in chapter one. These questions identify the different parties involved in evaluation and adoption activities, the processes of evaluation and adoption in each university, the impact of these processes and decisions on various university outcomes, and the influence of various internal and external factors. A grounded theory addressing this study's research problem is presented at the end of this chapter.

## **Research Q1: Parties Involved**

Question sought to identify which parties were involved in the evaluation and adoption of various learning management systems in selected Australian universities. Figures 38 and 39 on the next two pages highlight those parties directly and indirectly involved in various evaluation and adoption activities in the three university case studies.

**Figure 38: Comparative Parties Involved in University-Wide LMS Evaluation Activities**

Stage of LMS evaluation	Suburban University		Metropolitan University	Regional University
	2000	2005		
Initiation of the university-wide LMS evaluation process	Alfred (Vice Chancellor)		Cecil (Vice Chancellor)	Various interested academics
Oversight of LMS evaluation process	Vice Chancellor's Advisory Group (VCAG) (VC and PVCs of the university)		Planning and Resources Committee (a sub-committee of Council)	Teaching and Educational Committee (a sub-committee of Academic Senate)
Primary responsibility for LMS evaluation and recommendation	Susan (Director of CETU)	Peter (Senior Information Officer)	Stella (Director of LARS)	Belinda (Member of TETU)
Secondary involvement in LMS evaluation and recommendation	None	Caroline (CETU) Other members of CETU Various interested academics	Oliver and Nathan (LARS) Tim and Barbara (Education Research Centre) Members of the LATET committee Various interested academics Academics from other universities	LMS Working Party (a sub-committee of the Teaching and Educational Committee) <i>Note: this group included interested academics and IT Services, among others. The composition of this team also expanded over time.</i>
Formal review of LMS recommendation	None	VCAG	Cecil External auditors (through the Planning and Resources Committee)	None

**Figure 39: Comparative Parties Involved in University-Wide LMS Adoption Activities**

Suburban University	Metropolitan University	Regional University
Alfred and Silas (Vice Chancellors) Keith (President of Academic Board) David (PVC) Colin (PVC) Susan (Director of CETU) Caroline (CETU) Peter (Senior Information Officer) CETU-trained academic change agents Various interested academics	Cecil (Vice Chancellor) Luke (DVC Academic/Past President of Academic Board) Emily (Vice Principal of Central Services) Stella (Director of LARS) Oliver and Nathan (LARS) Tyrone (Faculty Multimedia Unit) Rachel (Former ITS) Deans of faculties Various interested academics/local champions	Xavier and Fergus (Vice Chancellors) Sashi (DVC) Toby (Director of TETU) Belinda (TETU) Richard (Director of IT Services) Various interested academics

## **SUBURBAN UNIVERSITY**

At Suburban University, Susan (who was appointed as an external applicant to the role by Alfred the VC) was responsible for the first evaluation of available learning management systems. Members of the Vice-Chancellor's Advisory Group were also involved indirectly to the extent to which they approved Susan's request to bypass the usual critical review processes normally followed by the university, so that the university could 'fast-track' their adoption and 'catch-up' to other peer universities in the International Consortium, given senior management's belief that Suburban University had 'fallen behind'. On the basis of interview and document analysis presented in the previous case studies, no other administrative or faculty staff were involved in this first evaluation.

Susan's evaluation activities were enabled by the prior 'disestablishing' of the former Central Education Unit (CEU), creating space for Susan's appointment in a newly created Central Educational Technology Unit (CETU). The names of these different units is significant, signalling a shift in what was held to be important to management. Supporting her recommendation to adopt WebCT was a range of strategies and tactics originating from the portfolio of a newly appointed PVC role (Colin), as well as a Strategic Priorities Fund that provided monetary support for broader university-wide adoption, and the training of academic change agents within the faculties. Figure 39 lists the details of particular individuals involved in encouraging adoption at Suburban University. The nature of their particular contributions is detailed in the next section of this chapter.

Given the university's first experience with WebCT and PeopleSoft (an enterprise IT system that failed to deliver according to the university's expectations), a number of changes were put in place across the university, particularly at the executive level. A new senior manager responsible for IT systems across the university was appointed in 2001. He brought in a number of new approaches to IT evaluation at that time. Five years after Suburban University's first evaluation in 2005, the university went through a second LMS evaluation. Caroline from CETU was much more heavily involved in this second evaluation, along with a range of other academic staff and students consulted as part of this decision making process. The Vice Chancellor's Advisory Group was also much more sceptical of new IT purchases, and took a more active role in overseeing this second evaluation. The substantive changes in process for this second evaluation are noted in the next section of this study under research question two.



## **METROPOLITAN UNIVERSITY**

A number of different parties were involved in evaluation and adoption activities at Metropolitan University. Formal evaluation originated with Stella and her Learning and Resource Support (LARS) unit, who involved a number of academics in their evaluation activities. Their first evaluation was cut short by Cecil's intervening recommendation through the Planning and Resources Committee that they should adopt WebCT, following the decisions of other universities in the International Consortium. Stella successfully argued to this committee that the campus edition version of this platform was inappropriate for the university, and secured funds to commission Tim and Barbara to conduct a second evaluation. Stella and her team worked with Tim and Barbara behind the scenes, whilst other academics and members of the university were involved throughout. Other universities were also involved in the evaluation of these platforms, through external representatives participating in internal formal committees and through informal discussions with other academics (including visits to other universities), both in Australia and overseas. Once a decision was finally made to recommend Courseware, an open source initiative, Cecil became involved again and rejected this proposal, requesting that external auditors review this recommendation through the relevant Council committee. This process ultimately led to the recommendation of a proprietary platform, culminating in a final decision by Stella and her team in favour of Blackboard.

The evaluation activities at Metropolitan University were preceded by a number of prior initiatives by Cecil the Vice Chancellor, following the work of Toby and the Learning and Multimedia Unit (LAMU) group, who encouraged adoption of multimedia and educational technologies in the early 1990s. Cecil introduced a very large Multimedia Development Fund that encouraged academics to adopt new technologies in their teaching across the university, affecting up to one third of academics at the university. As an unintended consequence of this process, Metropolitan Online was developed by Tyrone, with the assistance of Rachel, and adopted by a number of academics prior to the evaluation processes described above. The university responded by restructuring several central administration units into a large Central Services division under a new external appointment (Emily), and promoting several staff members, such as Stella, to senior roles. Following the university's decision to adopt Blackboard, a range of strategies and tactics was used to encourage adoption, described in more detail in the next section of this chapter.

## **REGIONAL UNIVERSITY**

At Regional University, Belinda was involved centrally in several rounds of evaluations of various learning management systems, as part of the Teaching and Educational Technology Unit (TETU). The first evaluation involved a number of keen academics such as Capernicus, in trials of different applications. The second round evaluation moved from Topclass to other products, and led to the development of an LMS Working Party (chaired by Belinda), which was a formal sub-committee of the Teaching and Educational Technology Committee (chaired by the DVC [Sashi]), itself a sub-committee of the Academic Senate. This working team included a number of academics and administrative people from various parts of the university, including IT Services. The composition of this working team changed again following a major failure in the WebCT system in 2003, leading to greater involvement of other high level university staff in these matters.

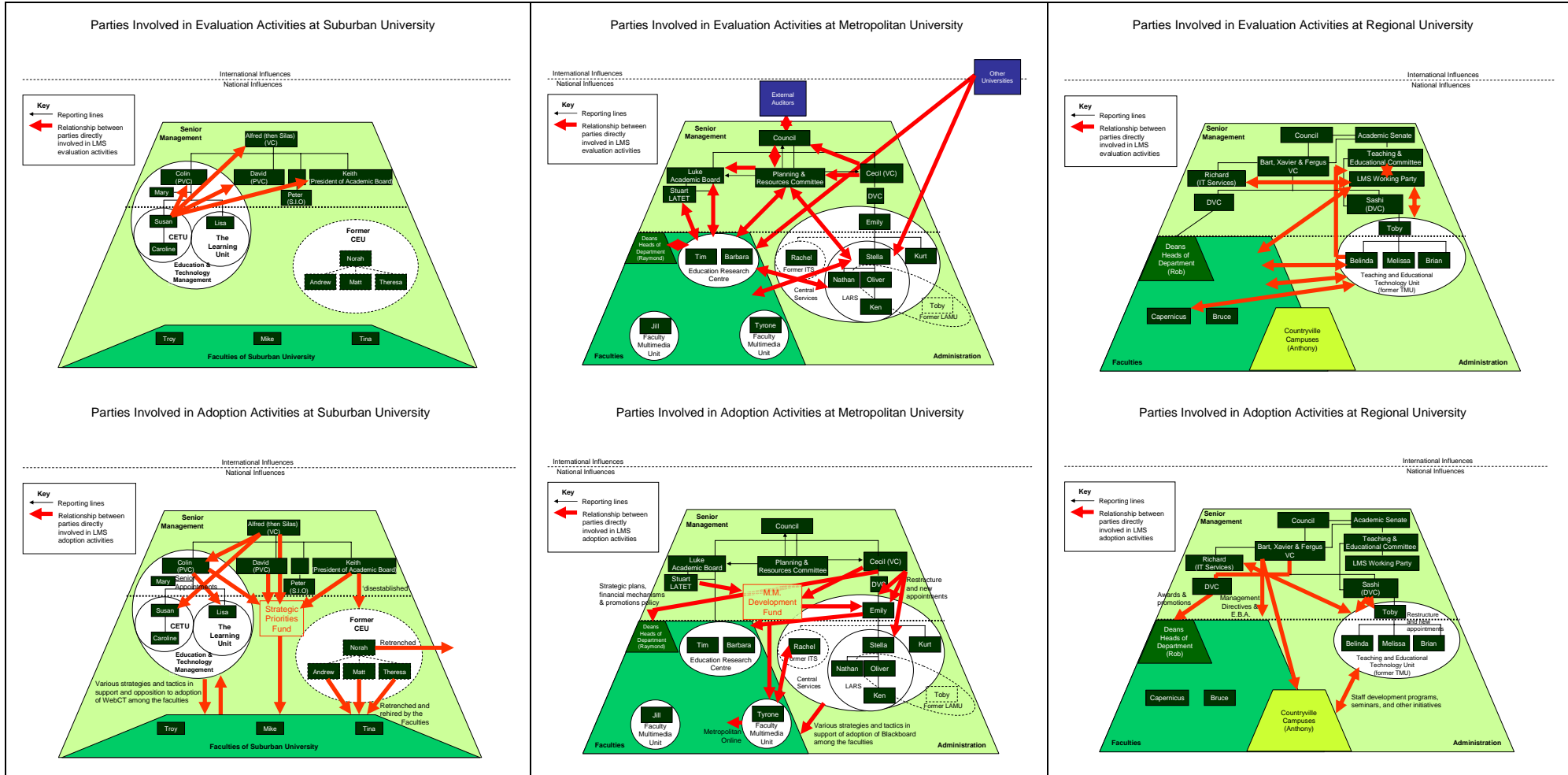
Adoption of WebCT was encouraged across the various Regional University campuses through a range of mechanisms put in place by different parties. The Vice Chancellor (Fergus) and Sashi required university staff to avoid duplication in their teaching across multiple campuses through strong management directives issued to staff on the main campus and at the Countryville Campuses. Fergus also put in place a number of other formal mechanisms, complemented by various strategies pursued by TETU. Further details of these strategies are discussed in the next section of this study.

## **CROSS-CASE ANALYSIS**

Figure 40 attempts to illustrate these relationships between the before mentioned parties in both evaluation and adoption related activities. The second round of evaluation decisions made at Suburban University in 2005 are not included in this figure.

Across all three universities, evaluation activities were the primary responsibility of a single member of academic staff, located in a department responsible for educational technology across the university. Senior members of the university were involved in a secondary capacity in all cases, including the Vice Chancellor in every case, although not directly at Regional University. Other members of staff were involved to varying degrees.

**Figure 40: Comparative Relationships between Parties Involved in Evaluation and Adoption**



Suburban University differed from Metropolitan and Regional University in denying faculty teaching staff involvement in evaluation activities during 2000, either through participation in university-level committees, informal working groups, or individual experimentation. It is assumed that more people would have been involved in evaluation at Suburban University had the usual critical review processes normally observed in this university not been deliberately disengaged at the request of Susan, approved by the Vice Chancellor's Advisory Group.

Metropolitan University was also different from the other two universities in so far as its evaluation involved parties external to the university in its internal decision making. Academics at other universities were consulted and involved in the evaluation activities within the LARS group and Education Research Centre, through both informal and formal decision mechanisms. A firm of external auditors was also involved in the validation of the Vice Chancellor's decision to reject an open source recommendation and adopt a proprietary system.

The relevant senior executives of all three universities were also involved in LMS adoption activities. In each case, the Vice Chancellor and associated DVC/PVCs, along with members of the equivalent central educational technology groups, were all involved in encouraging adoption throughout the campus using various strategies and tactics at their disposal. Various individual academics also took an interest in adopting these technologies at a faculty level, some as a result of training opportunities provided by the central technology group, and encouraged other academics within their faculties to also adopt. Further details of the substance of these evaluation and adoption activities are described in the next section of this chapter.

There are few empirical studies in Australian higher education that have investigated the roles played by different identities in the evaluation and adoption of learning management systems. Early studies of the introduction of educational technology into university classrooms between 1992 and 1995 found that the majority of these projects were initiated by interested academics, primarily to improve student learning (Alexander and McKenzie, 1998; Cochrane et al., 1993; Tinkler et al., 1994). In almost all of these early empirical studies, there was very little senior management involvement in these processes. For example, Alexander and McKenzie claimed that in the majority of cases where university programs adopted new computer-based technologies, they were conceived by an individual or a small group of academics. Further, there was little evidence of institutional or faculty strategic plans to use IT, in addition to neutral or negative reactions experienced by these interested academics from their respective department or faculty (Alexander and McKenzie, 1998:

238). Tinkler et al. (1994) implicitly acknowledged this same phenomenon by recommending that Australian universities ought to develop long term strategic plans for infrastructure and technologies in their institutions (Tinkler et al., 1994: 508).

An empirical study of experimentation and adoption of computer-based education at the Queensland University of Technology (QUT) shed light on the additional involvement of central education computer staff and senior management in that particular institution. Cochrane et al. (1993) found that central educational technology staff helped to develop and install computer programs, as well as provide interested staff with various forms of assistance during the early 1990s. They also noted the (exceptional) influence of senior management in that institution's decision making, explained by reference to their long institutional history of experimentation with educational technologies since the mid-1980s. This history was argued to have been influenced in part, by their institutional identity as an institute of technology, by resource pressures felt across the sector, and by the formation of a university committee of interested academics to explore these matters on behalf of the university in the mid to late 1980s.

The findings of this study, with respect to the first research question, are consistent with the Australian higher education empirical studies cited above. This study has argued for the role of interested academics and central educational technology units in pushing for the adoption of new technologies on largely educational grounds prior to 1997. Where the management of universities such as Regional University were more involved, it was argued to be a function of their institutional identity (as an "innovative university") and prior history experimenting with educational technology (through ADEC), cross-campus teaching commitments, as well as the central involvement of key individuals.

Similarly, the unsupported nature of individual experimentation reported at Suburban University does not appear to be an isolated experience in Australian higher education. In that case, a lack of institutional support and departmental and/or faculty discouragement were reported by respondents. This experience was most likely not a unique phenomenon in the sector, if the findings of Alexander and McKenzie (1998) and Tinkler et al. (1994) are a reliable guide to the experiences of other Australian universities at that time.

A minor contribution that this study, therefore, makes to the higher education literature is to identify the roles played by the senior management of different Australian universities in the evaluation and

adoption of new learning management systems, particularly from 1996 onwards. The next section of this chapter explores the different processes of evaluation and adoption at work in the three universities.

## **Research Q2: Processes of Evaluation and Adoption**

The second major research question in this study was designed to facilitate investigation of the actual processes and strategies associated with the adoption of various learning management systems in selected universities. Given the nature of the research problem identified in chapter one, this research question was important to this study. In particular, Yetton and Associates (1997) claimed that Australian universities had embraced innovative online learning technologies without evaluating formally their merit to these institutions before adoption. This claim was also supported by similar Australian (Alexander and McKenzie, 1998; Brabazon, 2002) and North American (Berg, 2002; Noble, 1998b) research, discussed earlier in chapter one. It would, therefore, be expected that uncritical examination of these technologies, if they occurred within the selected Australian universities, would be identified within the domain of this research question. The next section of this chapter reviews the evaluation processes at the three selected universities, and then discusses how these universities sought to encourage broader adoption within their institutions.

### **EVALUATION PROCESSES**

The processes involved in evaluating university-wide LMS platforms ranged from the relatively simple to complex, and were different across all three university cases. The comparative details associated with each selected university's evaluation experiences are shown in Figure 41.

In the cases of both Metropolitan University and Regional University, several rounds of evaluation took place over a number of years, drawing upon a very similar group of common staff members each time. At Suburban University, however, there were two different and separate evaluations, conducted five years apart, each involving a different approach. These two approaches have been distinguished in Figure 41 by dividing Suburban University's evaluation experiences into two respective evaluation processes conducted in 2000 and 2005.

**Figure 41: Comparative LMS Evaluation Details**

LMS Evaluation Process	Suburban University		Metropolitan University	Regional University
	2000	2005		
Year (Suburban Uni only)				
Rationale driving initial LMS evaluation:	To 'catch up' with other International Consortium universities in order to avoid being 'left behind'.		<ul style="list-style-type: none"> <li>To encourage university-wide adoption of a common proprietary LMS platform and 'catch up' to other International Consortium universities, in order to avoid being 'left behind'.</li> </ul>	<ul style="list-style-type: none"> <li>Initial interest from several interested academics, following adoption of various educational technologies, to avoid duplication in teaching activities across newly acquired teaching campuses.</li> </ul>
Evaluation context:	<ul style="list-style-type: none"> <li>CETU evaluation, driven by a VC directive to 'fast-track' the LMS adoption.</li> <li><i>Note: the usual critical review process was deliberately bypassed at Susan's recommendation, approved by the VCAG</i></li> </ul>	<ul style="list-style-type: none"> <li>CETU-led review within the context of a new IT evaluation framework, under the direction of Peter (the newly appointed Senior Information Officer).</li> </ul>	<ul style="list-style-type: none"> <li><u>Evaluation 1</u>: LARS directed evaluation, reporting to the Planning and Resources Committee (a sub-committee of Council)</li> <li><u>Evaluation 2</u>: Education Research Centre directed evaluation, assisted by LARS and others, reporting to the Planning and Resource Committee</li> <li><i>Note: the VC personally intervened twice in this process, first in encouraging adoption of WebCT Campus Edition, then second in rejecting Courseware (open source)</i></li> </ul>	<ul style="list-style-type: none"> <li>TETU-led evaluation under Belinda, leading to the formation of an LMS Working Party that reported to the Teaching and Educational Committee (a sub-committee of Academic Senate).</li> <li><i>Note: the composition of this LMS Working Party grew in 1998 and 2004 especially, following the failure of WebCT in 2003.</i></li> </ul>
Evaluation framework:	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Pedagogical/ educational</li> <li>Technological</li> <li>Economic/financial</li> </ul>	<ul style="list-style-type: none"> <li>Pedagogical/educational</li> <li>Technological</li> <li>Economic/financial</li> </ul>	<ul style="list-style-type: none"> <li>Pedagogical/educational</li> <li>Technological</li> <li>Economic/financial</li> <li>Integration and sustainability (added in 2004)</li> </ul>
Other LMS evaluation studies consulted:	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Not known</li> </ul>	<ul style="list-style-type: none"> <li>LMS evaluations of other universities in Australia and overseas (e.g. Technology Savvy Uni and Redbrick Uni in Australia)</li> </ul>	<ul style="list-style-type: none"> <li>Discussions with staff at other universities who had used WebCT Campus Edition</li> </ul>
Internal respondents consulted:	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Various "stakeholders", including staff and students</li> </ul>	<ul style="list-style-type: none"> <li>University-wide evaluation committee, involving "knowledgeable academics", including the DVC Academic</li> </ul>	<ul style="list-style-type: none"> <li>Other members of the LMS working group, including several interested academics</li> <li>IT and "grass roots people" (especially in 2004)</li> </ul>
LMS platforms available to respondents at time of evaluation:	<ul style="list-style-type: none"> <li>WebCT Campus Edition</li> <li>Blackboard</li> <li>Learning Space</li> <li>Suburban Online (in-house custom platform)</li> <li>WebCT Vista (2005 only)</li> </ul>		<ul style="list-style-type: none"> <li>Topclass</li> <li>WebCT Campus Edition</li> <li>Blackboard</li> <li>Courseware (open source)</li> <li>Metropolitan Online (in-house custom platform)</li> <li>WebCT Vista (2005 only)</li> </ul>	<ul style="list-style-type: none"> <li>Topclass</li> <li>WebCT Campus Edition</li> <li>Blackboard (from 1998)</li> <li>Jannison (2004 only)</li> <li>WebCT Vista (2004 only)</li> </ul>

LMS platforms reviewed/trialled at time of evaluation:	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• WebCT Vista</li> <li>• <i>Note: it is likely that Blackboard was also reviewed, even though it was not stated expressly.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Topclass</li> <li>• WebCT Campus Edition</li> <li>• Blackboard</li> <li>• Courseware (open source)</li> </ul>	<ul style="list-style-type: none"> <li>• Topclass</li> <li>• WebCT Campus Edition</li> <li>• Blackboard (from 1998)</li> <li>• Jannison (2004 only)</li> <li>• WebCT Vista (2004 only)</li> </ul>
LMS platform recommended:	<ul style="list-style-type: none"> <li>• WebCT Campus Edition</li> </ul>	<ul style="list-style-type: none"> <li>• WebCT Vista</li> </ul>	<ul style="list-style-type: none"> <li>• Courseware (open source) (2003/4) (rejected by Cecil, reinforced by an external audit)</li> <li>• Blackboard (2005)</li> </ul>	<ul style="list-style-type: none"> <li>• Topclass (1997)</li> <li>• WebCT Campus Edition (1998 and 2003)</li> <li>• WebCT Vista (2004)</li> </ul>
Rationale supporting recommendation/s:	<p><u>WebCT Campus Edition:</u></p> <ul style="list-style-type: none"> <li>• Adoption by majority of International Consortium</li> <li>• Higher levels of adoption than other platforms</li> <li>• No internal objections</li> <li>• Save time and money by mimicking the decisions of other peer universities</li> </ul>	<p><u>WebCT Vista:</u></p> <ul style="list-style-type: none"> <li>• Satisfied evaluation framework</li> </ul>	<p><u>Courseware (open source):</u></p> <ul style="list-style-type: none"> <li>• Satisfied evaluation framework</li> </ul> <p><u>Blackboard:</u></p> <ul style="list-style-type: none"> <li>• Courseware rejected by VC and external auditors</li> <li>• Topclass didn't submit to tender</li> <li>• Opportunity to customise for interested academics, customer service, ease of use, lower cost of ownership.</li> </ul>	<p><u>Topclass:</u></p> <ul style="list-style-type: none"> <li>• Inexpensive, less clunky than WebCT C.E., easy to adopt quickly</li> </ul> <p><u>WebCT Campus Edition:</u></p> <ul style="list-style-type: none"> <li>• Topclass became too expensive</li> <li>• Satisfied evaluation framework plus had a commitment to open source</li> </ul> <p><u>WebCT Vista:</u></p> <ul style="list-style-type: none"> <li>• Satisfied evaluation framework; Blackboard not interested</li> </ul>



The comparative contexts for evaluation were discussed earlier in this chapter. A framework for evaluating various learning management systems was articulated at both Metropolitan University and Regional University, and later in 2005 at Suburban University. In each of these cases, attention was directed towards assessing the pedagogical merit of each platform for the particular educational context at each university, as well as addressing questions relating to the technical and financial operation of these platforms. Unsurprisingly, an additional criterion relating to sustainability was added to Regional University's framework after the failure of the WebCT platform in 2003.

In conducting their evaluations of the various LMS platforms available, Metropolitan University and Regional University both inquired about evaluations conducted by other Australian universities. In addition, staff from Metropolitan University even visited other universities in Australia and overseas to learn from their experiences. Both of these universities also conducted trials across available platforms and involved important stakeholders from within the university in these trials and evaluation processes. Although it is not clear whether Suburban University's second evaluation reviewed other completed LMS evaluations, such as the published review completed by Theresa in one of the faculties, they did carry out rigorous trials prior to a recommendation involving both students and teaching academics.

Metropolitan University, Regional University, and Suburban University in their second evaluation in 2005, all formed their initial LMS recommendations on the basis of the extent to which these platforms satisfied their prior agreed evaluation frameworks. Only in the case of Metropolitan University was this initial recommendation (Courseware) not accepted. In this particular instance, the Vice Chancellor desired a proprietary platform, and recommended another decision be made through the relevant Council review process. Blackboard was finally adopted as the most appropriate of the remaining platforms, based on their initial evaluation criteria.

The first evaluation experience of Suburban University (highlighted) stands in marked contrast to the later evaluation conducted in 2005, as well as evaluations carried out at both Metropolitan University and Regional University. Following pressure to 'fast-track' the university's adoption of an LMS platform, Susan recommended that the usual critical review processes in place to evaluate these technologies be bypassed, in order to help the university 'catch-up' with other International Consortium universities. Susan recommended that the university adopt WebCT Campus Edition on the basis that this was the platform used by the majority of other International Consortium universities, that it was also the most popular platform available at the time, that there were no

internal objections to this choice, and that this would ultimately save the university both time and money.

In chapter one of this study, it was argued that uncritical examination involves failing to analyse and question proposals in the face of public criticism and doubt (within the higher education sector), following Preston (2001: 354) and Tasker and Packham (1990). Chapter one also highlighted many significant criticisms and cautions associated with the promises advanced in support of online learning technologies. Susan's evaluation of WebCT Campus Edition at Suburban University in 2000, summarised in this section, is argued to be an instance of uncritical examination in Australian higher education on the following grounds:

- Failure to construct and apply an evaluation framework that could account for various educational, technological and economic/financial criticisms and cautions raised in the literature;
- Failure to consult with internal respondents affected by her decision, such as academic teaching staff;
- Failure to trial any of the available LMS platforms from which an evaluation decision would eventually be made, including WebCT Campus Edition which was ultimately recommended; and
- Failure to consult other available LMS evaluation studies, including a published study produced within one of the faculties about that same time.

It is further argued that in view of the findings of other empirical evaluation studies conducted in Australia (Alexander and McKenzie, 1998; Yetton et al., 1997) and North America (Berg, 2002), the uncritical examination conducted at Suburban University in 2000 may not have been atypical of evaluations of educational technologies in other universities in Australia and North America. The fact that this evaluation, like many others in Australian higher education, was conducted by an individual academic (Alexander and McKenzie, 1998) in an informal/intuitive process that failed to consult other stakeholders, identify likely costs and benefits, agree on decision criteria in advance, and was characterised by both subjectivity and a lack of transparency (Yetton et al., 1997), is further support for this argument. Field respondents interviewed for this study also reported similar instances of uncritical examination in other Australian universities around this same time period, the details of which can be found in the appendices.

It is, therefore, argued that Suburban University's evaluation of WebCT Campus Edition in 2000 was both uncritical in nature, and an illustration of uncritical examination that could have taken place in other Australian universities. A grounded theory explaining how this phenomenon of uncritical examination took place is a major contribution of this study, and is discussed at the end of this chapter, along with the influence of various external and internal factors (research question four). This observation of uncritical examination within the context of broader institutional change in a university case study is also a minor contribution to the Australian higher education literature.

The next section of this chapter explores the processes of adoption identified at each of the three case universities.

## **ADOPTION PROCESSES**

Once the three universities decided to adopt their respective learning management systems, their chosen strategies and tactics to encourage adoption among the faculties were, in the main, fairly similar, albeit with some significant exceptions. Figure 42 illustrates these various strategies for each of the three universities. The highlighted squares indicate approaches that were not shared by all three universities.

As can be observed in Figure 42, all three universities appointed new internal and external staff to senior roles through internal restructuring processes, trained various faculty academics as internal change agents, developed supportive university policies that ultimately fed into promotion and award criteria for academic staff, conducted informative seminars, and even issued directives from the Vice Chancellor attempting to compel faculty staff to adopt. These strategies were employed by a range of parties in each institution, particularly senior management.

In addition to these more overt measures, a number of covert tactics were also used. For example, lecture rooms were refurbished with the capacity to conduct online learning, increasing student expectations of lecturing staff that they should make use of these investments. A new flexible learning term was inserted in the Enterprise Bargaining Agreement at Regional University in 1996 which required staff to support flexible learning initiatives undertaken by the university. Finally, Metropolitan University even went so far as to introduce questions into their teaching evaluations that asked students to indicate the extent to which technology had been used in that particular subject.

**Figure 42: Comparative Adoption Strategies**

Adoption strategies	Suburban University	Metropolitan University	Regional University
Senior staff appointments/agreements	✓	✓	✓
Benchmarking/industry audits		✓	✓
Strategic plans with financial incentives/disincentives	✓	✓	
Training faculty-level change agents	✓	✓	✓
Supportive policy, promotions and university awards	✓	✓	✓
Training and support programs (including seminars)	✓	✓	✓
Management directives	✓	✓	✓
Hosting an educational technology conference			✓
Central support of only one university system	✓	✓	
Technology questions in teaching evaluation surveys		✓	
New inclusion in the Enterprise Bargaining Agreement			✓
Refurbishment of lecture rooms	✓		

A range of financial mechanisms were also employed. For example, a financial package was developed to encourage desired behaviours as part of a broader university plan at both Suburban University and Metropolitan University. At Metropolitan University, these mechanisms went as far as holding deans of faculties accountable to assigned adoption targets, with a system of financial penalties applied if they were not met. Both of these universities also cut support for other available platforms used in their faculties, “retiring” a popular in-house platform at Metropolitan University, and denying an in-house platform developed by staff at Suburban University access to central university servers.

The use of some of these measures, aggravated by a perceived lack of rigour in the evaluation process at Suburban University in particular, led to a significant degree of staff resistance. These responses were described in more detail in chapters three through five.

The manner in which these three universities responded to this resistance varied in the extreme. Figure 43 highlights the different responses of the three universities to staff resistance to initial university adoption strategies.

**Figure 43: Comparative Responses to Staff Resistance**

Adoption strategies	Suburban University	Metropolitan University	Regional University
Re-writing meeting minutes	✓		
Retrenching/sidelining staff	✓	✓	
Public response to sceptical staff	✓		
Stonewalling resistant staff	✓		
Censoring competing perspectives	✓		
Squashing competing platforms	✓	✓	
Inflating claims of success	✓		
Hiding failures	✓		
Facilitation through an external consultant			✓
Special dispensation from the VC			✓

The response adopted by Suburban University to resistant staff was more unitarist, when compared to Metropolitan University and Regional University. Although there was some evidence that Metropolitan University had sidelined some staff and denied other platforms, Suburban University was alone in its exercise of a number of hardline tactics. These tactics included Keith’s re-writing of meeting minutes to ‘disestablish’ the CEU, senior management’s stonewalling and censoring of competing staff perspectives, and Susan’s purported inflated claims of success and hidden failures.

By way of contrast, Regional University also experienced some staff resistance. However, it dealt with this resistance in a different way, allowing concessions to marginalised groups that could justify such positions, as well as employing the use of third party facilitators from outside the university to manage conflict.

An empirical study investigating, among other issues, how computer facilitated learning (CFL) might be encouraged among academic staff in Australian universities, was completed by McNaught et al. (2000), based on surveys from 28 Australian universities. They found that funding for adoption was provided from the top/centre to faculties for the development of online materials. How this money was internally administered varied from total devolution to faculties, to small strategic funds at the centre with most funding at faculty level, through to central grants. Most universities in this research claimed that they adopted both devolved and central approaches, with

some use of clawback budgets (McNaught et al., 2000: 28), a financial mechanism that discouraged non-conformity with executive directions (Marginson and Considine, 2001).

Academic development units, usually centrally based, assisted greatly in the dissemination of computer facilitated learning materials, and were one of those centrally located units in receipt of central funding. Of the 28 universities surveyed, 16 had a specific budget from internal university funds for supporting technology in teaching and learning, six had no specialty fund, and three made no mention (McNaught et al., 2000: 46).

Academic Development Units were found to play a major role in encouraging the adoption of computer facilitated learning among faculty academics. Among the major ways in which they sought to increase the uptake of these technologies in Australian universities were (McNaught et al., 2000: 51):

- General workshops across the university, across faculties and departments;
- Software training sessions;
- IT literacy support for staff and students;
- Educational designs of entire courses and units;
- Individual consultations;
- Evaluations of CFL innovations;
- Providing information about CFL resources;
- Maintaining an inventory of CFL projects in the university;
- Support for computer based assessment systems and online learning systems; and
- Facilitation of grant writing for CFL development and visiting specialists, teachers and scholars.

Of the above list, educational design and individual consultations were believed to be the most important of these strategies in influencing adoption among faculty academics (McNaught et al., 2000: 51).

The adoption strategies used by Suburban University, Metropolitan University and Regional University were consistent with many of the above approaches observed by McNaught et al. In particular, the use of central funding, in addition to the activities of the various central education technology or academic development units, were central approaches observed in this study. This

study also captured the efforts of some universities, such as Suburban University, to force adoption on faculty staff through more unitarist measures, particularly in the face of staff resistance.

The extent to which these different adoption strategies, and the evaluation exercises that preceded and followed them, had an impact on different university outcomes is discussed in the next section of this chapter.

### **Research Q3: Impact on Various University Outcomes**

A number of consequences of adopting new learning management systems were observed and reported in each of the three case studies, explained in further detail in chapters three to five. A summary of these impacts across six domains noted in each of these chapters is highlighted in Figure 44.

### **ORGANISATIONAL RESOURCES**

Respondents from all three universities claimed that adopting learning management systems involved significant additional costs in acquiring and maintaining the platform, staff training and academic time. It was claimed further by respondents at Metropolitan University and Regional University however, that there were some specific circumstances in which learning management systems could be more cost effective than traditional face-to-face approaches to teaching, particularly in subjects with very large numbers of students, preparing students for lab sessions in the sciences, and providing a forum for student-to-student discussions and networking. There may have also been some savings found in cross-campus teaching, such as a reduction in duplication, as sought at Regional University. These savings in these specific situations did not appear to outweigh the significant costs associated with these funding benefits at the university level, based on the evidence in the three cases.

**Figure 44: Comparative Impacts on Various University Outcomes**

Impact	Suburban University	Metropolitan University	Regional University
Organisation Resources	<ul style="list-style-type: none"> <li>• Significant additional costs in acquiring and maintaining platform, staff training and lost academic time.</li> <li>• Claims that no cost savings were realised.</li> </ul>	<ul style="list-style-type: none"> <li>• Significant additional costs in acquiring and maintaining platform, staff training and academic time.</li> <li>• Claim it could be cost effective in some specific circumstances, particularly with large student numbers (e.g. preparing students for labs).</li> </ul>	<ul style="list-style-type: none"> <li>• Significant additional costs in acquiring and maintaining platform, staff training and academic time.</li> <li>• Claim it could be cost effective in some specific circumstances (e.g. encouraging new forms of student interaction in the field).</li> <li>• Claims of reduced central administration costs (e.g. enrolment) and staff time (especially travel) when teaching across multiple campuses.</li> </ul>
Learning and Teaching	<ul style="list-style-type: none"> <li>• More convenient access to some course and digital resources.</li> <li>• Improved visual displays in some academic disciplines.</li> <li>• Claims of increased participation among some “shy” students.</li> <li>• Claims of restrictive pedagogical assumptions in the use of most large learning management systems.</li> <li>• Contested claims of improved student learning and improved teaching.</li> <li>• Claims of improved teaching when teachers reflected on their teaching as a result of being confronted with new technology.</li> <li>• Argued it ultimately depends on how it is used by individual teachers.</li> </ul>	<ul style="list-style-type: none"> <li>• More convenient access to course content and digital resources</li> <li>• Claims of: <ul style="list-style-type: none"> <li>• Increased participation among international students;</li> <li>• Improved communication and reduced paperwork in large enrolment subjects;</li> <li>• Increased variety and thus student attention;</li> <li>• Improved student confidence;</li> <li>• Positive impacts on the university reputation; and</li> <li>• New forms of teaching enabled by the technology</li> </ul> </li> <li>• Claims of restrictive pedagogical assumptions in the use of most large learning management systems.</li> <li>• Difficulty evaluating both improved student learning and an improved university reputation.</li> </ul>	<ul style="list-style-type: none"> <li>• More convenient access to course content and digital resources.</li> <li>• Claim that it was most beneficial to local postgraduate students, not international or undergraduate students.</li> <li>• Claims of improved teaching when teachers reflected on their teaching as a result of being confronted with new technology.</li> <li>• Claims of restrictive pedagogical assumptions in the use of most large learning management systems.</li> <li>• <i>Note: there were no claims of improved student learning at this university.</i></li> </ul>
Organisation Learning	<ul style="list-style-type: none"> <li>• New IT evaluation processes developed following the university’s experience with Peoplesoft and WebCT Campus Edition.</li> <li>• Rigorous second-round evaluation of WebCT Vista.</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulty disseminating individual learning from early multimedia grants to the broader institution.</li> <li>• Unanticipated benefits of increased collaboration, new research directions and awareness of technology and education among staff.</li> <li>• Evidence of learning from past IT systems and LMS evaluations in later round LMS evaluations.</li> </ul>	<ul style="list-style-type: none"> <li>• Drew from experience of failed ADEC venture in expanding its delivery across several campuses.</li> <li>• Greater involvement of other university stakeholders in platform decisions following the crash of WebCT in 2003.</li> </ul>



<p>Legitimacy of Adoption</p>	<ul style="list-style-type: none"> <li>• Lack of broad support for the first WebCT evaluation.</li> <li>• Claims among central staff that the first evaluation decision was “failing”.</li> <li>• Significant staff resistance to online learning in general and WebCT Campus Edition in particular.</li> <li>• Claims that some early restructuring was a “mistake”.</li> <li>• External legitimacy gained through ‘formal’ adoption “as much as anyone”.</li> </ul>	<ul style="list-style-type: none"> <li>• Broad staff support for the final platform decision.</li> <li>• Some public scepticism relating to the need to adopt a new vendor-provided platform, given the perceived utility of the in-house platform.</li> <li>• Some staff disagreement on cultural and educational grounds.</li> <li>• General criticism that the decision process took too long.</li> </ul>	<ul style="list-style-type: none"> <li>• Significant external legitimacy through field organisation metions.</li> <li>• Internal legitimacy through rewarding staff who adopted the technology.</li> <li>• Legitimacy challenge after the failure of WebCT.</li> </ul>
<p>Pace of Adoption</p>	<ul style="list-style-type: none"> <li>• Late and very rapid adoption from 2000-2005.</li> <li>• High levels of adoption (over 64,000 student “seats” in 2005) contested by claims that ‘actual’ student and staff usage was much lower, despite this claim being difficult to measure.</li> </ul>	<ul style="list-style-type: none"> <li>• Very late adoption <i>as a university</i> from 2005.</li> <li>• Five different platforms were used by different faculties until this decision was made.</li> <li>• Very slow university evaluation process (seven years).</li> <li>• Early positive staff response with all 150 pilot subjects in the new platform filled in Spring 2005.</li> </ul>	<ul style="list-style-type: none"> <li>• Early and very rapid adoption from 1998-2002, especially from 1999.</li> <li>• Claim that “nearly all” subjects use WebCT to some degree, however most did not utilise its full capacity.</li> <li>• Claims of “stagnated” adoption since 2003 (previous WebCT crash).</li> </ul>
<p>Stability of Adoption</p>	<ul style="list-style-type: none"> <li>• Claims of very high stability, reinforced by difficulty changing management decisions and the “gradual filtration” of adoption into the faculties through training faculty-based academic change agents.</li> <li>• Second evaluation process in 2005 also recommended WebCT, despite lack of internal support after first WebCT adoption.</li> </ul>	<ul style="list-style-type: none"> <li>• Likely to be highly stable due to a late institutional decision, high involvement of staff, and various strategies used to encourage adoption.</li> </ul>	<ul style="list-style-type: none"> <li>• Highly stable due to a supportive institutional culture and broad support among students and staff.</li> <li>• Second evaluation process in 2004 also recommended WebCT, despite a major disaster with WebCT in 2003.</li> </ul>

These findings appear to concur with the work of other Australian higher education authors. For example, Professor Simon Marginson estimated recently that an online teaching program was approximately 40 to 50 percent more expensive per student than a face-to-face program (Rood, 2004). Alexander and McKenzie concluded similarly that the cost of making IT available was high, as was the cost of the associated support infrastructure (Alexander and McKenzie, 1998: pviii). Although these authors did acknowledge that some cost reductions were possible through reduced staff travel time associated with cross-campus teaching commitments, costs generally increased as a result of lost staff time and the cost of purchasing, installing, supporting and maintaining computing facilities.

## **LEARNING AND TEACHING**

Determining the extent to which learning and teaching had been shaped by the adoption of learning management systems was a difficult exercise in this study. Whilst there was common agreement across all three cases that learning management systems had provided students with more convenient access to course content and digital resources, claims of improved learning and/or teaching were either contested internally or difficult to evaluate. None of the three universities studied was able to argue convincingly that the adoption of learning management systems had improved learning directly at the university level, despite the claims of the literature discussed in chapter one. Further, it is doubtful that any of the universities could substantiate such claims if they were made, as these claims are extremely difficult to prove. It was proposed at both Suburban University and Regional University however, that teaching did improve when individual academics were forced to reflect on their teaching more generally, as a result of adopting new teaching-related technologies.

Staff at Metropolitan University claimed that there were benefits to using learning management systems in some circumstances, particularly when combined with face-to-face teaching approaches. For example, it was claimed that learning management systems could increase the variety of student learning experiences and therefore student attention. The use of multiple choice questions and online discussions were also claimed to increase student confidence in subject materials in some disciplines, particularly those requiring heavy investments in lab materials and time. It was also argued that learning management systems enabled new forms of teaching not practical in a face-to-face setting, such as peer reviews among students and subject-level discussions around contemporary issues in some disciplines such as Economics.

The impacts on learning and teaching were not all positive however. Respondents at all three universities noted that the design of large proprietary learning management systems like WebCT and Blackboard operated on the basis of rather limiting pedagogical assumptions that affected how teachers taught in the classroom.

There was evidence across the three cases that different student groups were likely to respond to these technologies in different ways. For example, respondents from Suburban University and Metropolitan University argued that online learning discussions resulted in greater participation from shy students and international students respectively. Respondents at Regional University disagreed with this proposition however. They claimed that international students, particularly at an undergraduate level, preferred face-to-face teaching approaches that encouraged more social interaction with their lecturers and fellow students, given their desire to refine their English skills, as well as gain a university education. Respondents at this university claimed that the student group most likely to benefit from these technologies were local postgraduate students with limited time, who were trying to balance the competing demands of work, family and study.

Another major observation relating to the issue of learning and teaching were the indirect university benefits claimed to accompany the adoption of these technologies. For example, respondents at Metropolitan University claimed that adoption sometimes provided the university with an improved reputation, even though this was difficult to measure. The fact that Regional University was awarded two prestigious mentions by a respected field organisation for its adoption of new technologies is perhaps some support for this proposition.

The experiences of these three universities in teaching and learning were remarkably consistent with the findings of other research in Australian higher education. For example, Bell et al.'s (2002) survey of online learning in Australian universities found that approximately 90 percent of fully online courses were at a postgraduate level, particularly in management and commerce, education and health (Bell et al., 2002: ix). Other studies have also noted difficulties evaluating the effectiveness of new educational technologies introduced into the classroom:

At the current stage of rapid development of information technologies for the delivery in higher education, marginal percentage differences in 'effectiveness' could neither be isolated from extraneous variables for meaningful measurement, nor could indicate anything significant enough to form a basis for differentiation.(Tinkler et al., 1994: 86).

In Alexander and McKenzie's (1998) evaluation study, it was found that there were a number of benefits reported in adopting new technology in the classroom for both students and teachers alike. For example, in their evaluation of 104 different university projects, they found that there were reported improvements in the quality of learning, access to learning, and attitude to learning among students (Alexander and McKenzie, 1998: ix). Improvements in actual student attitudes were reportedly far greater than improvements to actual student learning outcomes however (Alexander and McKenzie, 1998: 54), despite the latter being the primary reason that the majority of these 104 programs adopted this technology in their courses (Alexander and McKenzie, 1998: 236). Unanticipated benefits included staff reporting an improved understanding of student learning (Alexander and McKenzie, 1998: 57), as well as an increased departmental (Alexander and McKenzie, 1998: 58) and institutional reputation for innovation (Alexander and McKenzie, 1998: 59), further supporting the findings of this research. Alexander and McKenzie's (1998) findings in relation to an improved external reputation were also consistent with the findings of Staw and Epstein's (2000) study of management fads in the largest US corporations.

## **ORGANISATIONAL LEARNING**

All three universities showed evidence of their university learning from the prior experiences of adoption of new educational technologies, particularly learning management systems. Suburban University's second LMS evaluation that ultimately led to their adopting WebCT Vista in 2005 was significantly more rigorous and critical than their first evaluation conducted solely by Susan in 2000, as already discussed earlier in this chapter. Metropolitan University even went so far as to commission an internal evaluation of their prior experiences in encouraging adoption through the Multimedia Development Fund, and found evidence of greater collaboration, new research directions and education among staff. Metropolitan University's prior successful implementation of a larger systems project was also highly significant in shaping the approach taken to evaluating the LMS project. Similarly, Regional University was able to draw on its experiences with the failed ADEC venture in using technology to aid its teaching across its developing Countryville campus network, as well as expanding the membership of its WebCT review processes following difficulties experienced by staff with this platform in 2003.

## **LEGITIMACY OF ADOPTION**

Each of the three universities had a different experience in terms of both internal and external legitimacy associated with their adoption of various learning management systems. Suburban University initially became involved in the assessment of learning management systems after the senior executive of this university perceived that they were ‘falling behind’, a major threat to their external legitimacy as a university. The uncritical evaluation associated with the decision to adopt WebCT Campus Edition, coupled with use of particular management tactics in response to some staff criticism, was associated with significant staff resistance. Some CETU staff even went so far as to claim that Susan’s first adoption recommendation was in fact “failing”. A number of staff similarly claimed that the ‘disestablishment’ of the Central Education Unit prior to Susan’s appointment to the newly created Central Educational Technology Unit was a “mistake”. Beyond these specific comments, there was also significant staff resistance to both learning management systems in general, and WebCT in particular, noted in chapter three. As a result of Suburban University’s formal adoption of WebCT Campus Edition to ‘catch-up’ with other International Consortium universities, it could be argued that they probably enjoy a greater degree of external legitimacy to the extent to which they mimicked other universities’ decisions.

Metropolitan University recently adopted its first university-wide learning management system during 2005, making it difficult to assess the impact of this action on the university’s external legitimacy. Internally however, the decision to adopt Blackboard enjoyed broad staff support, particularly given that a decision was finally made after an evaluation process lasting some seven years. A small minority of respondents objected to the decision on cultural and educational grounds, however this view did not appear to be held widely at the university.

Regional University enjoyed significant external legitimacy through mentions by a respected field organisation following their adoption of WebCT across its campuses. The legitimacy of its decision may have been challenged internally following difficulties with the WebCT platform in 2003. However, there is not enough respondent data to argue convincingly for this conclusion.

## **PACE OF ADOPTION**

The three university cases each adopted their respective learning management systems during different time periods. Regional University adopted WebCT Campus edition relatively early in 1997, Suburban University was relatively late in 2000, and Metropolitan University was among the

last adopters of a university-wide LMS in Australia in 2005, based on claims made by respondents at each of these universities.

The speed at which the evaluation and adoption processes took place was also different among the universities. Suburban University made its evaluation decision very quickly under Susan. After this decision had been made in 2000, it was claimed that WebCT Campus Edition was adopted quickly across the campus, with almost all Schools using the platform by 2005. Regional University similarly had to make a decision to adopt a new LMS platform in “only three or four weeks” after their first LMS platform became too expensive. Once the decision had been made to adopt WebCT Campus Edition in 1998, it was claimed that “nearly all” subjects were using it by 2003. Metropolitan University, in contrast to Suburban University and Regional University, took some seven years to decide on its university-wide LMS platform. Since making this decision, it was argued that the initial response of academics was very positive to the proposed pilot conducted in 2005.

Another issue that arose out of discussions with respondents relating to the pace of adoption in their institutions were the contested views relating to substantive adoption within individual subjects. For example, at Suburban University, it was claimed that although the university had a large number of “student seats”, actual student usage of these platforms beyond formally enrolling students onto these platforms was thought to be much lower. A similar situation was also found at Regional University where most subjects were found not to be making use of WebCT’s full functional capacity.

The observation that many subjects may not have made full use of these platforms was also found in research conducted by McNaught et al. In their survey and case study research of Australian universities, they found that most universities in their sample had put basic course information and content on the web, including a collection of useful websites. However few had included chat and assessment tasks (McNaught et al., 2000: 31). Staff and students were also found not to be making extensive use of specialist software, instead preferring to browse the web, use email and other office products (McNaught et al., 2000: 34-35).

Once Regional University and Suburban University made the decision to adopt WebCT Campus Edition in 1998 and 2000 respectively, it took both universities approximately five years before they could claim that either most subjects or most schools were using this platform. Whilst

respondents in both of these cases argued that the speed of adoption across these campuses was relatively fast, other studies in Australian higher education have claimed that adoption taking place over this kind of timeframe was “gradual”. For example, a survey of 28 Australian universities in 2000 claimed that adoption of Computer Facilitated Learning (CFL) took place over a number of years and, once adopted, was relatively enduring.

Increased use of CFL within the cases appears to have been a gradual change process over a number of years, although there was a sense that this process was gaining momentum and that there would be no ‘going back’ to conventional methods. The survey data supported this well (McNaught et al., 2000: 74).

It was claimed further that where there was some significant event, such as a new appointment or injection of funding, the pace of this adoption was likely to increase. The use of both of these types of mechanisms was noted earlier in this chapter under research question two.

In some cases, changes had been prompted or accelerated by a significant event, such as a new executive or senior appointment or a substantial injection of funding (McNaught et al., 2000: 74).

## **STABILITY OF ADOPTION**

Once decisions were made in each university to adopt their respective LMS platform, these decisions were found to be remarkably enduring and highly stable. Both Suburban University and Regional University continued with WebCT Vista after adopting WebCT Campus Edition earlier, despite low levels of internal legitimacy at Suburban University and a major failure of the platform at Regional University in 2003. The decision made by Metropolitan University to adopt Blackboard in 2005 is similarly anticipated to be highly stable. These findings are entirely consistent with the findings of McNaught et al. who concluded that once computer facilitated learning approaches had been adopted,

...there would be no ‘going back’ to conventional methods (McNaught et al., 2000: 74).

One of the reasons for such high stability in these decisions arises out of switching costs associated with changing platforms, given the very large number of students and academics using this technology regularly, and the significant investment in training spent instructing them how to use it. The fact that so many staff members were involved in evaluation decisions at Metropolitan University and Regional University, particularly at the senior management level, is also likely to reinforce these original decisions. Broader adoption strategies put in place in each university also created environments supportive of the adoption of these LMS technologies.

On 12 October 2005, Blackboard and WebCT announced plans to merge their companies under the Blackboard brand (The Observatory on Borderless Higher Education, 2005). The new combined company will make up over two thirds of the global market for learning management systems. The data and conclusions presented in this thesis, therefore, reflect the state of the higher education sector and selected Australian universities prior to this point in time. It is entirely possible that the consolidation of these market leading platforms may force many Australian universities to consider open source technologies when reviewing their learning management systems in the future.

The various impacts of evaluating and adopting different learning management systems have been described in the section above. These consequences were argued throughout to be consistent with the empirical observations proposed by other Australian higher education authors.

## **Research Q4: Influence of Internal and External Factors**

The next section of this chapter will identify the influence of various internal and external factors on the parties, processes and outcomes addressed in the previous three research questions. One of the significant limitations constraining the ability of Yetton and Associates (1997) was their functionalist strategic management framework that limited their capacity to recognise broader influences at work in the universities they investigated. This study has argued throughout for the need to adopt a broader approach, and has made use of a grounded theory methodological framework. Grounded theory developed has also been discussed and validated further in light of relevant insights from institutional theory, explained and justified in the appendices.

Interviews and document analysis uncovered a wealth of data on the different internal and external environments at the three case universities. Whilst it was clear that some factors were a direct influence on various parties, processes and outcomes, other factors appeared to operate on a comparatively less direct basis. This study has therefore sought to be discerning as to the nature of different internal and external factors across the three universities.

Following suggestions from Strauss and Corbin (1998), three broad classifications have been used to discern between various internal and external influences found in each case: causal, intervening



and contextual.<sup>37</sup> Causal influences impact directly on phenomena, intervening influences alter the impact of these causal influences, and contextual influences set the pattern of conditions that create a set of circumstances that lead to the observed phenomenon. The next section of this chapter investigates the various internal and external influences at work on the three case universities, with a particular interest in identifying the antecedents of uncritical examination observed at Suburban University in 2000.

## **INTERNAL FACTORS**

### **Contextual Influences**

The following internal contextual influences were open coded and grouped together according to theme, resulting in the emergence of several internal factors, each with its own set of properties and dimensions. Further axial coding resulted in the identification of five broad contextual influences, each of which varied across the three case studies. A summary of these various attributes and groupings is found in Figure 45.

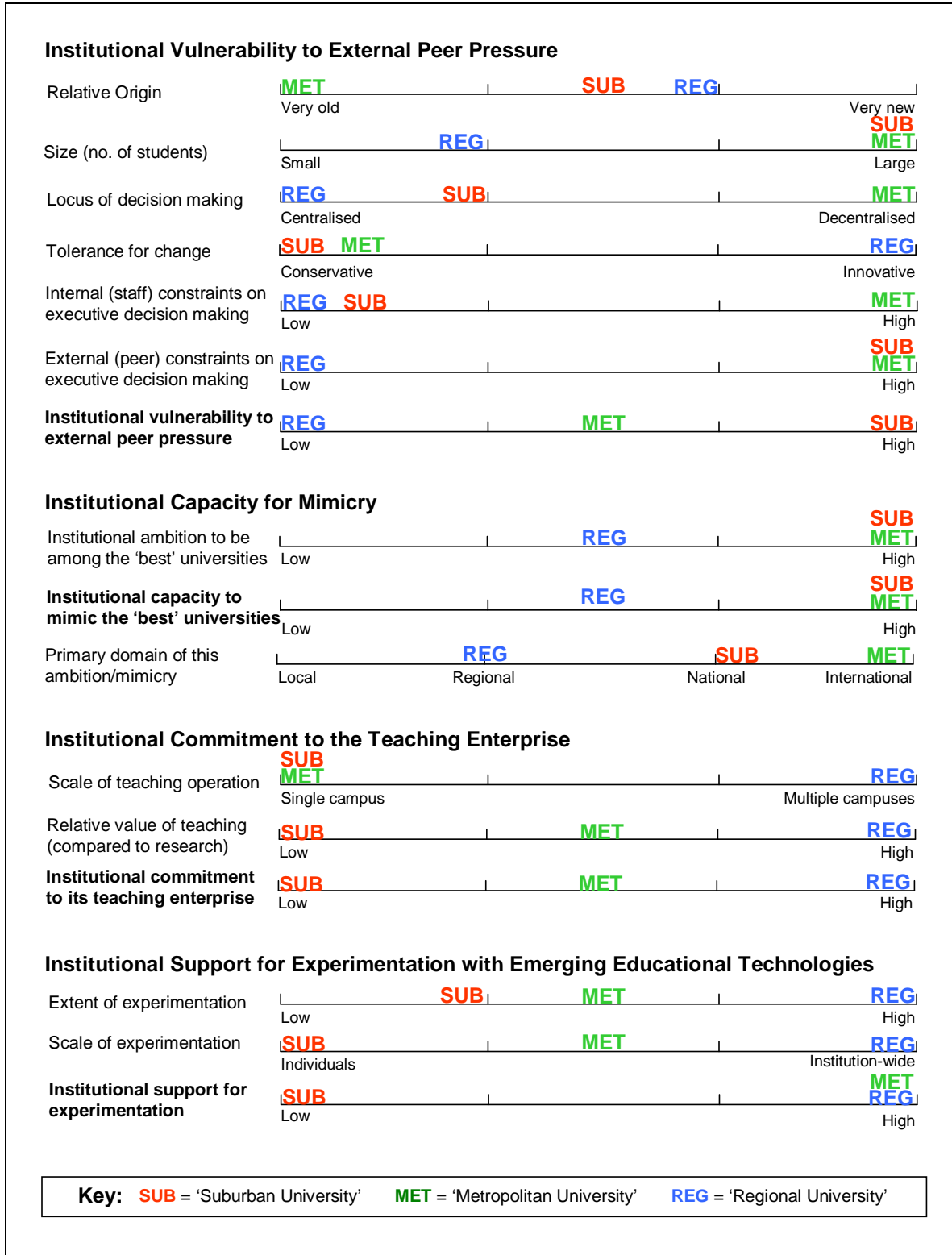
The first class of internal contextual factors are grouped under the category ‘institutional vulnerability to external peer pressure’. This grouping includes a range of various internal factors that broadly constrain the capacity of senior management to make decisions.

The relative origin of the university shapes both the university’s mission and its capacity to realise it in the present environment (Marginson and Considine, 2001). For example, Regional University’s relatively recent entry into the Australian higher education sector left it with less time to develop a strong institutional reputation, particularly in research, and forced it to compete in new ways against other more established universities, such as Suburban University. Metropolitan University on the other hand, being one of the oldest universities in Australia, has historically enjoyed a sound institutional reputation, particularly for its research. As older universities, Suburban University and Metropolitan University appeared to be subject to greater pressures toward more conservative institutional values that sought to preserve their interest in maintaining the status quo. Newer universities such as Regional University attempted to be more innovative as they competed against more established universities.

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<sup>37</sup> Further information on data analysis and coding protocols adopted in this study are found in chapter two and the appendices to this study.

**Figure 45: Internal Contextual Factors**



Suburban University and Metropolitan University were both large universities, compared to Regional University which was less than half their size. Despite these universities being of similar size, Suburban University and Metropolitan University had different approaches to university decision making, with a strong senior management at both Suburban University and Regional University. Metropolitan University, by contrast, was argued by respondents to be one of the most decentralised and devolved of all Australian universities. Regional University, as a smaller university, had always enjoyed a more centralised approach to university decision making

These internal influences acted together as constraints on senior management decisions. Across the three case studies, universities that were older, larger, decentralised and conservative showed evidence of greater internal constraints on senior management decision making (primarily through staff and faculty resistance), than universities that were newer, smaller, centralised and innovative. Metropolitan University was a university with an internally constrained senior management, whereas Regional University was a much less inhibited institution. For example, the original recommendation of the Vice Chancellor at Metropolitan University to adopt WebCT was successfully resisted by Stella and her team, eventually leading to a second subsequent round of evaluation. Staff at Regional University however, were much more tolerant of central mandates for change, such as the Vice Chancellor's directive to avoid duplication of teaching resources across campuses.

Suburban University was much less internally constrained than Metropolitan University, having a less extensive history and more centralised approach to decision making. Yet it was slightly more constrained than Regional University, particularly as a result of its much larger size and conservative attitude to change. The Vice Chancellor and senior management were ultimately still able to push through their change agenda. However, they encountered significant resistance from staff following the first LMS evaluation exercise. This resistance was not strong enough however, to block unpopular senior management decisions, such as the disestablishing of the Central Education Unit.

In addition to this internal constraint on senior management decision makers, each university's partnerships with other universities appeared to act as a quasi constraint, somewhat like the internal constraints argued above. Although the presence of external university partnerships is an external factor by definition (discussed later in this chapter), these partnerships constrained the VCs of participating universities to consider the decisions of other VCs in these partnerships, opening up

the possibility for mimicry of trusted peers in their personal networks. To this end, the impact of these external factors constituted an additional constraint on senior management decision making. For example, the VCs of both Suburban University and Metropolitan University were members of the Australian University Consortium and the International Consortium. When the VCs of these universities realised that other universities in the International Consortium had adopted university-wide LMS platforms, this increased pressure on these universities to follow, acting as a significant constraint on their ability to be independent in decision making. Regional University, by contrast, was not a member of any comparable university consortium that influenced their decision making in this way.

Together, these internal and external constraints on senior management decision making combined to shape the vulnerability of these universities to external peer pressures. Metropolitan University and Regional University both represented polar types across these dimensions. Metropolitan University was subject to both significant internal and external constraints on its senior management decision making. However, Regional University enjoyed much lower constraints on both these measures.

It is argued that the mix of internal and external constraints on Suburban University combined to create a particularly high vulnerability to external peer influence, should it ever be exerted. Although the senior management of Suburban University were subject to the same kinds of external constraints as Metropolitan University, they lacked the same internal constraints and safeguards that could act to counter the decisions of the senior management of this university.

The second set of internal contextual factors affecting the three universities is grouped under the label 'institutional capacity for mimicry'. This factor is based on the extent to which the university sought to be among the 'best' universities in that university's set of peers. Where this institutional ambition was high, it is argued that there will be a correspondingly high capacity to mimic the decisions of other universities considered to be a part of the group that the university seeks to be among.. This capacity for mimicry was restricted to particular domains associated with the arena in which these sets of universities operated. Suburban University and Metropolitan University both had high levels of institutional ambition. However Metropolitan University was much more sensitive to changes in the international environment than Suburban University, based on the standing of the universities they sought to better. This may account for the way in which Cecil at Metropolitan University was influenced primarily by the activities of other universities overseas in

the International Consortium, whereas Alfred at Suburban University did not become involved until he was invited to participate by Cecil. Regional University's behaviour did not appear to be nearly as consumed with a desire to be among the 'best' universities in its class to the same degree, but was understood to be more concerned about matters within its broader regional domain, such as the Countryville student catchment area.

Although these first two classes of internal contextual factors do appear to be similar in their effect, they arise from the operation of very different mechanisms. The first factor is constituted by formal structural and historical considerations, whereas the second is shaped by the present strategic intentions of the university's senior management. In the case of Suburban University, they were highly vulnerable to both of these external peer-based influences as a result of these internal contextual conditions.

The third major category of internal contextual influence was 'the institutional commitment to the teaching enterprise'. This group of attributes includes the scale of the university teaching enterprise (such as whether or not teaching was required across one or many campuses), coupled with the institution's attitude towards teaching relative to research. Universities such as Regional University who operated across multiple campuses were more likely to have a greater need to value teaching-related activities, due to increased complexities involved in cross-campus teaching. Universities with a face-to-face teaching commitment at one major campus only, such as Suburban University and Metropolitan University, were not as likely to be burdened with the complexities of teaching across multiple campuses, such as at Regional University. These universities therefore enjoyed relatively more freedom to pursue other competing institutional agenda, such as research.

Respondents at both Suburban University and Metropolitan University claimed that their institutions did not value teaching related activities as highly as research, although the difference was much more exaggerated at Suburban University. As a result of Suburban University's more recent history and very strong institutional ambition to be seen as a high quality "research university", many respondents claimed that their university actively deprecated teaching related activities in favour of research activities, particularly at the level of senior management.

It is, therefore, argued that Suburban University's face-to-face teaching commitments across its single campus operation, combined together with its more recent age and very strong institutional ambitions, created an internal environment that prioritised research over teaching, in order to be

seen to be among the ‘best’ (research) universities at a national level. Suburban University’s low institutional commitment to its teaching enterprise could therefore lead to the institution failing to actively encourage leading developments in its teaching programs for the sake of its research agenda. These factors together would naturally lead to the university’s ‘falling behind’ other universities that took an active interest in developing these areas.

Another related contextual factor was the ‘institutional support for experimentation with various educational technologies’. Universities that appeared to have a higher commitment to their teaching enterprise and possessed a greater tolerance for change may have been more likely to experiment with emerging educational technologies than those universities that did not value teaching as highly and were more conservative in nature. These technologies may have been used to teach across multiple campuses, such as at Regional University, or they may have been more focused on multimedia and digital applications, such as at Metropolitan University. In both of these cases, there was moderate to high institutional support for experimentation, as well as an attempt to pursue an institution-wide approach to their adoption. In reality however, the scale of adoption actually achieved at Metropolitan University was far less than originally intended.

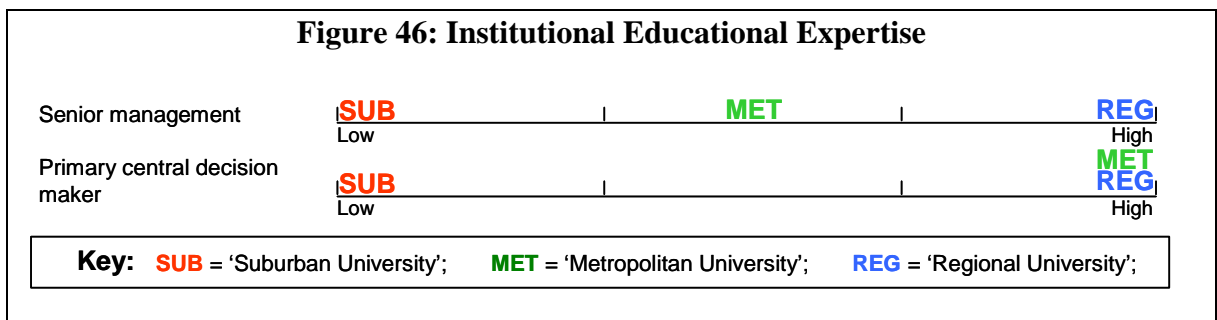
Suburban University by contrast, provided very little institutional support for such experimentation, due to a much lower value assigned to teaching relative to research. Many of these technologies were even derogatively portrayed as belonging to “distance education” by the Vice Chancellor Alfred, an activity pursued by universities thought to be of lower institutional status than that to which Suburban University aspired to. Experimentation was thus limited mostly to the level of interested individuals, where it did occur in the faculties.

It is argued from these case studies, that universities with a lower commitment to their teaching enterprise were less likely to also have strong support for experimentation with emerging educational technologies, and were therefore, unlikely to respond quickly to emerging learning management systems appearing in the external environment. Universities such as Suburban University were thus prone to ‘falling behind’ other universities that were more committed to their teaching enterprise and to supporting experimentation in emerging educational technologies, such as Regional University. Although Metropolitan University did have a long history of supporting experimentation with educational technology through its Learning and Multimedia Unit under Toby, and the Multimedia Development Fund under Cecil, these activities were argued to be limited to individual academics, as discussed in chapter four. It is, therefore, possible that a university such

as Metropolitan University could still ‘fall behind’ other universities that pursued an institution-wide experimentation agenda, particularly where they were not adopted by faculties or departments in a coordinated manner. Finally, institutional change and organisational learning within each university was hypothesised to shape the contextual conditions under which later round decisions and changes were indirectly influenced. These historical influences are thus, in their nature, internal contextual influences, and were observed in each of the three university case studies. For example, Suburban University’s evaluation of WebCT was very different in the second round compared to the first, following a number of changes made after the first uncritical examination. Similarly, Metropolitan University’s decision to “mainstream the digital revolution” led to the development of the Multimedia Development Fund, out of which emerged the university’s first learning management system in a rather unplanned manner. Similarly, Regional University’s previous experience with the Australian Distance Education Consortium provided them with the experience and equipment required to teach across multiple campuses in their expanding Countryville campus network.

### Intervening Influences

One of the internal intervening factors that appeared to account for much of the varied behaviour across the three case universities was the level of institutional education expertise. Although there were a number of actors involved in each university, discussed earlier in this chapter under research question one, there were two broad groupings of actors that were perhaps most significant in their personal influence over the evaluation of learning management systems: the senior management and the primary central decision maker/evaluator. Figure 46 summarises the dimensions associated with this internal intervening factor.



Where the senior management possessed formal or substantive educational expertise, as opposed to well developed research and administration skills, it was observed that these institutions were also

more committed to their teaching enterprise, proactive in supporting experimentation with education technologies, and more discerning in their evaluation of new educational innovations. For example, the senior management of Regional University, including Xavier, the Vice Chancellor and Sashi, the DVC, both had strong backgrounds in pedagogy and educational administration, which may have led to them valuing the university's educational enterprise and proactively pursuing further government-funded teaching developments across the newly acquired Countryville campuses. These staff members, together with Toby, who had a strong educational technology background, encouraged the adoption of a range of educational technologies in their teaching programs across the Countryville campus network. The senior management of Metropolitan University were not as educationally qualified as those at Regional University. However, they did have some highly skilled teachers among their ranks (one member of the senior management had been acknowledged for outstanding teaching in his institution with a university teaching award, as well as continuing to teach first year students). Metropolitan University valued its teaching enterprise, but not as highly as its research enterprise, and were subject to some degree of reactivity, such as the construction that they were 'falling behind' their peers in adopting a university-wide LMS within the International Consortium. The senior management of Suburban University by contrast, were not known for their educational expertise, had a historically low commitment to their teaching enterprise, and were reactive in investing in a new learning management system.

The educational expertise of the senior management was also relevant in accounting for the different structural decisions made at two universities. Before the examination of new technologies at Suburban University and Metropolitan University, there was a period of internal restructuring lasting approximately two years at both universities. These restructuring decisions were vastly different in each university. At Suburban University, the former Central Education Unit was "disestablished" to make way for the newly created Central Education Technology Unit. In retrenching and hiring new staff, the university lost important educational skills that former staff members previously offered to the university through the CEU. None of the staff members initially recruited to the CETU appeared to possess educational expertise that was as strong as the former staff. As a result, it is argued that they were left with a further shortage of institutional educational expertise. The management of Metropolitan University, however, were more careful in preserving the institutional educational expertise of the university in its restructuring initiatives.

The actual decision to recommend a particular LMS platform was undertaken within the centrally located education technology units of the three case universities. In the case of both Metropolitan



University and Regional University, these people were highly qualified and experienced in the use of educational technologies, both with PhDs in educational fields relevant to their professional responsibilities. By contrast, the staff member responsible for evaluation at Suburban University did not have a background in education, nor was she placed within a broader support group that could assist her with this deficiency, given the previous “disestablishment” of a critical centre for educational expertise. When pressure was exerted from the VCs of both Suburban University and Metropolitan University to adopt a university-wide LMS platform, the decision maker at Metropolitan University (Stella) was able to resist the VC’s push for WebCT on pedagogical grounds, supported by an internal environment that permitted such constraints on senior management decision making.

The same was not true for Susan at Suburban University however. Without a background in education, or the background of another staff member to trade-off, the evidence indicates she was unable to construct a suitable framework for evaluating other learning management systems as could Stella at Metropolitan University and Belinda at Regional University. She instead mimicked the decisions of other peer universities in the International Consortium. For example, a respondent from Suburban University provided the following quote, arguing that in the absence of educational expertise, those responsible for the teaching enterprise are likely to mimic the decisions of outsiders.

And it’s not unique to Australia, it’s pretty well everywhere, that these people have this responsibility for managing this activity in their organisation, and they sort of look around for guidance, because they don’t, they don’t have the formal training. I mean they could be brilliant neurologists, or brilliant engineers, and they might accidentally be good teachers, because they’ve happened to have modelled and picked up on some good habits, but a scary percentage of the population of the university has had any formal training. I don’t know what the numbers are like here, but you know, if you had six or seven percent of your academic staff had any formal teaching qualifications, that would be a miracle. Which means that 90 something percent of them are making it up. You know, and then the people who are managing that are also not necessarily grounded in it. So they look outside (Respondent from Suburban University).

A second internal intervening factor was the decision made by the Vice Chancellor concerning the urgency of ‘catching up’ with other peer universities. At Suburban University, the Vice Chancellor employed Susan in 1999 with a brief to ‘fast-track’ the adoption of a learning management system in that institution. This decision had an impact on the restructuring, examination and adoption processes. For example, Susan’s approved recommendation to the Vice Chancellor’s Advisory Group was based on the opportunity to save time and money by copying the decisions of other International Consortium universities. Similarly, Suburban University’s stronger preference for ‘force’ and ‘domination’ based strategies were intended to bring about a faster pace of adoption in

that institution in order to ‘catch up’ with other universities. The earlier restructuring decisions to ‘disestablish’ the CEU may have also been governed by this urgency decision, particularly if the use of relatively extreme strategies to respond to staff resistance are any guide to their motivations.

A final internal intervening influence was senior management power. This factor involved the extent to which the senior management of the university were able to push through their institutional change agendas to satisfy their various interests. Part of their power is based on the degree of centralisation of university decision making and extent of internal staff constraints on senior management decisions, discussed earlier in this chapter as internal contextual factors. The senior management of both Suburban University and Metropolitan University had high senior management power relative to staff that resisted these changes, to the extent to which they were ultimately able to effect the change they desired in a form very close to their original intentions. The senior management at Metropolitan University had much less power to effect change in the form originally desired, evidenced in Stella’s capacity to reject the VC’s original LMS recommendation, and the length of time it took the university to ‘catch up’ (seven years) by adopting a university-wide learning management system.

### **Causal Influences**

There were two major internal factors that exercised a causal influence over the events in the three case universities. The first internal causal influence was the decisions of the senior management of each university. Sometimes this senior management comprised the Vice Chancellor alone, and at other times it included other Deputy Vice Chancellors. For example, the VCs of both Metropolitan University and Suburban University committed their universities to ‘catching up’ after they realised they were ‘falling behind’ their peers. These decisions then led to a series of changes within their institutions, including restructuring, evaluating new learning management systems, and encouraging adoption of these platforms across these institutions. The VC and DVC at Regional University similarly encouraged that university to embrace new educational technologies within the context of their Countryville Campus network, after previously deciding to acquire new regional campuses in the Countryville area, as well as to establish the Australian Distance Education Consortium.

Second, the employment of Cecil to the position of VC was a unique internal causal event at Metropolitan University. Cecil’s employment led to a raft of new changes at this institution, including plans to make Metropolitan University “one of the best universities in the world” and to

“mainstream the digital revolution”. Cecil appeared to be both the originator and instigator of these major university changes.

These contextual, intervening and causal internal influences are capable of being summarised in appropriate figures, and are found later in this chapter in Figures 50 to 52. Given the interest in uncritical evaluation in this study, the particular internal factors associated with Suburban University’s uncritical evaluation of WebCT in 2000 are summarised in Figure 47.

The next section of this chapter identifies and differentiates between relevant external factors that also influenced different parties, processes and outcomes.

**Figure 47: Internal Factors Associated with Uncritical Examination at Suburban University**

<b>Nature of Influence</b>	<b>Internal Factor</b>
Causal	<ul style="list-style-type: none"> <li>• Vice Chancellor’s realisation that his university was ‘falling behind’</li> <li>• Vice Chancellor’s decision to ‘catch up’ to other International Consortium universities</li> </ul>
Intervening	<ul style="list-style-type: none"> <li>• Urgency of the decision (e.g. the Vice Chancellor’s decision to ‘fast-track’ the adoption of a learning management system)</li> <li>• Low senior management educational expertise</li> <li>• Low primary central decision maker educational expertise</li> <li>• High senior management power</li> </ul>
Contextual	<ul style="list-style-type: none"> <li>• High institutional vulnerability to external peer pressure, resulting from low internal constraints and high external constraints on senior management decision making</li> <li>• High institutional capacity for mimicry, based on correspondingly high levels of institutional ambition to be among the ‘best’ universities in Australia</li> <li>• Low institutional commitment to the teaching enterprise, based on the scale of the university’s teaching operations and relative value of teaching compared to research</li> <li>• Low institutional support for experimentation with emerging educational technologies</li> <li>• Past institutional change and organisational learning that shapes future internal contextual conditions</li> </ul>

## **EXTERNAL FACTORS**

Respondents from the three universities noted the influence of a range of external factors upon their respective universities. Factors belonging to this group of externalities were sometimes general to

the higher education sector at large, and sometimes particular to only one of the three universities studied.

Figure 48 lists the comparative perceived external environments affecting each of the three university case studies. This figure is a compilation of similar summary tables found in chapters three, four and five. Whilst it is possible that there were other factors affecting these universities, these were the major influences identified by respondents at the three universities.

**Figure 48: Comparative Perceived External Environments**

External Factor	Suburban University	Metropolitan University	Regional University
Online learning literature	✓	✓	✓
Media speculation	✓		
Australian Federal Government rhetoric	✓	✓	✓
Australian Federal Government grants	✓	✓	✓
Corporatisation of universities		✓	
Partnerships with local government, TAFE, and the Department of Education			✓
Software vendor marketing activities	✓	✓	✓
Industry consultants	✓		
'Downtown' influences on Council		✓	
Other universities	✓	✓	✓
Professions		✓	✓
Domestic student expectations	✓	✓	✓
International student expectations	✓	✓	✓
Emerging digital technologies	✓	✓	✓

*Source: adaptation of Figures 16, 25 and 34*

One of the most basic observations from this figure is that there were a number of external influences that respondents at the three case universities identified as comprising an external influence on their university. These influences ranged from individual actors through to the

collective contributions of many parties (e.g. online learning literature and Australian Federal Government rhetoric).

The second major observation that can be made is that more than half of the external factors listed in Figure 48 (shaded) were common to all three case universities. Given that these organisations were operating in the same field or sector, this observation is not surprising. These influences included the online learning literature, Australian Federal Government rhetoric and grants, software vendor marketing activities, the activities of other universities, student expectations and the emergence of new digital technologies. These factors were most likely common to the Australian higher education sector at large.

The third major observation of these factors is that some of these external influences were found at some universities only. For example, Regional University had a unique relationship with the local councils in the Countryville Region that was not shared by either Suburban University or Metropolitan University. Suburban University similarly had a unique relationship with an industry consultant who helped to advise and support their adoption processes.

These external influences are capable of further differentiation into contextual, intervening and causal influences for the three universities concerned. The next section of this chapter identifies and discusses the influence of these different external influences on the parties, processes and outcomes of this study.

### **Contextual Influences**

There were several external contextual influences which set up the conditions under which learning management systems were eventually evaluated and adopted in the three universities. Slaughter and Leslie (1997) argued in their book that academic work has changed in response to the emergence of global markets. The rise of multi-polar competition led national policy makers in Australia, New Zealand, Canada, the US and UK to reduce growth rates in state expenditure on discretionary programs, and invest more into direct technological innovation and economic competitiveness. These national policies promoted academic capitalism, or market-like behaviours on the part of faculty and institutions (Australian universities that displayed these characteristics were called 'Enterprise Universities' [Marginson and Considine, 2001]).

Across all five countries, the rate of growth in the percentage of GNP allocated to postsecondary education declined consistently in constant dollars per student. Revenue shifted away from block grants to a competition or market logic (Thornton, 2002; Thornton and Ocasio, 1999). Revenue from other sources such as sales, services, tuition, private gifts, grants and other competitive sources of money increased. Expenditure on discretionary items and instruction declined (Slaughter and Leslie, 1997).

In research universities, it was claimed that these changes added pressure on faculty staff to pursue competitive funding more actively in a more competitive environment. Slaughter and Leslie argued that competition for scarce research funding also sat well with their orientation towards prestige maximisation, and was a key source of differentiation among universities.

As outlined already in chapter one, the various Public Sectors in Australia were transformed during the 1980s following the introduction of economically rationalist ideologies. Both the Coalition and Labour Governments pursued reform under a belief that the State should maximise returns from market forces in an international setting. A quasi-market system for higher education was created by Dawkin's reforms in 1988, leading to greater competition among universities for students, and funding from industry and government. Although these changes were also introduced in other countries such as Canada, the US, UK and New Zealand, their introduction and the associated fall in fiscal support from the Australian Federal Government was relatively faster.

A related external contextual factor that all three case universities noted was international students. This group of students was an increasingly important source of funding that Australian universities were concerned to acquire and maintain. For example, part of the fear of 'falling behind' for Cecil at Metropolitan University related to the possible loss of international students at a time when Canberra was reducing its funding for universities. The Vice Chancellor of Regional University was similarly concerned about the possibility that US Ivy League universities might take away their student markets. Alfred at Suburban University was also concerned about this market, however his response involved reinforcing the need for Suburban University to maintain an on-campus presence and avoid "distance education" technologies.

During this same time, emerging digital technologies such as learning management systems, also constituted part of the external context that Cecil argued was part of a revolution in higher education. In the three case universities, individual interested academics had the opportunity to

experiment with these technologies in their university classrooms and thus introduce incremental change into the broader university environment, even when such change was not welcome, such as at Suburban University before 1997. These technologies also led to a blurring of the traditional boundaries between distance and campus based-education among Australian universities (Senate Employment Education and Training References Committee, 1994: 14).

The Australian University Consortium was another significant contextual influence on all three universities. For Suburban University and Metropolitan University, this grouping actually shaped their institutional identity, and helped to reinforce their view of themselves as leading “research universities”. The activities and reputation of this grouping also appeared to be significant for other non-member universities in Australia. For example, the Vice Chancellor of Regional University maintained that he would not be intimidated by this grouping as he made plans for his own institution.

After the Dawkins Reforms of the late 1980s (Dawkins, 1988), many new universities were formed through amalgamations among former Colleges of Advanced Education, Institutes of Technology and older Australian universities. A number of new technology-enabled institutions were also created in the mid 1990s, examples of which were given in chapter one of this study. The International Consortium that was later developed by Cecil in 1997 was one such new player which drew upon the Australian University Consortium membership, along with other international universities. This consortium, along with others like it, was set up to compete against other Australian and international universities for an increased share of the lucrative international student market.

In an external environment characterised by new values (a competition logic), new rules (a reduction in block funding grants), new players and new technologies, the cost of ‘falling behind’ other respected universities was likely to be a serious concern for many Australian universities. All three universities in this study acknowledged the significance of this external context. It is therefore argued that these external contextual factors contributed to the conditions under which pressure was exerted on both Suburban University and Metropolitan University to ‘catch up’ once they had ‘fallen behind’, leading to uncritical evaluation in one of those universities. The decision of Regional University to develop its Countryville campus network was influenced similarly by these same factors, particularly their desire to secure additional government funding and protect regional student catchment areas from other universities, enabled by emerging digital technologies.

### **Intervening Influences**

After the International Consortium was created in 1997 and exerted an external causal mimetic influence on Suburban University and Metropolitan University (discussed in the next section), the nature of its relationship shifted to an intervening influence. During LMS evaluations conducted at both these universities, the decisions of other International Consortium members to adopt WebCT Campus Edition placed significant pressure on particular individuals to mimic these other member universities. In the case of Suburban University, this pressure led to Susan's recommendation (with the support of the Vice Chancellor's Advisory Group) that the university could save time and money by copying the decisions made by other International Consortium universities. Cecil at Metropolitan University made the same recommendation but was successfully resisted by Stella and others who critically evaluated this product.

The decisions of other non-International Consortium universities were also relevant across the three universities. For example, the prior restructuring decisions of other universities were relevant in influencing the way in which Suburban University established a central unit responsible for encouraging adoption of learning management systems in that university. The LMS evaluation decisions of other universities were also taken into account in the evaluations conducted at all three case universities. At Metropolitan University, non-International Consortium academics were even involved in formal internal evaluations of various LMS platforms. The decisions of other universities were also relevant in increasing pressure on universities to adopt more quickly, particularly when these universities realised that they had 'fallen behind'.

The Australian Federal Government also provided generous assistance to individual academics and universities in various forms of financial grants. For example, the Federal Government attempted to influence the adoption of new educational technologies by altering the capital operating grants given to universities for technology infrastructure through the National Priority Reserve Fund (Baldwin, 1991; Johnson et al., 1992; Tinkler et al., 1994; McCann et al., 1998), funding the development of best practice technology in the sector through CAUT (Baldwin, 1991; Caladine, 1993; Lundin, 1993; Tinkler et al., 1994; Jevons and Northcott, 1994) and via its own funding (James and Beattie, 1995; Hesketh et al., 1996; Alexander and McKenzie, 1998), directly funding academic staff development (Hesketh et al., 1996; Taylor et al., 1996) and funding cooperative multimedia centre programs (Hesketh et al., 1996; Yetton et al., 1997). It was claimed by



respondents that this money was very effective in encouraging adoption at a local academic level, as well as further increasing pressure to “do something new”.

Respondents from Suburban University also anticipated future enforcement of adoption through AUQA monitoring (the Australian Universities Quality Agency) and future DETYA budgets. Such a fear was not entirely unfounded, given the Federal Government’s data requirements, relative funding models, research quanta and standardised quality rankings (Marginson and Considine, 2001: 177) used to “inscribe and normalize not only individuals but also collective, organised bodies” (Clegg, 1989: 191). In relation to online learning in particular, the Federal Government targeted individual academic staff through quality assurance and professional development programs (Caladine, 1993; Tinkler et al., 1994; Senate Employment Education and Training References Committee, 1994; Jevons and Northcott, 1994), and universities at large via modification to their institutional profiles to encourage a ‘futures focus’ (Johnson et al., 1992; Tinkler et al., 1994). This observation was also made by Yetton and Associates (1997) who found that

the main imperative for revisiting their strategic plans was the higher value placed on teaching and the accompanying recognition that the ‘student as client’ quality assurance push required a refocus onto student-centred and/or flexible learning (Yetton et al., 1997: 20).

Metropolitan University and Regional University also noted the influence of normative pressure exerted from different professional associations. At Metropolitan University, professional associations were responsible for pressuring at least one faculty into a decision to adopt an LMS platform before the university-wide decision in 2005. Similarly at Regional University, a professional conference was held on campus after a decision had been made by the university to adopt WebCT in 1998. It is highly likely, although it was not mentioned explicitly in interviews or documents, that there were similar pressures at Suburban University, given that pressures exerted on the other two universities were national in character.

Respondents at Metropolitan University also noted the way in which ‘downtown’ corporate influences affected the university’s Council. This external pressure was claimed to have influenced the view of Council in rejecting the first recommendation for an open source LMS platform in favour of a vendor-supplied platform. Corporate influences on university councils were also found in many other Australian universities. A survey conducted in 2003 found that an average of 65 percent of appointed council positions in Australian universities (making up approximately 47 percent of all council seats) were appointed by the states and territories (Australian Vice-Chancellor's Committee, 2003: 1). Of these appointed positions, the highest proportion (an average

of 32 percent) were drawn from business and the professions. Thus, the professions and the state were significant indirect influences over council and university decision making (Australian Vice-Chancellor's Committee, 2003: 1).

The influence of various software vendors was also noted by respondents at all three universities. These vendors reinforced the enthusiastic claims of the literature through advertisements and personal visits to the universities. In some cases, these vendors were even involved in helping to shape the strategic direction of the university with respect to the adoption of new learning management systems, particularly at Suburban University. The timing of vendor intervening influences appeared to be later in the change process at some universities than others.

Domestic students were a common intervening influence for all three universities. Students that were exposed to learning management systems in previous subjects at the university often demanded their use in future classes. Thus, interested academics, together with domestic student pressure on other non-adopting academics, led to later-round pressure to adopt following their initial incursion into the university classroom.

These external influences were largely common to each of the three universities in this study, and played a significant role in shaping indirectly the evaluation and adoption of learning management systems in the three cases. Other relevant external causal factors are discussed in the next section.

### **Causal Influences**

There were two major external causal influences that affected the three universities, although the impact of these influences was not felt equally by all three universities. Cecil's creation of the International Consortium, an interorganisational collaboration, was a major external jolt and causal influence on both Metropolitan University and Suburban University in 1997. After triggering the creation, enactment and dissemination of the constructions 'falling behind' and the need to 'catch up', the International Consortium then became an intervening influence during later periods (discussed in the previous section).

After Cecil's arrival as the new VC at Metropolitan University in 1996, he created the International Consortium as a vehicle to help reconstruct the identity of his institution as "one of the best universities in the world". As Cecil became committed to "mainstreaming the digital revolution", he

realised that other universities in the International Consortium had already adopted university-wide LMS platforms and that his own institution was 'falling behind'. Cecil then committed the university to 'catch up' over the next seven years, following which the university underwent significant restructuring, a protracted period of evaluation, and the eventual adoption of Blackboard in 2005.

Suburban University was similarly influenced by the International Consortium as an external causal influence. When Alfred was invited by Cecil to join the International Consortium in 1997, he also realised that his own institution was 'falling behind' and that he needed to 'catch up'. This decision then led to a series of restructuring efforts, an LMS evaluation, and several adoption strategies.

One of the most significant causal influences at work on Regional University was the operation of various 'state' bodies and funding initiatives. In late 1992, the Vice Chancellor was approached by one of the Countryville local councils to discuss the merit of expanding their teaching enterprise to include several new campuses within the Countryville local government area. Supported by Federal Government funding, these external factors led to the VC constructing plans in this area, leading to the development of a large network of student campuses. Federal Government funding was also provided for Regional University to setup the Australian Distance Education Consortium between 1994 and 1997, which they were later able to use for enriching their Countryville teaching programs. The development of this campus network, and the corresponding demands that it placed on university teaching resources, was an important technical rationale under which various educational technologies, including learning management systems, were encouraged across the university.

These contextual, intervening and causal external influences are capable of being summarised in appropriate figures, and are found later in this chapter in Figures 50 to 52. To summarise this section on significant external factors, Figure 49 contains the external factors associated with uncritical examination at Suburban University. Apart from the particular causal influences at work in both Suburban University and Metropolitan University, it is argued that the intervening and contextual factors noted in this figure were most likely common to the Australian higher education sector at large.

**Figure 49: External Factors Associated with Uncritical Examination at Suburban University**

Nature of Influence	External Factor
Causal	<ul style="list-style-type: none"> <li>• International Consortium (an intervening influence in later periods)</li> </ul>
Intervening	<ul style="list-style-type: none"> <li>• International Consortium</li> <li>• ‘State’ grants and policy</li> <li>• Software vendors and industry consultants</li> <li>• Domestic students (post-adoption influence on other academics)</li> </ul>
Contextual	<ul style="list-style-type: none"> <li>• Global markets and other governments</li> <li>• Federal Government reforms leading to new values and new rules</li> <li>• International students</li> <li>• New technology</li> <li>• Australian University Consortium</li> <li>• New players</li> </ul>

The next section of this chapter will outline how these different influences were associated with different periods of change and templates for organising (Greenwood and Hinings, 1996: 1041) at all three universities, particularly in terms of their influence on different parties and processes.

## **INFLUENCE ON PARTIES, PROCESSES AND OUTCOMES**

Figures 50 to 52 summarise the influence of the previously discussed internal and external influences on the three case universities. These figures are segmented into relevant major templates for organising that were discussed in chapters three to five, particularly around Figures 15, 24 and 33. Associated with each of these different periods of time were primary and secondary contributions from different parties, in addition to the operation of the previously described internal and external factors. The major causal influences on each university are highlighted.

**Figure 50: Internal and External Factors and Institutional Change at Suburban University**

<b>Period</b>					
Template for organising	Unsupported Academic Experimentation	'Falling Behind'	'Catching Up'		
Year	1990-1996	1997	Restructuring 1998-2000	Initial Evaluation 2000	Fast-Tracking Adoption 2000-2005
<b>Parties</b>					
Primary:	Interested academics	Alfred (VC)	Alfred (VC) David (PVC) Keith (Pres. Academic Board)	Susan	Colin (PVC) VCAG CETU staff
Secondary:	CEU staff Alfred (VC)	Other PVCs in the VCAG	CEU Staff Susan Council	VCAG	Faculty academics
<b>Internal factors</b>					
Causal		VC realisation that his university was 'falling behind'	VC decision to 'catch up'		
Intervening	VC's sense of urgency to 'catch up' (e.g. "fast-track"). Low senior management educational expertise Low primary central decision maker educational expertise High senior management power				
Contextual	High institutional vulnerability to external peer pressure High institutional capacity to mimic the 'best' universities Low institutional commitment to the teaching enterprise Low institutional support for experimentation Past institutional change and organisational learning that shapes future internal conditions				
<b>External factors</b>					
Causal		International Consortium			
Intervening	'State' grants & policy Other universities		International Consortium Other universities 'State' grants & policy Industry consultants Software vendors	Domestic students	
Contextual	Global markets and other governments Federal Government reforms leading to new values and new rules International students New technology Australian University Consortium New players				
<b>Relationships between internal and external factors</b>					
'The literature'					
Personal networks	Interested academic networks	VC's networks			
Key constructions created, enacted & disseminated	New educational technology was discouraged as it was "distance education" (VC)	Suburban University was "falling behind" [its peers] (VC)	Suburban University "had to 'catch up'" (Caroline)	"Fast-track the use of educational technology" (Susan)	

**Figure 51: Internal and External Factors and Institutional Change at Metropolitan University**

<b>Period</b>								
Template for organising	Centrally Supported Academic Experimentation	'One of the Best Universities in the World'	'Mainstream the Digital Revolution' or be 'Left Behind'	Catching Up				
				M.M. Fund	Metropolitan Online	Restructuring	Multiple Evaluations	Implementing Change
Year	1990-1996		1997	1997-2002	1998-2005	1999-2001	2001-2003	2005-
<b>Parties</b>								
Primary:	Interested academics LAMU staff	Cecil (VC)			Tyrone Rachel	Cecil	Stella Oliver	Cecil Senior Mgt
Secondary:		Senior management		LATET Central Services Interested academics	Interested academics	Emily Stella Central Services LAMU staff ITS staff	Cecil Planning and Resources Committee Education Research Centre Faculty academics	Deans Faculty academics
<b>Internal factors</b>								
Causal		Employment of a new VC Cecil	VC realisation that his university was 'falling behind'	VC decision to 'catch up'	Individual academic experimentation	VC decision to 'catch up'		
Intervening	Moderate senior management educational expertise High primary central decision maker educational expertise Moderate senior management power							
Contextual	Moderate institutional vulnerability to external peer pressure High institutional capacity to mimic the 'best' universities Moderate institutional commitment to the teaching enterprise High institutional support for experimentation Past institutional change and organisational learning that shapes future internal conditions							
<b>External factors</b>								
Causal		International Consortium						
Intervening	Other universities 'State' grants & policy			International Consortium Other universities 'State' grants & policy Software vendors Professions Domestic students		Auditors		
Contextual	Global markets and other governments Federal Government reforms leading to new values and new rules International students New technology Australian University Consortium New players							

Relationships between internal and external factors					
'The literature'					
Personal networks	Interested academic networks	VC's networks			University Council Other academic networks
Institutional entrepreneurship		Creation of International Consortium			
Key constructions created, enacted & disseminated		"We're one of the best universities in the world" (VC)	"Mainstream the digital revolution" (VC) "Unless we took up these initiatives, we would be 'left behind' as a university" (VC)	"...We need to catch up, we're slipping" (VC)	

**Figure 52: Internal and External Factors and Institutional Change at Regional University**

Period							
Template for organising	Centrally Supported Academic Experimentation	Multi-Location Teaching					
		The Australian Distance Education Consortium	The Countryville Campuses	Teaching and Educational Technologies Unit	Institutional Commitment to Flexible Learning	Multiple Evaluations	Encouraging Adoption Among Staff
Year	1990-1993	1994-1997	1992-	1996	1996	1997-2004	1998-
Parties							
Primary:	Interested academics	Xavier		Sashi		Belinda	Fergus and Sashi
Secondary:		Sashi Toby	Sashi Toby Fergus	Toby Other TMU staff		LMS Working Party Other TETU staff Interested academics ITS and Library staff	TETU staff ITS staff Interested academics
Internal factors							
Causal		VC decision	VC decision	VC/DVC Academic decision to encourage adoption of new educational technologies across the university			
Intervening	High senior management educational expertise High primary central decision maker educational expertise High senior management power						
Contextual	Low institutional vulnerability to external peer pressure Moderate institutional capacity to mimic the 'best' universities High institutional commitment to the teaching enterprise High institutional support for experimentation Past institutional change and organisational learning that shapes future internal conditions						
External factors							
Causal		Federal Government funding awarded	Initiated by Countryville Local Councils but supported by Fed. funding.				
Intervening	Other universities 'State' grants & policy Domestic students					Software vendors	Professions
Contextual	Global markets and other governments Federal Government reforms leading to new values and new rules International students New technology Australian University Consortium New players						



Relationships between internal and external factors					
'The literature'					
Personal networks	Interested academic networks	VC relationships with the state	Regional Development Council Meeting attended by VC		Other academic networks
Institutional entrepreneurship		Formation of ADEC			
Key constructions created, enacted & disseminated		VC fear that [domestic] "students might pursue distance education with Ivy League universities"			

Across the three universities, the external environments were similar, apart from some variation in particular intervening variables, such as the additional influence of an industry consultant at Suburban University. Regional University experienced different external causal influences from Suburban University and Metropolitan University due to their geographic location in the form of Federal Government funding and local regional council initiated ideas.

The internal environments at the three universities differed in substance more than their comparative external environments. The influence of the Vice Chancellor and senior management in these changes were highlighted in these figures. The decisions of the Vice Chancellors to 'catch up' with other universities and encourage the adoption of new educational technologies was a significant internal causal influence on internal events at each of the three universities, particularly at Suburban University and Metropolitan University.

Second, there was significant variation observed among the internal intervening influences. The amount of institutional educational expertise varied greatly between the three universities, and is argued to have shaped the contextual conditions and had a significant impact upon the LMS evaluation activities conducted at the three universities. There was also a notable difference in the capacity of the senior management of Suburban University and Regional University to bring about institutional change in their universities, compared with the VC at Metropolitan University.

Third, there was also significant variation in the internal contextual conditions at the three universities. These factors created the conditions under which different internal and external causes were able to 'jolt' the parties and processes of the three institutions into change in their institutions.

## **RELATIONSHIPS BETWEEN INTERNAL AND EXTERNAL FACTORS**

One of the issues of interest arising from this analysis was the nature of the relationship between different internal and external factors. This relationship between intra-organisational and broader field level factors has also been a persistent weakness in institutional theory, as discussed in the appendices.

Across the three case universities, there were at least three conduits linking different internal and external factors, particularly among the various causal influences highlighted in Figures 50 to 52. Respondents at all three universities noted the way in which 'the literature' was given to rather

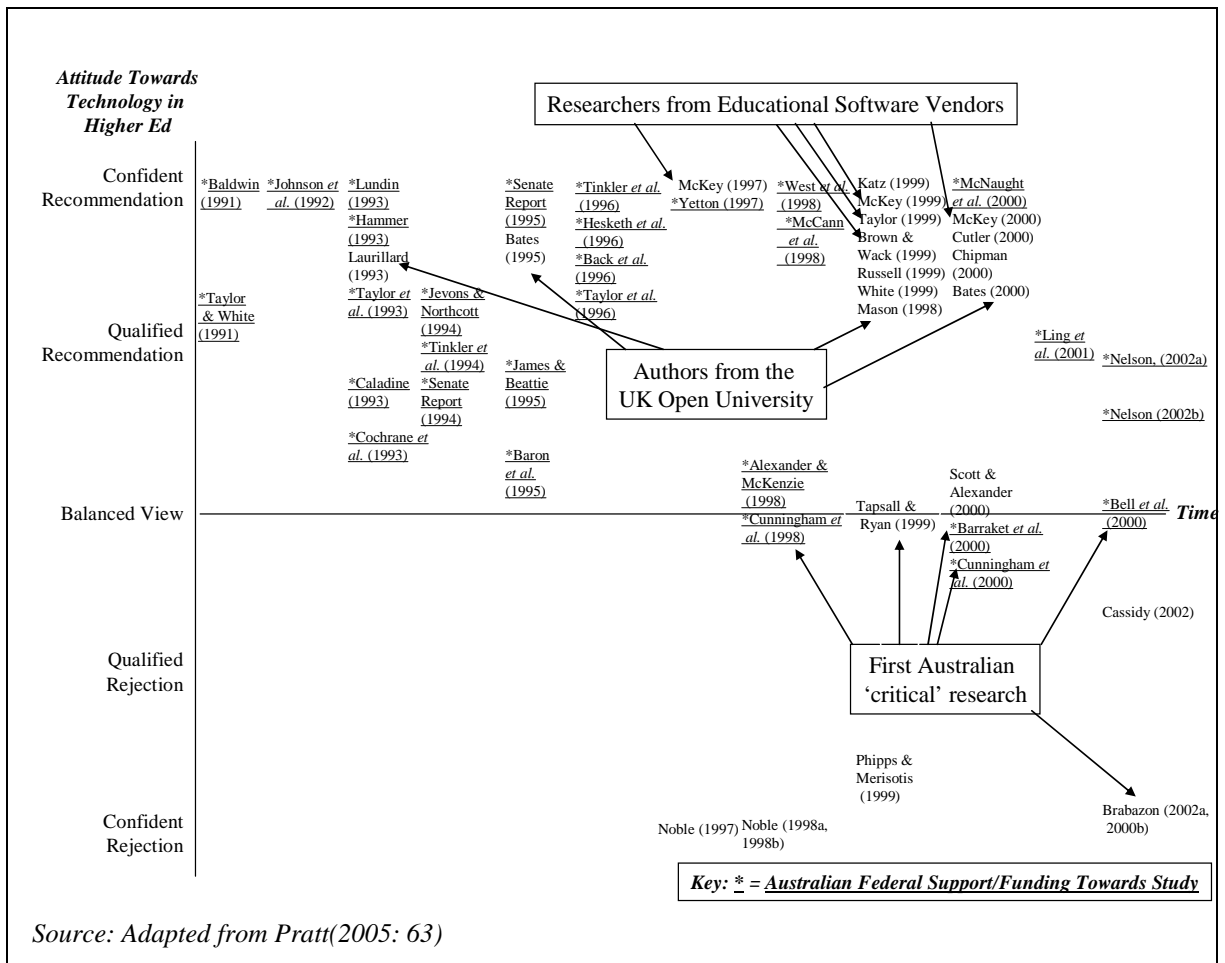
enthusiastic views about the educational and cost effectiveness of new online learning technologies. The combined impact of this literature led some case respondents to claim that it was “just the way education was going”.

It was argued in chapter one that the great majority of publicly funded and disseminated online learning research in Australia was of poor quality. This claim was made based on the fact much of this literature was developed without acknowledgement of the distance education foundations underlying this field, a failure of all but three studies to articulate a theoretical framework informing their evaluations, and a strong tendency for many of these studies to recommend confidently the adoption of unproven emerging technologies, following empirical studies of other Australian university adoption decisions.

Figure 53 shows the distribution of the online learning literature across time and attitude, as cited by Australian university adopters. This figure was assembled after reading through the literature and observing a wide range of attitudes toward the adoption of online learning technology among various authors. Whilst this analysis does not pretend to constitute a formal discourse analysis such as the work of Humes (2000) or Barley and Kunda (1992), it does represent a useful summative tool to map the literature at an aggregate level of analysis.

The scale “Attitude towards Technology in Higher Ed” represents an attempt to highlight the differences in the tenor and substance of the recommendations from the literature. “Confident Recommendation” refers to those papers that were biased in support of online learning methodologies and which did not raise relevant cautions or warnings in relation to the contested nature of many of the promises asserted. “Qualified Recommendation” refers to those papers which recommended the adoption of new technologies but also raised a number of cautions about their application. The “Balanced View” refers to those papers that adopted a more impartial, unbiased and academic tone, neither recommending nor rejecting the technology to readers. “Qualified Rejection” refers to those papers that acknowledged some of the benefits of online learning, but on balance, recommended against adopting the technology, questioning the assumptions of the technology and picking up flaws in the adoption process. “Confident Rejection” refers to those papers that found no basis of merit in the new technology and recommended that readers avoid the technology. The horizontal axis depicts the passage of time across which each of the studies is plotted in relation to their date of publishing.

**Figure 53: Distribution of the Online Learning Literature over Time**



There are a number of observations that can be made about this literature, based on the figure above. First, the number of reports grew over time from 1991, peaked around the year 2000, and then fell away quite sharply. These papers were produced by the Australian Federal Government (Back, Davis and Olsen, 1996; Baldwin, 1991; Nelson, 2002a, 2002b; West, Banks, Baume, Chipman, Clark, Doherty and Dow, 1998), educational software vendors (McKey, 1997) and distance education universities (Taylor and White, 1991). Further, consultancies such as Katz and Associates (1999) who advised Suburban University on their adoption strategies, as well as brokers on Wall Street (Cassidy, 2002), shaped collective beliefs concerning the utility of adopting online learning technologies like learning management systems. Other significant parties included:

- The media (James and Beattie, 1995; Noble, 1997; Cunningham et al., 1998);
- Online education brokers (McKey, 1997, 1999, 2000) and corporate universities (Cunningham et al., 2000);

- Technologists in the international (Laurillard, 1993; Bates, 1995, 2000; Noble, 1997; Mason, 1998) and national academy (Taylor and White, 1991; Cuttler, 2001; Chipman, 2001a, 2001b); and
- The professions who demanded that Australian universities provide workplace training (Taylor et al., 1993; Baron, Thiele and Hintz, 1995; Hesketh et al., 1996)

Second, the great majority of information presented to Australian audiences confidently supported the adoption of online learning. Early studies in online learning were focused strongly on arguments in favour of online learning technology, with many subsequent reports sharing this same optimistic view. Closer analysis of these supportive studies revealed a literature that was overly-dependent on a small unrepresentative sample of university models. Drawing on the empirical research studies cited in Figure 53, Figure 54 indicates the count of university citations by university and publication.

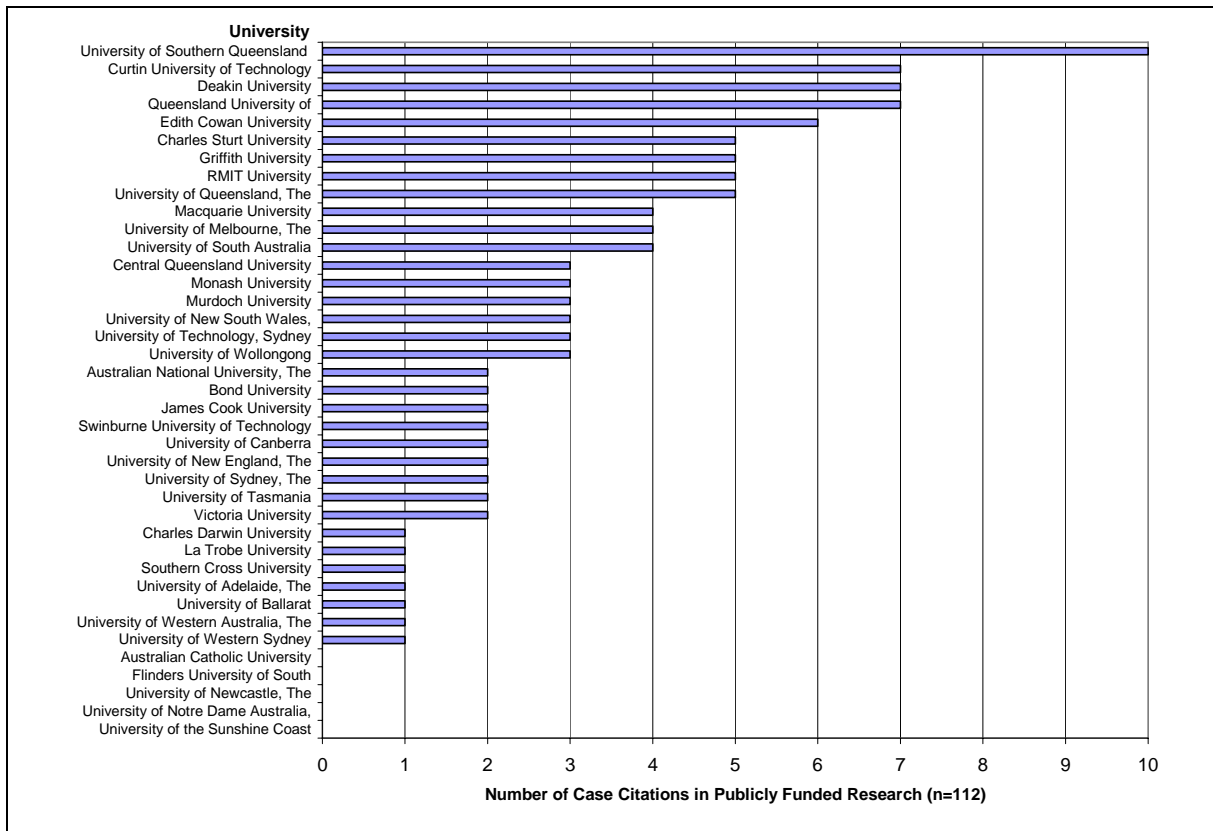
**Figure 54: Count of Australian Universities Cited in 15 Publicly Funded Empirical Studies**

No.	University	Taylor & White (1991)	Cochrane et al. (1993)	Taylor et al. (1993)	Jevons & Northcott (1994)	Tinkler et al. (1994)	James & Beattie (1995)	Backet al. (1996)	Taylor et al. (1996)	Hesketh et al. (1996)	Yetton et al. (1997)	McCann et al. (1998)	Barraket et al. (2000)	Alexander & McKenzie (1998)	McNaught et al. (1999)	Ling et al. (2001)
1	University of Adelaide, The													1		
2	Australian Catholic University															
3	Australian National University, The										1			1		
4	University of Ballarat															1
5	Bond University					1					1					
6	University of Canberra										1			1		
7	Central Queensland University				1						1			1		
8	Charles Sturt University				1					1		1		1		1
9	Curtin University of Technology				1	1				1	1			2	1	
10	Deakin University				1	1		1		1	1	1				1
11	Edith Cowan University				1	1	1			1	1	1				
12	Flinders University of South Australia, The															
13	Griffith University				1				1	1	1					1
14	James Cook University					1								1		
15	La Trobe University													1		
16	Macquarie University					1								2	1	
17	University of Melbourne, The					1	1			1	1					
18	Monash University				1		1					1				
19	Murdoch University				1					1					1	
20	University of New England, The				1	1										
21	University of New South Wales, The					1				1	1					
22	University of Newcastle, The															
23	Charles Darwin University										1					
24	University of Notre Dame Australia, The															
25	University of Queensland, The				1	1				1	1					1
26	Queensland University of Technology		1			1	1		1	1	1	1				
27	RMIT University						1			1	1			1	1	
28	Southern Cross University										1					
29	University of South Australia				1						1	1				1
30	University of Southern Queensland	1		1	1	1		1		1		1		1	1	1
31	Swinburne University of Technology					1										1
32	University of the Sunshine Coast															
33	University of Sydney, The										1	1				
34	University of Tasmania										1					1
35	University of Technology, Sydney										1		1	1		
36	Victoria University					1										1
37	University of Western Australia, The													1		
38	University of Western Sydney													1		
39	University of Wollongong						1				1	1				
	<b>TOTAL CASES:</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>12</b>	<b>14</b>	<b>6</b>	<b>2</b>	<b>2</b>	<b>12</b>	<b>20</b>	<b>9</b>	<b>1</b>	<b>16</b>	<b>5</b>	<b>10</b>

Source: Pratt (2005: 65)

In total, there were 112 citations made across 34 universities. Of these citations, some universities were clearly more popular than others. Figure 55 below ranks these citations from highest to lowest.

**Figure 55: Ranked Australian University Citations in Publicly Funded Research since 1991**



Source: Pratt (2005: 67)

Drawing on Figure 55, there was a distinct bias in the research towards citing universities with a history of distance education in studies focused on technology applications for ‘on-campus’ students. Across the 15 publicly funded research studies, 41 percent of a total of 112 case citations were drawn from only nine (24 percent) universities that contributed material to the Open Learning Agency of Australia, including seven of the former Distance Education Centres. If Queensland University of Technology and the University of Queensland are added to this group, both universities having a significant history of distance education, then this group of eleven (29 percent) of universities would account for over half (52 percent) of all citations since 1991. Thus, early empirical research claiming to support recommendations of online learning tended to rely on the experiences of unrepresentative samples from which generalised conclusions were applied across

the sector, resonating with Abrahamson and Fairchild's findings relating to management fashions (Abrahamson and Fairchild, 1999: 726).

The third major observation from Figure 53 is that there was a notable lack of critical evaluation of the claims circulated by earlier reports until some years later. Noble (1997; 1998a; 1998b) claimed that the rise of new technological and online approaches to education amounted to "degree milling" and represented an underhanded attempt by university administrators to claim power from academic staff through the pursuit of academic intellectual property placed on university systems. These arguments sparked much discussion in education circles, particularly in the United States of America (White, 1999), leading to further qualifying studies. Cunningham et al. (2000; 1998) critically addressed the fear that Australia might miss out on future opportunities in the new century and attacked claims that these new delivery vehicles might be a cost effective strategy to reach overseas markets. Phipps and Merisotis (1999) released a study in response to Russell's (1999) claim that there was no significant difference between traditional and online learning outcomes by noting fundamental problems in the research design of many of the so claimed empirical studies. In short, these critical studies brought a renewed focus on the truthfulness and empirical support of the earlier research.

Finally, the Australian Federal Government can be identified as a critical external influence in these debates. Figure 53 notes those studies either funded or supported and published by the Federal Government. These studies amount to the great majority of Australian research studies in this area, most of which confidently supported the adoption of online learning into the twenty first century.

It is also worth noting that field level respondents interviewed for this study made a number of comments about the online learning literature, recorded in the appendices. Some of these comments included reference to academic turf wars between multimedia and distance education academics, as well as US hegemony in key editorial roles.

The second major conduit between the internal and external environments were various personal networks, which have been argued to be even more important than the literature in encouraging the adoption of innovations (Rogers, 1995: 286). Individual interested academics who experimented with emerging digital technologies appeared to be well connected with other individuals outside their own institutions, most likely with other similar academics at other universities. These networks were important in sharing information about the different experiences associated with



various learning management systems, particular during times of evaluation, such as those at Metropolitan University and Suburban University. This could in all probability have also been the case at Regional University. However, a lack of corroborating evidence could not establish this claim.

Personal networks were also a significant conduit in connecting the Vice Chancellors of the three universities with various external causal factors. The personal networks provided by the International Consortium provided a context within which the Vice Chancellors of Suburban University and Metropolitan University could keep up with developments in other universities and within the field at large. It was through their respective participation in this very network that both Vice Chancellors realised their universities were ‘falling behind’. As a result, these Vice Chancellors then committed their institutions to significant internal changes, ultimately leading to the adoption of different learning management systems in those institutions. At Regional University, the Vice Chancellor’s prior relationship with the Federal Government enabled him to acquire significant external funding to acquire new campus infrastructure, initiated by a conversation he had with a local council representative in that particular region.

Third, there were a number of instances of institutional entrepreneurship (defined and discussed in the appendices of this study), particularly from the Vice Chancellors of Metropolitan University and Regional University. The setting up of the International Consortium, a field-wide institution involving several other national and international universities, created an opportunity for Metropolitan University to reinforce its intentions to be seen as “one of the best universities in the world”. An unintended consequence of this creation was that it created pressure on both Metropolitan University and Suburban University to ‘catch up’ with other universities. Regional University similarly set up the Australian Distance Education Consortium to provide online education through a television station with other universities. This latter example of institutional entrepreneurship was rather short-lived in comparison to that of the International Consortium however.

Finally, there were also a number of examples of various constructions created, enacted and disseminated within the three case universities that socially constructed a particular view of reality within the three universities. For example, at Suburban University, the Vice Chancellor was reported to have claimed that new educational technologies belonged to ‘distance education’ and were not welcome at their on-campus institution. At Metropolitan University, many respondents

noted the way in which the Vice Chancellor had attempted to instill a belief that they were “one of the best universities in the world”, in addition to their need to “mainstream the digital revolution”.

The most significant construction that arose across all three cases was ‘falling behind’, a creation of the Vice Chancellors in all three cases. At Suburban University and Metropolitan University, this construction was enacted by the Vice Chancellors when they sought to ‘catch up’ with other peer universities in the International Consortium. Whether or not these universities were actually behind was immaterial once this construction was created and enacted; it became a new ‘myth’ disseminated across these universities.

For Regional University, there were not as many common constructions repeated by respondents as at the other two universities. The same fear of being left behind that was found at Suburban University and Metropolitan University was also evident to a small degree at Regional University however. It was claimed that at least part of the reason why the Vice Chancellor was particularly interested in developing the Australian Distance Education Consortium was out of a fear that his students might pursue an education with US Ivy League universities. This same fear was also found to have driven the production of a final report on how Regional University could further encourage the adoption of new technologies.

This research question has attempted to identify the influence of various internal and external factors on the parties, processes and outcomes addressed in the previous three research questions, each of which was addressed in this chapter. On the basis of interviews and document analysis across the field and higher education environment, this section has differentiated between different internal and external causal, intervening and contextual influences, following Strauss and Corbin (1998).

In contrast to the claims of Yetton and Associates (1997), this section outlines a number of organisational and field-level influences that led to an instance of uncritical evaluation of a new learning management system, based on the experiences of Suburban University, Metropolitan University and Regional University. These complex relationships between various internal and external influences are capable of being represented as a grounded theory under a broader selective category. The next section of this chapter outlines a grounded theory as a response to this study’s major research problem.

## Response to the Research Problem: A Grounded Theory

The major research problem that this study attempts to address is: *how did selected Australian universities evaluate and adopt various learning management systems in their teaching and learning programs, given claims of uncritical evaluation, problems and cautions in the higher education literature?* This problem, discussed in further detail in chapter one, was then addressed by this study's methodology, drawing upon a grounded theory methodological framework.

The grounded data analysis methodology for this study was outlined further in chapter two and the appendices of this study. Following guidelines discussed in that chapter, a grounded theory was constructed based on identification of the core category observed in the study.

Straus and Corbin (1998) encouraged researchers to identify the central category that represents the main theme of their research. This category usually involves a few words that summarise what the research is all about, and is itself an abstraction. It is suggested that other analysts should be able to follow the logic of this analysis, and should agree that it is a plausible explanation. It should also be able to handle significant variation.

Strauss suggested the following specific criteria for selecting the core category in his 1987 text (Strauss, 1987: 36):

1. It must be central and all other categories relate to it;
2. It must appear frequently in the data;
3. The explanation that evolves is logical and consistent with no forcing;
4. The name or phrase is sufficiently abstract to help other research in other areas; and
5. It is able to explain variation as well as the main points in the data. That is, when conditions vary, the explanation still holds. It should therefore be able to explain alternative cases in terms of this central idea.

Strauss and Corbin (1998) also suggested looking at the interplay between various macro and micro conditions and how these not only affect each other, but also shape actions/interactions and consequences, including next round effects. Glaser similarly argued for the construction of "complex theory of a complex world" (Glaser, 1992: 71).

The central category identified in this study was ‘falling behind’. This phenomenon was facilitated by the complex interaction of a range of macro and micro contextual conditions. However it was ultimately caused by acts of institutional entrepreneurship which had the effect of an external jolt among the Vice Chancellors’ interpersonal networks. Once this construction of ‘falling behind’ was enacted, it led to VCs committing their universities to ‘catching up’, sometimes with a significant sense of urgency. Various external and internal intermediary factors were found to shape the restructuring, evaluation and adoption decisions, leading to a range of organisational consequences and later round internal contextual conditions.

The central category ‘falling behind’ was able to account for why Suburban University was uncritical in its evaluation of a learning management system, as well as how Metropolitan University nearly committed the same act. As a relatively early adopter of educational technologies, Regional University did not face this same external legitimacy threat to the same degree. The category ‘falling behind’ also appeared without forcing in all three cases, although was less prominent at Regional University. This central category is also capable of being applied in other competitive contexts, although this was beyond the explicit parameters of this particular study. Finally, it is argued that this category allows significant variation, as was demonstrated in the previous section of this chapter.

‘Falling behind’ was also prominent in much of the higher education literature during this period. Once a competition ethic was introduced into the international sector through the commercialisation of higher education (Power, 2000: 158) following the pursuit of smaller government models (Osborne and Gaebler, 1992), winners and losers were likely to emerge in the pursuit of more heavily contested external funding. In North America, Noble (1997) argued that one of the reasons universities were uncritical in their evaluation of the promises associated with online learning systems was a fear that if they did not adopt quickly, they might be ‘left behind’.

What is driving this headlong rush to implement new technology with so little regard for deliberation of the pedagogical and economic costs and at the risk of student and faculty alienation and opposition? A short answer might be the fear of getting left behind, the incessant pressures of “progress”. But there is more to it. For the universities are not simply undergoing a technological transformation. Beneath that change, and camouflaged by it, lies another: the commercialization of higher education. For here as elsewhere technology is but a vehicle and a disarming disguise (Noble, 1997).

This same fear of being ‘left behind’ in the international higher education marketplace was also observed in Europe. One of the reasons given for the failure of the UK e-Universities project was a fear that they would be ‘left behind’ other universities in the US. Academics in Britain’s Open

University claimed that the UKeU was not set up to meet any educational need, but was driven by a number of things,

mainly this notion that somehow Britain was missing out on the dot-com impulse in education...And there was a vague feeling that if the United Kingdom doesn't get organized in this field, we are going to lose out (Carr, 2001).

Other observers also concurred with this evaluation.

...If the UK did not "do something" its international student market would be overrun by aggressive online universities from the United States and elsewhere [ . This] was based on fear rather than fact (The Observatory on Borderless Higher Education, 2004).

It could be argued that one of the consequences of the Australian Federal Government's dissemination of sponsored online learning research (Figure 53), was that it sent a strong signal to university decision makers that the future competitiveness of Australian universities was dependent on their adoption of new learning management systems to conduct online learning, or they might risk 'falling behind'. The fact that they were now operating in a more internationally dependent and competitive sector, with drastically reduced government support, may have further reinforced this view. For example, representative quotes over a period of ten years from the online learning literature are located in Figure 56.

**Figure 56: ‘Falling Behind’ in the Australian Higher Education Literature**

Year	Illustrative Quote
1992	<i>Singapore is establishing a distance university and Malaysia is investigating similar possibilities, with a view to becoming international centres of educational leadership and provision. Australia has the proverbial window of opportunity, for a quite limited time, to build on the position of advantage we currently hold. If this opportunity is not developed, by conscious policy in a coordinated way, quite quickly, it will be lost to us (Johnson et al., 1992: 22).</i>
1993	<i>In North America and Europe, as well as in various parts of Asia, several other parts of the world and increasingly in Australia, flexible distributed learning options, including open distance education methods and the use of communications and information technology, have become the norm for most universities and tertiary colleges rather than a specialised or add-on activity (Lundin, 1993: 12).</i>
1994	<i>If we are at a watershed in the very nature of higher education, it will be because of the extremely rapid advent of delivery of educational information (now) and materials (soon) across a globe spanning digital data network. Several key components are in place and being expanded as rapidly as funds allow, especially on-campus access to computer-filled 'laboratories'. The next step, and one which is already underway on some campuses, will provide network access to digital versions of widely used undergraduate course materials. This promises to transform educational publishing and the role of libraries. With the strong advocacy of US vice-president Gore for the development of 'information highways' to service education in particular and similar less publicised initiatives in leading Asian economies, Australian commitments to the development of AARNet can most charitably be described as a small step in the right direction, but fall well short of grabbing our current opportunity to remain one of the leaders in Internet utilisation (Tinkler et al., 1994: 124).</i>
1996	<i>The scepticism among academics about the benefits of CMC is healthy, but may also be of concern if one accepts the scenario that a failure to accommodate computer-mediated communication in teaching is likely to lead to a loss of international competitiveness in higher education (Hesketh et al., 1996: xi).</i>
1997	<i>Those universities who are first to find and develop a new form, have the potential to gain a considerable market advantage. They will not try to do everything. They will build on their strengths and existing capabilities to compete in new and focussed ways (Yetton et al., 1997: 127).</i>
2000	<i>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 reports make clear (McNaught et al., 2000: 1).</i>

It is possible that these arguments were further supported by the literature’s unbalanced focus on the adoption activities of other Australian universities, echoed by the national media (e.g. Lawnham, 2002b, 2002a). Combined with generous Federal Government funding awarded specifically to encourage adoption of these technologies among academics (Hesketh et al., 1996; Taylor et al., 1996) and their institutions (Baldwin, 1991; Johnson et al., 1992; Tinkler et al., 1994; McCann et al., 1998) at a time of financial crisis in the sector, it is argued that these factors led to increased social pressure on non-adopting academics and universities. Whilst some academics made light of this phenomenon through parody (Alexander, 1998), others expressed more transparent cynicism.

The extraordinary hype surrounding electronic communication technologies makes it extremely difficult to separate speculations from reality, to sort what is imagined from what is feasible. The reality is that the extent of their application is presently modest, and the practicalities of

implementation more problematic than is widely admitted....To make statements of this kind is to run the risk of being called reactionary or Luddite (James and Beattie, 1995: 4).

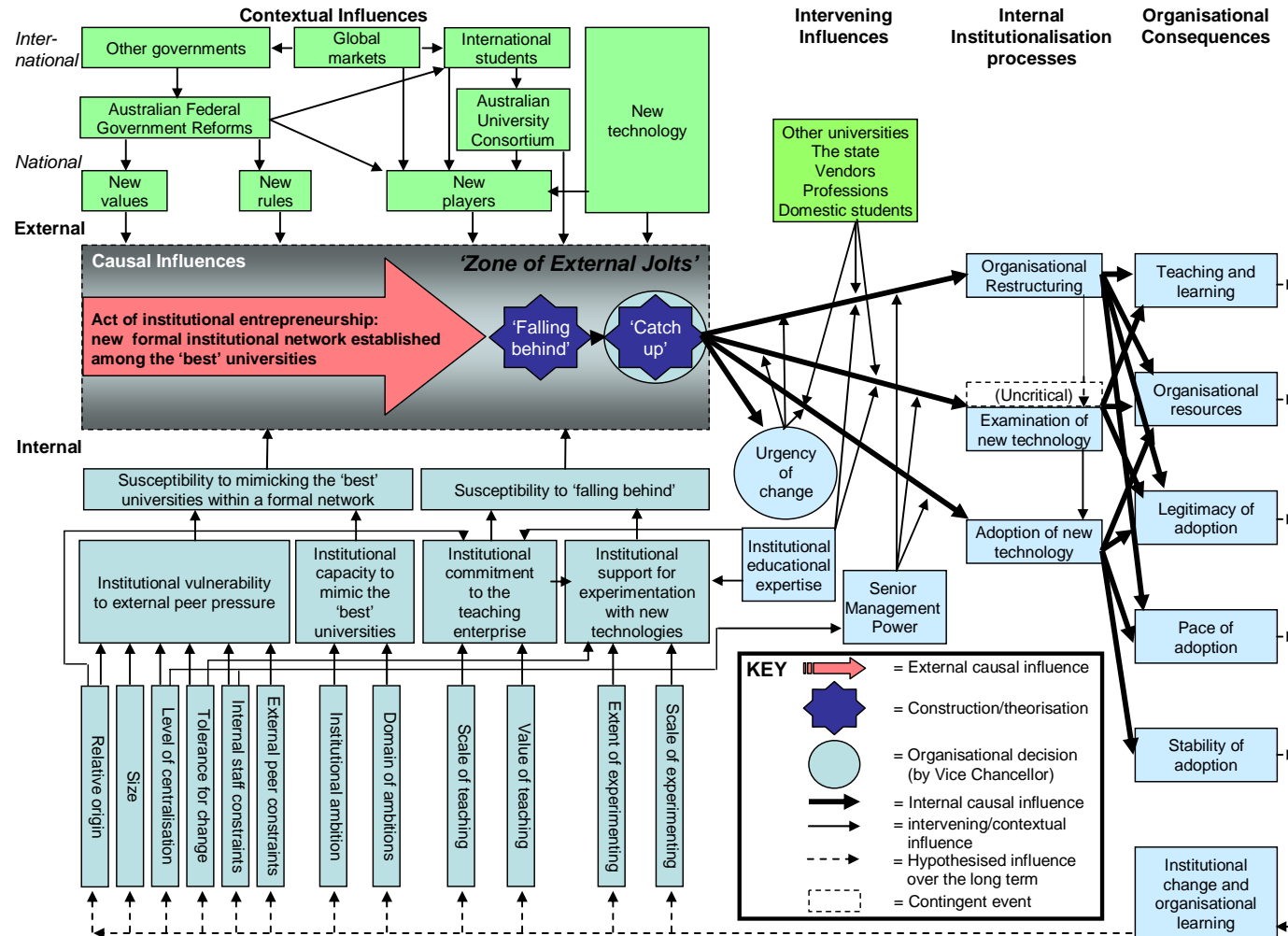
There is so little recorded in the professional literature about the difficulties, confusions and paranoia that result from teaching, learning and writing online. With so much funding thrown at online development, it takes courage to affirm a non-digital alternative (Brabazon, 2002: 116).

This phenomenon of major institutional decisions being made uncritically on the basis of other institutions' actual or anticipated decisions was also observed by commentators of the internet around that same time. 'Herd behaviour' of this order however, was more commonly associated with speculative bubbles and management fashions than higher education.

During the 1990s, building mathematical models of herd behaviour turned into a growth industry among economists. The models vary in detail, but they share one important attribute: at some point, people stop thinking for themselves and start copying others because they have decided it is in their self-interest to do so. It is this behaviour that generates speculative bubbles. And once the bubbles get going, they tend to feed on themselves, with the increases in stock prices drawing ever more people into the market (Cassidy, 2002: 124).

Figure 57 represents a grounded theory and process model of how 'falling behind' led to uncritical evaluation of LMS technologies in selected Australian universities. The relationships portrayed in this model were described at length in the last section of this chapter. Many elements of this model, particularly the fear of being 'left behind' and institutional educational expertise, were further validated in semi-structured interviews with field-level respondents not involved with the three case studies. Further details relating to these interviews are found in the appendices to this study.

Figure 57: 'Falling Behind': A Grounded Theory of Uncritical Decision Making





It is argued in this study that this grounded process model provides a significantly broader and more contextually-sensitive explanation of uncritical evaluation of new educational technologies in Australian higher education than Yetton and Associates (1997). It was noted in chapter one that the functionalist theoretical framework adopted by these authors limited their capacity to appreciate broader sociological insights promoted by other theoretical frameworks. This grounded model therefore directs attention to the interplay between the internal and external university environments, a range of internal and external moderating influences, as well as the significant influence of the Vice Chancellors in each university. It is therefore argued that these findings represent a major contribution to the higher education literature in its exploration and explanation of a previously under-researched area of some importance to the field.

It is also likely that this grounded process model is capable of explaining instances of uncritical evaluation of new educational technologies in other Australian universities during this same time period, where the relevant conditions were similar. However, this would need to be the subject of further research. Generalisations to theory beyond studied cases are claimed to be more convincing when they are limited to similar situations and time periods (Patton, 1990), make use of rich thick descriptions to highlight similarities and differences (Merriam, 1990; Ward Schofield, 2002), adopt multi-site studies with maximum variation (Firestone, 1993; Ward Schofield, 2002), conduct research on sites known to be ideal or exceptional according to the outcomes or conditions sought (Firestone, 1993; Ward Schofield, 2002), and make use of different qualitative comparative methods such as matrices and tables (Firestone, 1993; Miles and Huberman, 1994; Ward Schofield, 2002). This research study has observed all of these suggestions in the development of this grounded theory, as was argued at length in chapter two. It has also been argued throughout this chapter that the findings of this research are consistent with other empirical research in the Australian higher education sector. Finally, elements of this model, particularly a fear of 'falling behind' and a lack of institutional educational expertise, were observed in other Australian universities by field respondents interviewed for this study. Further details relating to these interviews can be found in the appendices.

## Grounded Theory and Institutional Theory

It was argued in chapter two that a grounded theory methodological framework encourages the development of ‘emergent’ theory that is ‘grounded’ in the data collected. Various conventions for analysing data and developing theory were also discussed in that chapter and in the appendices.

The relationship between grounded theory and other literatures is unique in the methodology literature. Grounded theory proponents claim that if substantive theoretical literatures are to be consulted, it should be after and not before data analysis and theory building. This research has heeded this call.

It has also been noted throughout this thesis that some aspects of institutional theory are relevant to this particular study. A comprehensive review and justification for drawing upon selected insights from this literature are included in the appendices. That appendix ends with the identification of three major opportunities that researchers might consider addressing in future research.

Addressing selected gaps in this institutional theory literature was an initial aim of this research, leading to the completion of this literature review. The use of this theory as a framework for data analysis and theory development was later abandoned as data analysis progressed on a grounded basis. This created the opportunity for data analysis and theory development unconstrained by some of the discussed limitations of this expansive literature. After the completion of grounded analysis and theory development however, it has become apparent that specific aspects of institutional theory are relevant in the validation of this thesis’ findings and grounded theory.

This thesis highlights the different strategic choices (Child, 1972) of senior university managers within the highly institutionalised field of higher education (Brint and Karabel, 1991; Casile and Davis-Blake, 2002; Gornitzka, 1999; Kraatz and Moore, 2002; Kraatz and Zajac, 1996; Marginson and Considine, 2001). Some of these senior managers reproduced (Van de Ven and Hargrave, 2004) internally ‘myths’ located in the field (Meyer and Rowan, 1977) through institutional isomorphism (DiMaggio and Powell, 1983), particularly mimetic isomorphism (DiMaggio and Powell, 1983), following unanticipated ‘external jolts’ (Meyer, 1982; Hoffman, 1999; Hinings, Greenwood, Reay and Suddaby, 2004). The behaviour of the VC of Surburban University following the newly formed International Consortium is a case in point. Other senior university managers were the very constructors (Van de Ven and Hargrave, 2004) of these field-level changes through acts of

institutional entrepreneurship (Covaleski and Dirsmith, 1988; DiMaggio, 1988; Gioia et al., 1994; Goodstein, 1994; Fligstein, 1997; Garud and Ahlstrom, 1997; Lawrence, 1999; Garud, Jain and Kumaraswamy, 2002; Dejean, Gond and Leca, 2004; Maguire, Hardy and Lawrence, 2004; Greenwood and Suddaby, 2006). The VC of Metropolitan University's creation of the International Consortium, an act of institutional entrepreneurship through interorganisational collaboration (Dorado, 2005; Lawrence, Hardy and Phillips, 2002), was also exemplary.

Actors who fail to question aspects of organisational life are not unaccounted for within an institutional theory framework (DiMaggio, 1988). This can occur in particular when organisations are threatened by the potential loss of external legitimacy, putting at risk a portion of their external resources (DiMaggio and Powell, 1983; Meyer and Rowan, 1977; Suchman, 1995). Uncritical acceptance can even occur when these structures or technologies are inefficient (Meyer and Rowan, 1977; Scott and Meyer, 1983/1991) or technically irrational (Selznick, 1996). This often occurs under the influence of various structural (Giddens, 1979; Ranson et al., 1980) and isomorphic influences. Allegations of uncritical decision making were claimed in relation to Suburban University, where a fear of 'falling behind' put at risk anticipated government funding and new student enrolments. The decision to adopt WebCT Campus Edition did not lead to cost savings or demonstrable improvements in education, nor was it argued to be the most appropriate choice for this particular institution, based on interviews with staff at that university. The decision of managers in this university to mimic the decisions of other universities within the International Consortium network is not novel from an institutional perspective, except for the fact that isomorphism was shaped by the decisions of other organisations in the VC's personal networks (Galaskiewicz and Wasserman, 1989) rather than the field at large (e.g. the activities of other 'Unitechs' and 'New Universities').

In relation to the process and mechanisms of institutional change, Lawrence, Winn and Jennings (2001) outlined a typology of different mechanisms that could lead to institutional change, also outlined in further detail in the appendices. These authors suggested that studying the relationships of power between different subjects could help to uncover the temporal processes at work within organisations. Figure 58 adapts their typology as a framework to categorise the major strategies used to encourage adoption within the three case studies.

The most common approach discussed in the literature was the use of 'influence', and involved popular notions of decision making, non-decision making, manipulation and attempts to manage

meaning (Lawrence et al., 2001). Influence mechanisms were relatively discrete, strategic acts initiated by self-interested actors that assumed their subject was capable of agency. These approaches required time to engage in decision making and evaluate the likely costs and benefits. In this study, there were a range of influence-based mechanisms employed, such as creating strategic plans with financial incentives and disincentives, negotiating with particular faculties, inflating claims of success and hiding failures.

**Figure 58: Comparative Mechanisms of Institutionalisation**

	Target as subject	Target as object
Episodic	<p><b><u>Influence</u></b></p> <ul style="list-style-type: none"> <li>Strategic plans with financial incentives/disincentives</li> <li>Hosting an educational technology conference</li> <li>Facilitation through an external consultant</li> <li>Special dispensation from the VC</li> <li>Public response to sceptical staff</li> <li>Inflating claims of success</li> <li>Hiding failures</li> </ul>	<p><b><u>Force</u></b></p> <ul style="list-style-type: none"> <li>Management directives</li> <li>Re-writing meeting minutes</li> <li>Retrenching/sidelining staff</li> <li>Stonewalling resistant staff</li> <li>Censoring competing perspectives</li> <li>Squashing competing platforms</li> </ul>
Systemic	<p><b><u>Discipline</u></b></p> <ul style="list-style-type: none"> <li>Senior staff appointments/agreements</li> <li>Benchmarking/industry visits</li> <li>New inclusion in the Enterprise Bargaining Agreement</li> <li>Training faculty-level change agents</li> <li>Supportive policy, promotions and university awards</li> <li>Training and support programs (including seminars)</li> <li>Technology questions in teaching evaluation surveys</li> </ul>	<p><b><u>Domination</u></b></p> <ul style="list-style-type: none"> <li>Central support for one university system only</li> <li>Refurbishment of lecture rooms</li> </ul>

*Source: original contribution, adapted from Lawrence, Winn and Jennings (2001: 632).*

The use of the ‘force’ mechanism involves “the direct, overt use of power to overcome another actor’s intentions or behaviours” (Lawrence et al., 2001: 635). It therefore involves similarly discrete strategic acts on the part of self-interested actors. However, it disregards the choices and views of those targeted. For example, the retrenching of the former Central Education Unit, stonewalling of resistant staff and censoring of competing perspectives were all intended to remove

opposition to Suburban University 'catching up' to its esteemed peers in the International Consortium.

The 'discipline' mechanism involves working through the routine, ongoing practices of organisations, to shape the formation of the subject, such as their identity (Lawrence et al., 2001: 636). Influence-based mechanisms by contrast, also assume a degree of subject agency but focus on changing the subject's actions. As a result of the impact on the subject's formation and identity by internalising others' external demands, this approach can advantage particular views or groups, without the initiators of these practices being clearly connected with their operation. One example of this approach, raised by respondents in all three case universities, was the way in which university promotions policies were adjusted to encourage adoption of new technologies in university teaching programs.

Finally, the 'domination' mechanism adopts a similar systemic approach to the use of routine organisational approaches such as discipline. However, it disregards the choices of those that it targets. For example, the decision of a university to support only one central system denies other groups any alternative choice for such a platform.

Figure 59 attempts to count the number of different approaches used by each university within each class of change mechanism. The numbers assigned are not an indication of the magnitude of institutional power, only the mechanisms through which these universities sought to exercise their power.

Discipline-based strategies were among the most common approaches used by all three university cases. Influence strategies were also moderately popular with Suburban University and Regional University, however were not used much by Metropolitan University.

In contrast to the other two cases, Suburban University made extensive use of force-based approaches, and used domination approaches twice as much as the next closest university. The preference for these mechanisms of change could be argued to be linked to the low levels of internal legitimacy evoked among staff. A perceived need to 'catch up' among senior management led to the view that changes in this university ought to be 'fast-tracked'.

**Figure 59: Comparative Use of Various Mechanisms of Institutionalisation**

	Target as subject	Target as object
Episodic	<p><b><u>Influence</u></b>                      Suburban University (4)                      Metropolitan University (1)                      Regional University (3)</p>	<p><b><u>Force</u></b>                      Suburban University (6)                      Metropolitan University (3)                      Regional University (1)</p>
Systemic	<p><b><u>Discipline</u></b>                      Suburban University (4)                      Metropolitan University (6)                      Regional University (6)</p>	<p><b><u>Domination</u></b>                      Suburban University (2)                      Metropolitan University (1)</p>

*Source: original contribution, adapted from Lawrence, Winn and Jennings (2001: 632).*

Lawrence Winn and Jennings (2001) theorised the likely connections between the mechanism of power employed to bring about institutional change, and the consequential pace and stability of those changes thus affected. These authors claimed, in summary, that:

- Influence brings slow pace and low stability;
- Force brings very fast pace and low stability;
- Discipline brings slow pace and high stability;
- Domination brings fast pace and high stability;
- Influence and discipline bring medium pace and high stability; and
- Force and domination bring very fast pace and high stability.

The fact that all three universities employed a range of discipline-based strategies and also had highly stable adoption decisions is unremarkable from an institutional theory perspective. Where

discipline mechanisms were accompanied by influence-based approaches, such as at Suburban University and Regional University, the pace at which these changes were adopted would be expected to be moderate. Lawrence, Winn and Jennings argued further that this combination would ultimately bring the identities of individuals affected in line with the institutionalised norm adopted. The observations of the three cases would appear to confirm this hypothesis, given their highly stable nature and gradual change.

In the case of Suburban University, their strong use of force-based strategies and occasional reliance on domination should lead to very fast paced change with high stability across the university. Respondents at Suburban University claimed that the adoption of WebCT Campus Edition among faculty staff was actually very fast. Thus, the broad predictions of Lawrence, Winn and Jennings appear to explain and validate the observations made concerning the adoption strategies adopted and the consequential speed and stability of change in the three university case studies.

The core category 'falling behind' represents a major institutional contradiction (Seo and Creed, 2002) and trigger for organisational change, discovered by the VCs of Suburban University and Metropolitan University through their new network positions (Greenwood and Suddaby, 2006) in the International Consortium. As a relatively early adopter of educational technologies, Regional University did not face this same external legitimacy threat to the same degree (Tolbert and Zucker, 1983) as they appeared to adopt new educational technologies primarily for their technical and not external legitimacy benefits.

It is claimed that the findings and grounded theory articulated in this chapter is further validated by this limited discussion of institutional theory. Further, the grounded theory developed in this study has explored the links between macro and micro explanations, and shown how the activities of individuals within organisations can affect and be affected by broader field developments, particularly where they are linked to the interpersonal networks of organisational leaders in a changing institutional context. Locating empirical studies that integrate both intra-organisational and field-level perspectives with the construction and reproduction of change is a major weakness in institutional theory, as identified in the appendices. It is therefore claimed that this model also represents a minor contribution to the institutional theory literature. It is recommended that this theory be developed and refined further however, through further research relying primarily on an institutional theory conceptual framework.

## Conclusion

This chapter analyses the broad pattern of change observed in each of the three university case studies, particularly around the evaluation and adoption of different learning management systems. Research questions one to four are addressed within this chapter, identifying the relevant parties involved, different processes of evaluation and adoption, their impact upon various university outcomes, and the influence of several internal and external factors. A grounded theory addressing this study's research problem is also discussed at the end of this chapter.

Throughout this chapter, references have been made to the higher education literature, while limited references only have been made to the institutional literatures at the end of this chapter. The observations discussed in research questions one to four are broadly consistent with both of these literatures, particularly other empirical studies conducted in Australian higher education. This consistency has been argued throughout to create a further degree of plausibility in the findings outlined in this chapter. The response to this study's broader research problem through recourse to the development of a grounded theory has also been discussed with reference to the higher education and institutional literatures. Some core elements of this model, particularly identification of a fear of 'falling behind' and the importance of institutional education expertise, were further validated by field-level interviews, reported in the appendices of this study.

This study claims several contributions to the Australian higher education literature. First, this study proposes a broad sociological explanation to account for uncritical evaluation of new educational technologies in Australian universities through the development of a grounded change process model, based on three Australian university case studies. Second, this study identifies the particular roles played by different members of the senior management of three Australian universities in the evaluation and adoption of new educational technologies, particularly from 1996 onwards. Finally, this study illustrates in comparative detail, an instance of uncritical examination of a learning management system, within a broader context of institutional change.

The findings and grounded theory discussed in this thesis are largely validated by the insights of institutional theory, reviewed at large in the appendices. The grounded theory of uncritical decision making explores the links between micro and macro explanations of institutional change, and the construction and reproduction change perspectives, a major weakness within institutional theory. This theory represents a minor contribution to this literature. It is recommended however, that this



theory be developed and refined further through further research drawing primarily on an institutional theory conceptual framework.

The next and final chapter in this study concludes this thesis, summarising this study's major findings and contributions.

## CHAPTER SEVEN: CONCLUSIONS AND CONTRIBUTIONS

### Summary

I was talking to him the other day and I said you were coming out and I said, “how honest do you think we should be?” Because, I said “it’s a really intriguing topic that someone is actually going to ask the question, you know, how were these decisions [made] and against, how were these decisions evaluated basically”. And the short answer is “they’re not”. And I think you know that. And from a management perspective, I was interested because there’s a lot of research in management that tells you how you could go about these things, and who should be the stakeholders you know. But this place avoided doing all that, because, well, for whatever reasons. I don’t know why we’ve got WebCT as opposed to Blackboard. But once you’ve got it you know, you’ve got it for life. The cost for anyone in management to contemplate changing tools now, it’s just impossible. And that’s a shame because it’s not like it’s being used, it’s just expensive (quote from a respondent at Suburban University).

This study investigated how selected Australian universities evaluated and adopted various learning management systems in their teaching and learning programs, given claims of uncritical evaluation, problems and cautions in the Australian (Alexander and McKenzie, 1998; Brabazon, 2002; Yetton et al., 1997) and North American (Berg, 2002; Noble, 1998b) higher education literature. Ironically, universities charge large amounts of money teaching their students to develop competence in critical analysis, yet some studies have claimed that they were deficient in critically analysing their own decisions (Brabazon, 2002; Yetton et al., 1997).

This important question has received little attention in the higher education literature, despite the high visibility and costs of these decisions. Although limited theoretical explanations have been proposed by various researchers, such as Yetton et al. (1997) and Brabazon (2002), these matters have not been the subject of published empirical research to date. This thesis therefore makes an important contribution to the higher education literature by answering the following research problem: *how did selected Australian universities evaluate and adopt various learning management systems in their teaching and learning programs, given claims of uncritical evaluation, problems and cautions in the higher education literature?*

To assist with the examination of this research problem, four researchable questions guided field research in this area:

1. Which parties were involved in the evaluation and adoption of various learning management systems in selected Australian universities?
2. What was the process and evaluation of these systems?
3. How did the evaluation and adoption of these systems impact upon various university outcomes?
4. How did various internal and external factors influence these parties, processes and outcomes?

A grounded theory methodological framework was employed throughout to promote broader sociological explanations than other studies constrained by functionalist theoretical frameworks (Yetton et al., 1997). Qualitative case studies utilising semi-structured interviews and document analysis were conducted at three Australian universities. The findings of this analysis were written up in three case study narratives (chapters three to five) and an analytic cross-case analysis (chapter six). Semi-structured interviews and document analysis at the field level were undertaken as an additional source of data to verify emergent grounded theory.

Chapter six contains detailed responses to each of the four research questions, supported by reference to the higher education and institutional theory literatures summarised in chapter one and the appendices. A grounded theory of uncritical decision making (Figure 57) was also developed in response to this study's research problem, the substance of which was verified by field level interviews and prior cross-case analysis. It was argued in this same chapter that this model may be capable of application to other Australian and North American universities, given variation across the cases and corroboration between various data sources. Generalising to the sector at large has never been a strength of qualitative analysis however (Eisenhardt, 1989), nor an explicit aim of this research.

Identification of the core category 'falling behind' became the primary basis for this study's major contributions to the higher education literature. This core category arose in all three cases, the Australian higher education literature, and was even observed in North American and European higher education literature. Further information relating to this core category and the process model built around it are found at the end of chapter six.

The next sections of this final chapter summarise briefly the major and minor contributions to the higher education and institutional theory literatures.

## **Contributions to the Higher Education Literature**

The research problem for this study was drawn from analysis of the higher education literature. As a result of empirical and theoretical analysis addressing this research problem, major and minor contributions to this literature have been identified, the details of which are found in chapter six.

### **MAJOR CONTRIBUTIONS**

- Development of a grounded theory explaining how uncritical examination and adoption of various learning management systems can and did take place among selected Australian universities (Figure 57). The explanation proposed is considerably broader and empirically grounded, compared to current theoretical explanations proposed to date (e.g. Yetton et al., 1997).

### **MINOR CONTRIBUTIONS**

- Identification of the roles played by senior management in selected Australian universities in the evaluation and adoption of new learning management systems, particularly from 1996 onwards (Figures 38 to 40); and
- Provision of a detailed case study of uncritical decision making involving a new educational technology (chapter three). This case differs from other research cited in chapter one as it has recorded the interests, agency and resistance of various individuals involved in institutional change processes within an Australian university, yet also highlights the relationships between these micro intraorganisational interactions and the broader field-wide dynamics of the Australian higher education sector in which they are embedded.

## **Contributions to the Institutional Theory Literature**

Institutional theory was used in the early stages of this research project as the main conceptual framework, but was later discarded in favour of a grounded theory approach. During data analysis however, opportunities emerged to contribute to this initial theory. During a review of the institutional theory literature in general, and institutional change literature in particular, a number of

opportunities were identified for minor contributions to institutional theory (Figure 73). Detailed justification for these contributions are located in the appendices of this study.

## **MINOR CONTRIBUTION**

- Development of an empirically-grounded process theory of change which links the activities of key individuals with broader field developments, and illustrates both the constructive and reproductive perspectives of institutional theory (Figure 57). It is recommended that this theory be developed and refined further however, through further research drawing primarily on an institutional theory and not a grounded theory conceptual framework.

There are also important implications for public policy and university decision makers flowing from this research. The next two sections outline several important implications for each of these domains.

## **Implications for Public Policy**

There are several implications flowing from this study for public policy. First, the operation of the core category ‘falling behind’ was found to be a product of the complex interaction of a range of external and internal factors in selected Australian universities. One of the primary conditions that led to the emergence of this uncritical antecedent was the introduction of a competition logic into the Australian higher education sector following reforms under the Labor government from 1983 to 1996, continued by the Coalition government after the 1996 election. Research funds in particular, were directed to those universities best able to compete. One of the results of these reforms was increased informal stratification of the higher education sector into three broad levels of universities, each with different missions and foci: the established/traditional universities, the technology universities with their focus on industry relevance and employability, and the regional universities who focused on being more student responsive (Marginson, 1997: 251).

One of the dysfunctional outcomes arising from this legacy of competition policy in Australian higher education, not unlike that observed in other organisations (Alvesson, 1990), is that the senior management of Australian universities appear to have focused more of their attention on managing

their institutional status and public image in order to gain access to external resources, than their traditional substantive research, teaching and community interests (Marginson, 1997).

Thus competition led to faster globalisation and technological change, and more research outputs; but it did not necessarily lead to better teaching and learning, or a higher quality of research. Competition was not focused on these outcomes. While data about teaching and research quality was partial, complex and contested, data on positional standing (while subjective) was transparent and widely discussed (Marginson, 1997: 254).

Increasing competition in the sector has also had the dysfunctional effect of encouraging a greater degree of institutional isomorphism, and not the much sought after institutional diversity that policy makers have sought more recently (Nelson, 2005a). Revisiting the rules and values that the Federal Government is encouraging indirectly through its current funding and regulations frameworks might help to arrest a lack of institutional focus on important substantive areas within the university, such as the teaching enterprise, particularly when new technologies become available.

We now know that a national (and global) higher education system modeled as a market game is narrowing rather than broadening the range of identities available...At a system level, less isomorphism and more collaboration can be achieved by modifying the intensity of competition, reversing the trend of the last decade. Fear does not provide a favourable climate for genuine innovation (Marginson and Considine, 2001: 252).

Second, policy makers need to be reminded of their potential to create and disseminate management fads through their decisions to fund and publish research on various higher education research innovations (Newell, Swan and Kautz, 2001b). In particular, they need to be aware of the influence of popular management ideas, disseminated through the popular press, upon their own research agenda (Barley, Meyer and Gash, 1988; Mazza and Alvarez, 2000). Policy makers should also consider the various commercial and political interests that can influence their research, and attempt to seek out researchers from a range of alternative research perspectives, including more critical scholars (e.g. Cunningham et al., 2000, 1998; Tapsall and Ryan, 1999).

Third, policy makers could demand more rigorous scholarship on the part of their research contributors, requiring explicit identification of theoretical and methodological frameworks, comprehensive reviews of the existing literature, discussion of associated limitations and delimitations, as well as rigorous testing of supporting evidence across a broad range of samples, such as Alexander and McKenzie's (1998) study. It is argued that these recommendations could provide universities with a greater capacity to conduct more informed and discerning evaluations of new educational technology innovations.

Finally, it is worth noting that governments themselves are not immune to a fear of ‘falling behind’, given increasingly global competition among nation states (Slaughter and Leslie, 1997). Many of the implications for management (below) are therefore also relevant to government decision makers.

## Implications for Management

In this research project, the Vice Chancellors in all three selected Australian universities were subject to a fear of ‘falling behind’ at different points in time. Field level interviews suggested that this phenomenon was also observed in other Australian universities. One of the conduits through which uncritical isomorphic influences flowed were the interpersonal networks of the Vice Chancellors. One of the risks in participating within these networks, observed at Suburban University, and to a lesser extent at Metropolitan University, was strong pressure to mimic the decisions of other universities in this same network. Universities lacking the internal capacity to challenge and resist decisions emanating from these networks can be at risk of adopting changes that are not always in the technical interests of those affected by these changes, particularly if the Vice Chancellor becomes “committed and enthused” (Mark, field respondent) about this change.

This study also raised the importance of senior management and central decision makers understanding what it is they manage. Many respondents in universities in this research noted that promotional mechanisms traditionally favoured those with a background in research and not teaching. Unless those responsible for managing the teaching enterprise have a general appreciation of various education frameworks, and a personal knowledge of their application in their particular educational context, they are disposed to either make ignorant decisions (as alleged by field respondents), or copy other decision makers outside the university (as occurred at Suburban University).

There are also a range of recommendations for university managers confronted with new educational innovations, drawing on Pratt (2005). It is suggested that university managers facing pressure to adopt new organisational practices, could demand high quality evaluations of programs before they are adopted (Slavin, 1989: 757; Birnbaum, 2000).

One of the most important reasons for the continuing existence of the educational pendulum is that educators rarely wait for or demand hard evidence before adopting new practices on a wide scale. Of course, every innovator claims research support for his or her methods; at a minimum, there is usually a “gee whiz” story or two about a school or district that was “turned around” by the

innovation. Alternatively, a developer may claim that, while the program itself has not been formally evaluated, the principles on which it is based are supported by research (Slavin, 1989: 753).

Slavin (1989) claimed that educational institutions could ask the following three questions when evaluating new innovations:

- a) Has the group using the program been compared to a comparable control group?
- b) Did the post test assess objectives that were being pursued equally by experiment and control classes?
- c) Was the program evaluated under realistic conditions over realistic time periods? (Slavin, 1989: 757).

Second, university staff could be trained to appreciate the faddish nature of many management innovations (Abrahamson, 1996a: 279), while staff development should shift from a focus on what is new to what works in practice (Slavin, 1989: 757). Finally, controlled pilot programs could be used to test new innovations on a small scale before full implementation across the wider university (Slavin, 1989: 757; Birnbaum, 2000), particularly when there are contested claims relating to core promises associated with their adoption.

## **Suggestions for Further Research**

This study was conducted within the specified analytical delimitations outlined in chapter two. The first of these delimitations was that only three out of 40 Australian universities were researched in reasonable depth, although additional field interviews and documents were analysed at a field level. Whilst the higher education literature and field interviews suggest that the findings of this research are capable of generalisation to other university contexts, this is a claim best tested by future researchers. Further, as a result of locating within the Australian higher education sector, there might be further scope for testing the 'falling behind' grounded change process model in other non-higher education contexts, particularly those operating under a strong competition logic.

A second major delimitation of this study was that this research was located primarily within a grounded theory methodological framework. Opportunities, therefore, exist for other researchers either to reinterpret the case study findings of chapters three to five within another relevant theoretical framework, or to explore other relationships between institutional theory and the grounded theory developed in this research. The grounded theory developed in this thesis requires further development, testing and refinement through an explicitly institutional conceptual framework before more significant claims can be made about the standing of this theoretical contribution. Two



other theoretical issues that future researchers might also consider are the relationships between institutional identity and institutional change, and contingency theory and institutional theory (particularly as they have been conceived within the 'falling behind' model produced in this research).

## **APPENDICES**

## **Appendix One: Validation of Grounded Theory through Field Interviews**

Chapter six of this study addressed the four major research questions of this study, with reference to empirical research, higher education and institutional theory literatures. The end of this chapter then drew together these discussions to address the major research problem through the development of a grounded theory, following suggestions from the grounded theory literature.

This appendix item reviews the explanations of different field respondents in relation to this study's major research problem. As an additional data source to interviews conducted and documents collected at the three case universities, these interviews offer further support to the grounded theory developed in chapter six, particularly validation of the core category 'falling behind', and insistence on the importance of recognising the moderating influence of a lack of educational expertise among many university decision makers. It also suggests that the 'falling behind' process model from chapter six may be capable of extension to other Australian universities outside the three selected universities reviewed in this study.

The next section introduces the nature of this field evidence, and is followed by a short summary of the major views proposed by these respondents. The end of this appendix item then discusses the implications of this material for this study's major research problem and grounded theory.

### **NATURE OF FIELD RESPONDENT EVIDENCE**

Similar to interviews conducted at the three Australian case universities, this study also employed semi-structured interviews with various field level representatives, in order to understand broader field level dynamics operating in the Australian higher education sector. Field respondents were selected on the basis of reputation, either from recommendations made by participants in the field at relevant conferences, by respondents in university case studies, or by this researcher's own initiative, following perceived leadership in the higher education sector or participation in novel ventures that were relevant for this study. Further details of the selection criteria and nature of this data are located in chapter two.

Eight field level respondents were interviewed as part of this study, as indicated in Figure 60. Four of these respondents had particular expertise in distance education, with two of these respondents (Lachlan and Ashley) serving as editors of a reputable distance education journal. The composition of this group was therefore slightly biased towards the inclusion of a distance education perspective, given the dominance of non-distance education perspectives in the three case studies.

**Figure 60: Field Respondent Backgrounds**

No	Respondent <sup>38</sup>	Background Information
1	Stephen	Professor of Education
2	Mark	Professor and Pro Vice Chancellor of Teaching and Learning in a major distance education university.
3	Lachlan	Associate Professor in Education (including distance education)
4	Ben	Associate Professor in E-Learning and senior manager in an international E-Learning program
5	Vanessa	Director of an international E-Learning program
6	Sarah	Experienced distance education academic and senior manager in a traditional university
7	Ashley	Experienced distance education academic and senior manager in a regional university
8	Freddy	Australian Federal Government representative

As was argued at some length in chapter two, the methodology for this study has been adapted from grounded theory approaches to data analysis. Although research questions were identified at the beginning of this study, and have been referenced throughout, particularly in chapter six, field work was conducted in such a way as to allow respondents the opportunity to shape this study's major findings and theory development. One consequence of this grounded approach was that much more information was collected than was able to be reported in this study, for case and field respondents alike. The above field respondents were therefore asked a series of questions about a range of topics, some of which are not written up in this appendix item, due to scope and space limitations. This appendix item has therefore reviewed respondent answers in relation to this research study's major research problem: *how did selected Australian universities evaluate and adopt various learning management systems in their teaching and learning programs, given claims of uncritical*

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<sup>38</sup> All names noted in this table are alias' codes to protect the true identity of these respondents.

*evaluation, problems and cautions in the literature?* The next sections of this appendix explore these respondents' personal assessments of this issue.

## **UNCRITICAL EVALUATION AND 'FALLING BEHIND'**

During the 1990s and early twenty first century, Australian universities underwent significant change, discussed in chapter one and six. The adoption of business-like approaches among Australian universities was argued to have led to a premium being placed on institutional status, resource power and growth, over and above the traditional public service functions of the university. This shift in institutional priorities led to the self-realisation of the institution becoming an end in its own right (e.g. the institutional ambition category identified in chapter six), and was reinforced by a shift in values ("general shift in the attentive culture"), structures ("professionalisation of budget functions") and personnel ("more professional management").

I think what we've seen is a shift into more corporate and business-like approaches. ...It's certainly moved to more business-like approaches that are essentially budget, or bottom line, perhaps not in the strict business sense of surplus and profit and market share, although that does come into it, but bottom line none-the-less in that it's about, it's probably about institutional status and resource power, and program goals in your budget. And I think growth has been one of the bottom lines actually that's been quite commonly felt. You know expanding budgets, expanding revenue basis, and student numbers, desirable in themselves. ...So there are business bottom lines of a kind, and there's certainly business-like practices with professionalisation of budget functions and with the transition of academically trained executives into more professional management people.

But it's also been achieved by, I think a shift in, a more general shift in the attentive culture which has made the self-realisation of the institution the primary goal, rather than knowledge or public service or in any of the other, like specific and defuse functions that have been attached to universities, and they have an enormous number of goals and purposes attached to them. But the institution as an end in itself has become more, and in that sense, a kind of quasi-firm, has become more important as a perhaps, as the dominant affect if you like, for institutional organisation (Stephen).

Stephen argued that one of the consequences of this shift is that universities are now more likely to imitate their competition on issues that impact upon their institutional status. Although there was acknowledgement of greater mimetic isomorphism (DiMaggio and Powell, 1983) among Australian universities following these changes, it was claimed that this was limited to managerial decision making and not the broader academic enterprise.

Now one of the things that that's done, is it's fostered a habit of imitating the competition to a large degree, although you know, you get people who differentiate themselves selectively and sometimes, these things are quite novel, but that's fairly rare....So I do think these are conforming institutions in a way that they weren't, but I don't know whether academic work per se is necessarily more conforming. I would be really... I don't think the evidence is clear cut to even suggest that (Stephen).

Other respondents agreed that universities and their Vice Chancellors had placed increased importance on institutional reputation over the traditional functions of the university. For example, Mark claimed that when university decisions involved an opportunity for institutional repositioning and competitive advantage, particularly during a period of complexity and uncertainty, “critical analysis doesn’t always get done”.

Researcher:

What would your assessment be, in terms of the way that universities made decisions about this, in terms of the process they went through?

Mark:

I think that in most cases, the process of strategy formation was very much emergent. It was something that evolved, and that’s perhaps understandable given the complexity and the uncertainty. Many people saw this as an opportunity to gain strategic advantage for their institutions. Many VCs saw that as something significantly important. If there’s an opportunity for institutional repositioning and competitive advantage, then critical analysis doesn’t always get done. If the VC becomes committed and enthused, then the naysayers aren’t necessarily very popular.

Field respondents were therefore asked about the extent to which they observed the VCs of other Australian universities making decisions on the basis that they were ‘falling behind’, a direct threat to their institutional reputation and external legitimacy. Several of these field respondents (Mark, Stephen, Lachlan and Ben) claimed that they observed this same phenomenon in other Australian universities.

Researcher:

One of the things that’s come up for me so far in some interviews is this concept of ‘falling behind’. Universities seemingly looked at the environment and saw other universities making gains ahead of them. There was this fear that somehow... they’d be left behind....Is that a concept that you’re familiar with, as far as what you’ve seen in the industry?

Mark:

Oh Yes.

Researcher:

... how widely do you think that is?

Mark:

Yes, I think that it was a phenomenon that I observed. I know that Katriona, the VC at Gum Tree University, was one of the earliest VCs into the field. Didn’t necessarily translate into early mover advantage for Gum Tree University, but she was very keen, started putting money in very early on. And I know a number of her colleagues, as Vice Chancellors, began to panic. ‘We need to do this so that we are not left behind’. That’s absolutely true. Later on of course, these things tend to be cyclic, later on, again using my own university, even though we started early, there was never really the will to make it a whole-of-institution approach, which meant that we began to fall behind.

Just as it was argued in the case of Metropolitan University, institutions which invested early in new technologies were still capable of ‘falling behind’ when a “whole-of-institution” approach was not observed. Stephen agreed with this proposition, claiming that “mass unevenness” could not only

lead to a sense of ‘falling behind’, but also “looking silly” relative to other universities, particularly other Australian universities.

You know as I said, I think Australian universities have been a lot into ICTs, and done a lot, but still mass unevenness with a lot of areas where they’re just behind the game, they’re just not looking at what they can do. And once you know, there is a critical mass thing with modernism, once enough people do it, you’ve just got to do it or you look silly, apart from anything else. ...So yeah, more unevenness and a sense of being left behind. But left behind relative to what? Well left behind relative to each other. The international examples don’t as yet impact much directly, although I think we are going to have more serious competition from foreign providers long term (Stephen).

Lachlan argued further that this pressure not to ‘fall behind’ was a factor in the adoption of learning management systems, such as WebCT and Blackboard. This peer pressure, in turn, created a bandwagon affect (Abrahamson and Rosenkopf, 1990; Abrahamson, 1991; Abrahamson and Rosenkopf, 1993, 1997; O’Neil, Poudier and Buchholtz, 1998; Abrahamson and Fairchild, 1999; Mazza and Alvarez, 2000; Staw and Epstein, 2000; Fiol and O’Connor, 2003) following the prior adoption decisions of other organisations.

If you have, if you don’t have some sort of online presence, you will be seen as living in the dark ages. If you didn’t have a learning management system operating in your university of some sort, you’d be seen as someone who is behind everybody else (Lachlan).

Well I think, as I’ve already hinted, in the early days it was the bandwagon effect. I think a lot of Universities also latched onto the emergence of the LMS industry, the Learning Management System industry (Ben).

When asked specifically about the likely consequences of ‘falling behind’, Mark claimed that although issues of institutional and personal image and reputation were certainly involved, these factors were rather instrumental at a time of intense competition for high quality students.

Researcher:

We spoke earlier about many universities having a fear of being left behind. What consequence did they fear in being left behind?

Mark:

A number of things. A lot of it was about image and reputation. Gum Tree University was selling itself, for example, as the Innovative University, and the VC was very keen to be seen as innovative, at least in form if not in substance. So it was partly about image, it was partly about institutional, probably VC reputation. But ultimately it fed through to concern about student numbers, at a time when there was a lot of competition for students, and particularly for the best students. There was concern to be seen to be trendy, forward looking, successful, on top of current agendas, and the place to go. So it was part of a whole range of things to do with institutional positioning.

Once the bandwagon pressure to avoid ‘falling behind’ arose in higher education, uncritical analysis arose in the form of a preoccupation with the selection of a particular vendor’s learning management platform instead of examining the pedagogical implications of adopting these new

technologies in the broader teaching enterprise. One respondent argued that he observed this phenomenon overseas as well as in Australia.

A lot of the universities in my experience, and not necessarily in Australia, have been too hasty to jump onto online learning as a saviour, as keeping up with the crowd, as well as an alternative form of delivery, without carefully considering what are the implications and what are the technologies that are required, and what are the implications of educational delivery as far as that kind of technology is concerned. I don't think that many people have said now and looked at the pedagogical implications, the learning-teaching implications of using online learning, and therefore the first question is they, have tended to ask is "which one shall we go with? Blackboard? Or should we go with Web CT" (Lachlan)?

## UNCRITICAL EVALUATION AND IGNORANCE

When asked specifically to comment on why so many Australian universities were uncritical in their assessment of learning management systems, Lachlan claimed that key decision makers were ignorant as a result of a lack of education, at the same time as feeling pressure to avoid 'falling behind' from other competing Australian universities.

Researcher:

If you were to proffer an explanation for why so many Australian universities you know, weren't critical in their assessment of it, I mean is that the way you were going, in terms of a focus on the technology and not the organisation? I mean it starts with a strange, rather ironic idea for me, because universities would claim that they teach critical thinking to their students, but some would argue that they don't do themselves what they teach their students. I mean how can that kind of situation happen?

Lachlan

...I think some of the reasons are because of just a lack of education amongst people who are making these decisions. And there is a lot pressure as well from outside agencies for getting on with it very quickly.

Researcher

Can you think of any particular agencies that come to mind when you say that?

Lachlan

Well competing organisations I'm thinking, competing organisations, you know, not necessarily any one in particular. So one university says, "oh well look the other ones got that you know, why haven't we got that?" "Why haven't we got our courses online?"

Mark agreed that some key decision makers were unbalanced in their mix of professional skills. Whilst these university decision makers may have had very strong business skills, many of them appeared to be lacking in their knowledge of education and technology in such a manner as to render them unable to critically assess broader field changes from an educational and technological point of view.

I think that there was a lot of naivety, people who have business skills knew nothing about the technology or the education. Some leading academics saw dollars for the grasping and it was never going to be realistic. Very few people had the total mix of skills that were needed. Very few people



early on wanted to ask the really tough questions because, frankly, there were unpopular. And I remember that I had quite a significant, very strong disagreements with the person I reported to because, maybe he was more entrepreneurial than me, but he saw the prospect of the virtual university. I always thought that we didn't have the business case. We didn't indeed have the educational case and we, thinking back to '97, I wasn't even sure we had the technologies to make it viable (Mark).

The ability to critically assess educational and technological issues became even more important when technology providers attempted to sell their money making solutions to university decision makers at a time of increasing resource pressure on Australian universities.

There were a lot of snake-oil salesmen around at the time. I remember in '97, '98, I probably had two or three meetings a week with commercial parties who were trying to get a stake of an emerging industry. There were a number of, I think Foxtel or Optus, they were in startup phase, they were talking about education channels, they were looking for content. A lot of technology providers, a lot of people were thinking about trying to sell universities good ideas that would make them a lot of money. So, there was a prospect of a fair bit of money, being made. That was the story that was being sold, and I think quite a few senior university administrators were quite naïve because they saw this as an opportunity for lining the institution's pockets (Mark).

When asked about the form of education that would be required to avoid the kind of ignorance that led to uncritical evaluation among university decision makers, Lachlan suggested exposure to key literature and sources of practice would suffice in the absence of appropriate training courses. To support his suggestion, Lachlan contrasted the approach adopted by decision makers at the University of Southern Queensland (USQ) with other traditional universities.

Researcher

You also said lack of education. Do you refer to a lack of a particular kind of education when you say that?

Lachlan

Well yes, I mean naturally, because people would dispute me. "What do you mean by that?" I mean, I think a lot of what I'm saying now is the kind of training in education that policy makers in the business have not had. And it's a matter of course because you can't, I mean that's the way the world is. You cannot simply sort of pick everybody up and send them to school, and which program would they go to? So key people you know, if they haven't exposed them to key literature and key sources of practice, are likely to make the wrong decisions. And the USQ example that we were talking about is a good case in point. There were key people in positions of decision making who had not necessarily the right exposure, but had the exposure to issues surrounding learning and teaching generally, and issues surrounding learning and teaching in the flexible learning mode. But I cannot say the same for many other universities, especially the traditional ones, where similar sorts of expertise were not there (Lachlan).

### **Ignorance and University Promotion Policies**

A significant issue that contributed to an ignorance of educational issues among university decision makers were the promotion policies at work in many Australian universities. Lachlan, Ashley and Ben claimed that university staff were appointed to various positions of responsibility they lacked a

capacity to manage. For example, Lachlan claimed that many academics were appointed to run academic development units without a background in learning and teaching. These promotion decisions were argued to then shape the development of these units.

So you get people, and in the '80s, in the '90s as I saw it, when the Australian Universities started looking at teaching and learning, they put people in positions of running staff development units, academic development units, who did not have the kind of education that was possible, that people such as [name deleted] had. So there were people in positions of power, as far as academic staff development in teaching and learning was concerned in units, in various universities throughout Australia, had come from various other disciplines, but had not studied you know, vigorously the area of learning and teaching. And I think it showed in how places like [name deleted] developed and other places developed (Lachlan).

This same phenomenon of university decision makers not understanding what they were managing was also observed among the top levels of management in Australian universities.

...The whole way in which senior managers get promoted up for the last ten years, has resulted in people getting to the top who don't understand what it is they're managing. See the difference between the way I work in areas where I've been, and where a lot of managers work, is that I think if I'm managing someone who is responsible, for example in maintaining an LMS, I need to have enough understanding of what that person is doing that I know when things go wrong, how they're going to go wrong and how you fix them fast. Most managers, senior managers in institutions haven't got that knowledge. So they could make diabolical decisions, as RMIT did with its student management system, that can even bring an institution to its knees, and then say "well I didn't understand". Well ignorance is no excuse (Ashley).

When Ashley was asked to account for how a university could end up employing people to manage processes they did not understand, he explained that it began with the person at the top of the university. Ashley argued that most Vice Chancellors did not have an educational framework to manage their university's educational enterprise, which was then "reflected all the way down" throughout the university.

Researcher

...I understand what you're saying in terms of the promotional path and people failing to miss that. Stepping back a little bit broader, how is it that that can actually come about in an institution, that you have that situation where people manage processes that they don't fundamentally understand? I mean at an organisational level, that appears to be crazy!

Ashley

Yes. And the reason it happens is that from the top, you've got that situation for quite a myriad, and I'm not sure what the situation is now. Most of the Vice Chancellors don't have that knowledge...So if the top person, if the majority of top people are like that, it's going to be reflected all the way down.

Ben supported this proposition by arguing that this lack of educational training was also evident at the level of the individual lecturer in the faculties. These academics were usually highly trained in their disciplinary field, but were then asked to teach students without having a theoretical

foundation to guide their efforts. Ultimately, lecturers without educational training, just like their senior managers, mimic others in their personal networks, particularly past teachers.

...There aren't that many lecturers in Australian Universities, of any Universities for that matter, who are well versed in educational theory. Not many of us have had any sort of formal training in the art of pedagogy. So you've probably done a degree in Engineering or Physics or Economics and you might have a PhD in that area, and lo and behold the next thing you know you're going in front of a class of 200 students right, and you've got to impart your knowledge. And they would do exactly the same thing that has happened to them when they were students (Ben).

A lack of education training among university decision makers became critical when new educational technologies such as learning management systems arose. In addition to bandwagon pressures flowing from other universities' adoption decisions, particularly when a university realised that it was 'falling behind', some universities allowed large software vendors to determine their educational choices instead of resolving how the technology might meet the requirements of their educational enterprise.

I think a lot of universities have just almost outsourced that E-learning thing because they don't understand, to people they think are the experts, but in actual fact they're wrong. Now, so you've got the first phase the bandwagon affect, then they've got, you've got the sort of outsourcing phase where they said "well let Web CT and Blackboard handle it" with some exceptions (Ben).

One of the major challenges associated with outsourcing learning decisions to vendors is that the educational frameworks underpinning the design of their LMS platforms can be inappropriate for the learning contexts within which they are employed.

...Web CT grew up as a result of one person sitting down and creating some tools for himself you know, to teach a course. And that's not the way to really develop a learning management system. One would argue, that people are now after so many years of exposure beginning to say "hey wait a minute, you know let's look at how learning and teaching operate. Let's see how learning and teaching takes place and then we go and build something that will support that"....The best place to start in my, pedagogy type person, as an educational designer type person, is to go back and look at what is the nature of the operation that we are getting into now? How do people learn? Where do they learn? What do they want? Where do they want to learn? And then you say "alright, lets go and build a kind of tool that will support that" (Lachlan).

Another field respondent agreed with this criticism of these large platforms, and suggested further that vendors were driven too often by industry ambitions rather than student learning requirements.

And of course you've got the big Leviathan WebCT and its rival Blackboard, who have come to dominate the scene. I am very, very sceptical of both these products. And it's not just me, because I've been attending E-learning conferences now for years and I've yet to go to a conference and hear someone say something positive about WebCT or Blackboard. And I think the problem lies in the fact that these systems are not learner-driven, they're not faculty-driven, they're industry-driven. You know it's very hard for you to say to one of these big LMS companies, "Look, this is what we want", because they will generally turn around and say "Well, this is what you can have". "You know well, we might consider giving you what you want but not until next year" (Ben).

## **Ignorance and Academic Turf Wars**

Another major factor that contributed to negligence among university decision makers was an academic turf war between academics from computing/multimedia and those from distance education backgrounds. Academics from distance education argued that academics from multimedia and computing were too uncritical and overly-enthusiastic about new technology, and failed to appreciate the ways in which these technologies had been historically theorised and developed within the distance education literature.

The 'born agains', or new people that adopted this technology quickly, tended to pour scorn on those from a distance education persuasion, and re-wrote everything in the field. New research was thus conducted that failed to draw on previous work in distance education (Sara).

Other academics from distance education went further, and suggested that these groups were not only ignorant of the long history of research conducted within their field, but actually "ridiculed" and "defamed" academics from distance education.

I mean the multimedia people have gotten really stuck into the distance education people in a kind of a form of arrogance, what I call the arrogance of ignorance. You could make outrageous statements when you have no knowledge. And if the people you're making them to have no knowledge, you won't be pulled up on how ridiculous they are. And amongst the multimedia people, there's a great ignorance of the literature of distance education people, less so now, but you could go to institution after institution where you have that kind of battle, where the multimedia people just ridicule the distance educators. "They're only interested in correspondence education"... that sort of stuff, defamed publicly, and that shouldn't have happened, that's unprofessional (Ashley).

One of the claimed consequences of this phenomenon was that research into online learning failed to build on compatible research completed years earlier in the field of distance education, thus leading to many avoidable mistakes. It was argued that this behaviour was caused, in part, by ignorance, a lack of education, and arrogance on the part of these computing-orientated academics.

But the people who have suddenly come on the bandwagon of online learning didn't want to have a bar of that. So we are doing the same thing all over again. We're making the same sort of mistakes that we made 15 years ago. What is different about distance education and online learning? The technology, just that, just that. The issue of the separation, the uses of time and space, distance are the same. But you know people just don't want to listen. Naivety is number one, lack of education is number two, and arrogance number three (Lachlan).

One academic from a multimedia background, without being informed of the above arguments, claimed that online learning had been implemented poorly in the vast majority of Australian universities. The criticism of 'old' teacher-centric educational paradigms was one example of an issue that had been discussed at length by academics from distance education.

Ben

I now think that we're on this sort of firm upward trajectory in terms of what E-learning has to offer, with the caveat that it's E-learning done properly. And if I'm blunt, I think the vast majority of institutions don't do it properly because they're still very much operating in the old paradigm.

Researcher:

And that's the teacher-centric way?

Ben:

Very much so, yeah. And what they call E-learning is essentially, you know, it's HTML page turning, it's drop boxes for lecture notes and that sort of stuff, rather than try and set up spaces for students to interact with one another and with the content.

This turf war between these two groups of academics was claimed to have arisen out of intra-university and field level developments in Australian higher education. At the field level, the Australian Federal Government brought about a number of reforms that led to Distance Education Centres (DECs) being established and then later absorbed into selected universities. The effect of these DECs was to centralise distance education expertise in a small number of providers away from the majority of Australian universities, while leaving non-DEC distance educators relatively unsupported in their own institutions.

I mean the difficult thing in looking at that is at the same time as this was happening, you also had the collapse of distance education through the establishment of the Distance Education Centres, and so you went from forty three providers down to about eleven or twelve...The DECs system was set up in 1989 I think. And so you had the DECs system established and pulled undone. Now that, the effect of the DECs system, the establishment of the DECs system, was to pull distance education back into those larger providers. And it gave a voice to those larger providers in terms of what they were doing...So you've got that phase 1989 through to say 1994, and then from 1994 the world wide web is starting to emerge, but you've got the effect of the establishment of the DECs, and so you've got the concentration of people who legitimately could practice distance education, and people like myself. And there were a whole cohort of us who were marooned in the non-DECs because of the failure of the government policy in that area (Ashley).

At the same time, senior managers in universities listened to people who worked with computers instead of those from a distance education background, as distance education was often perceived as print-based 'correspondence education'. Although people from a distance education background had been involved in the use of new online technologies from the same time as those from a computing background, the latter were more visible in many institutions (as a result of the above field-level changes), particularly among universities with a strong on-campus teaching orientation.

...What's happened is that senior managements of institutions have gone to people who have been working with computers to be told what to do with online learning. Now distance education in the '80s was all print-based. I mean we started to work with technology, but in that era, just about all of it was print based. And so the VCs didn't go to distance education when the shift went into online learning because they thought of distance educators as people who were involved with correspondence education. That was because of their myopia, not because of what was happening in distance education, because distance education started to move into that about the same time as people on campus. But the people on campus, all they were doing was computer based education, you know micro computers and so on. They had nothing else they were doing. But that made them a bit more visible when it came to technology. And so the effect of the move to flexible online learning was to bring two cohorts of innovators into the same patch. And in the battle that went on, the multimedia people won because of that phenomenon I described. And only in institutions where you

didn't have the multimedia people already working in that patch, did the distance educators maintain their ascendancy (Ashley).

Whilst these changes shaped the influences of distance educators across the sector, it was also suggested that leading academics from distance education could have also done more to inform new adopters how they might have considered using emerging learning management systems within a distance education framework.

I think that you know, people who have been protagonists and leaders in the field have probably something to blame. They have not done enough to get the word out to the novices, because this is the way of the world....It is not good to say that you know, we distance educators have known it all (Lachlan).

One of the claimed consequences of these changes was that it made it more difficult for academics from a distance education background to access government funding and projects.

...It was manifested in a different way in institutions that didn't have distance education. In those institutions, you had people who grabbed the national stage and made it more difficult for the distance educators who were making ground in their own institution, because they didn't get funding, they couldn't, they didn't get the projects, and the nationally funded projects would not go to them because the multimedia people were grabbing the projects (Ashley).

Where academics from distance education backgrounds were present and active in these universities, it was claimed that they were able to integrate online learning technologies into educational programs in a way that was "seamless".

So to go back to where we started the point, if you look at distance education and instructional, I mean distance education and online learning, it is not vastly different I think. The only thing that is different are the tools and technology. I wouldn't consider the processes of designing and development to be very different from one another, and I think [name deleted] has been able to make that seamless (Lachlan).

## **Ignorance and US Hegemony**

Another major contributor that encouraged ignorance and adoption among Australian university decision makers was the poor quality of literature in support of online learning technologies.

Researcher

I mean you mentioned kind of vaguely some influences, but who's encouraging people to get on the bandwagon?

Lachlan

Who, the impetus from this is coming from several directions you know. I think the literature is to blame. A lot people see it in the literature, therefore you start using it. Suddenly you read something and you say "oh this is an interesting idea", so you [start] proliferating it, you start using it, but there's not much you can do about that. Because even, to some extent, there are guardians of what gets published, but you know other things in the open source environment, anything can get published and people are free to pick up on whatever they want to pick up.

In addition to several major interests already identified in chapter six (e.g. vendors, other universities and the Australian Federal Government) some field respondents noted the way in which the US reinforced an ignorance of prior work completed in distance education, particularly in Australia. One respondent claimed that the US adopted a very narrow conception of online learning as distance education, rather than recognising distance education as a much broader field established many years earlier. Once this view became established in the US, it was difficult for academics in Australia to challenge, and has therefore resulted in the dissemination of a new educational fad.

Now distance learning is different, because distance does not talk about the technology, it talks about the mode, it doesn't talk about media type, it talks about the mode. It's a different operation, it's a different environment. So the only sustainable terminology is flexible learning or distance learning. You know terms like E-learning, P-learning, M-learning are nonsense, they are fads you know. We get carried away by these fads, because other people more powerful than us are using it.

...And I think not only we, but the Americans are at fault too, because they suddenly found that there was the web, they developed the web, basically found the internet. So to them, online learning was distance education. Online learning equals distance education. We would say "no wait a minute, online learning is an extension, is a component of distance education, is a type of distance education. Hey man, distance education is much bigger and broader". But in America, the American juggernaut is so huge, it's so large, whatever it says goes. And Australia's voice is hardly heard (Lachlan).

Once this particular view of the technology and associated terminology became established in the US, it was claimed that this then created another source of external discourse pressures on Australian university decision makers. The consequence of these collective changes, together with the arguments of the prior section of this chapter, were that new technologies were not constructed as part of a long-standing broader debate on how students could be assisted to learn using alternative technologies.

Researcher

To what extent do you think Australian universities, or some Australian universities, were then influenced almost as a second round of the cycle by the American literature and experience?

Lachlan

That's true. So see, and I level the same sort of criticism against us as well. So suddenly we are picking up on the American terminology, and we are starting to talk about blended learning when we shouldn't be talking about blended learning, because blended learning means nothing. It's nonsense, it's just a fad. And also E-learning I think is a fad. You know we keep talking about E-learning and I'm guilty of it to. But what is E-learning? Do we talk about P-learning? Do we talk about B-learning for book? Do we talk about C-learning, classroom learning? No we don't, well sometimes we talk about classroom based learning. So this notion of E-learning is nonsense I think. But sooner or later we will have technology permeating all our learning and teaching processes, so there's no need to talk about E.

Other field respondents also observed the significant influence of the US in creating both hype and normative models that were influential in Australia.

There was a fair bit of push, fair bit of hype from the States of course. A lot of people were looking to the States for the models that were being used there (Mark).

When asked who was responsible for this ignorance in the US, Lachlan claimed that blame needed to rest upon the shoulders of the editors of key literature. Not only did he claim that they failed to adopt a comprehensive view of the distance education literature, but they also failed to consult, research broadly, and conceptualise.

Who's fault it is? Editors' fault. The editors did not take on a comprehensive view of what distance education comprises. Why? Going back to what I said before, because of their effect of exposure to what had been going on before. Why? They did not consult. They did not consult widely enough. They did not talk widely enough, they did not do enough research, they did not conceptualise (Lachlan).

In his interview, Lachlan provided a very recent example to illustrate his prior arguments about ignorance and US hegemony. In the extended quote provided below, Lachlan identified two similarly named texts, both claiming to be comprehensive in their content, however one adopted a much narrower view than the other. In the end, Lachlan admitted that this challenge was in fact part of a broader academic turf war within higher education.

This is a classic case of what I'm talking about. This just came out, four volumes, called *The Encyclopaedia of Distance Learning*, by a publisher called Idea Group Publishers in the US alright...And this publication which is hot off the press, just came out, is almost you know, ignoring exactly, a classic case of what you say earlier on. It ignores what we have known as distance education for a very long time, and suddenly now they come up with this Encyclopaedia of Distance Education. So the student who is coming on board now, would read this and say "uh, there you go, this is my Bible, this is distance education", and you have lost all of that...At the end of the day, what matters is that it goes into the bibliographies, it goes into the data base as the *Encyclopaedia of Distance Education*. There is no such thing, there is no other such thing. So the new student who is a PhD student, somewhere in some university is studying distance education, because not everybody's studying distance education, because it's a big fad in the US. You know some dorky university somewhere in the US has got a distance educational program and a student specialising in distance education, they will go to the Encyclopaedia, so it's like the blind man looking at an elephant. I mean which part are you going to touch, and that's your reality...Now this one has been put together by a group of those traditional distance educators. So here are two publications, one is called *Handbook of Distance Education*, one is called *Encyclopaedia of Distance Learning*. And you make your own judgment, and I will tell you, they are diametrically opposed, they're miles apart...

Researcher

I take it this one [pointing to the second book] is probably broader in its conception of education and distance education?

Lachlan

That's right, as we have known it in the past, what I was describing about..., moving onto course design and development and also including multi media, but something more comprehensive, something more realistic, and something more appropriate, appropriately placed I would say. Whereas these guys have suddenly come in, they've taken no knowledge from there, and developed an encyclopaedia. What the data bases, search engines pick up, words like handbook and encyclopaedias, so where do you go?

Jonathan



That's interesting. It sounds like a claim for academic turf in a way doesn't it?

Lachlan

It is, it is...but that's the way of the world.

## **IMPLICATIONS FOR GROUNDED THEORY**

Field respondents interviewed for this study appear to have confirmed many of the critical elements constituting the grounded theory proposed in chapter six. For example, the importance of institutional status as a primary institutional priority, particularly in a competitive marketplace for bright students. Under these conditions, it was observed that other Australian universities were also subject to the pressures of 'falling behind', a massive threat to their institutional status and external legitimacy. The consequences of universities 'falling behind' were that they would "look silly" and risk future student enrolments. These external pressures therefore encouraged universities to mimic their counterparts on issues that were seen to affect their institutional status and legitimacy.

Field respondents also observed that the adoption of new learning management systems became one such status issue. Universities felt bandwagon pressures to adopt following the decisions of other universities who had adopted either earlier, or more systematically across their institution. 'Falling behind' was, therefore, not a unique phenomenon found only among the three case universities discussed in this study.

Once universities decided that they needed to adopt new LMS technologies, it was claimed by field respondents that Australian universities were preoccupied with the selection of an LMS platform, instead of focusing on how they would be used within their educational enterprises. Such thinking was argued not to be uncommon during periods of uncertainty and threats upon the institution's status, particularly when the Vice Chancellor became "committed and enthused".

Field respondents also suggested that many university decision makers, from the Vice Chancellor, to heads of academic development units and individual lecturers, were ignorant of important educational theory that would assist them to understand what they managed. Without such educational knowledge to accompany their business skills, it was claimed that they were unable to evaluate critically some educational and technological changes, such as new learning management systems. Some university decision makers were argued to have even delegated these decisions to vendors supplying educational solutions that were not necessarily suitable for the particular educational contexts. Problems of management ignorance were claimed to have arisen also because

of academic turf wars between multimedia and distance education fields, enabled by broader field level shifts such as Australian Federal Government policy and US hegemony, particularly among the editors of US literature. Avoidable mistakes were therefore committed that could have been prevented, had new online learning technologies been conceived as a new medium for distance education, rather than a new technology and fad.

Although the field level views in this chapter have a distinct distance education bias to them, particularly explanations for management ignorance flowing from a recognition of their literature, these observations strongly supported the grounded model proposed in the last chapter. In particular, the core category 'falling behind' and intervening influence 'institutional educational expertise' both appear to be validated. Other internal and external contextual factors were also supported, such as Australian universities' susceptibility to mimetic isomorphism, the role of Australian Federal Government reforms, and the influence of other external intervening influences in this process. The decisions of other Australian universities, particularly competing universities, as a trigger for university decisions was also discussed within this chapter.

It is therefore argued from this appendix that the 'falling behind' grounded theory is capable of further application beyond the three Australian case studies discussed in this study. Further research would obviously be required to test the extent to which this model might hold in other more particular circumstances.

## Appendix Two: A Review of Institutional Theory

This appendix begins by defining institutional theory within the broader context of organisation studies. Several arguments are then proposed in support of institutional theory's capacity to support the investigation of the empirical research problem, introduced at the end of chapter one. This section is then followed by a broad review of institutional theory and its divergent historical development. Several dichotomies, tensions and new directions in institutional theory are then discussed, following which an argument is made for possible contributions to a number of ongoing debates within institutional theory. Finally, the empirical research questions from chapter one are linked to possible contributions to institutional theory, facilitating the opportunity for simultaneous contributions to both empirical and theoretical literatures.

### INSTITUTIONAL THEORY IN ORGANISATION STUDIES

It is not possible to understand individual or organizational behaviour without locating it in a societal context (Friedland and Alford, 1991: 232).

Early institutional theory can be found in the disciplines of economics, political science and sociology. Scott (1995) cites the early work of Hughes (1936), who originally defined an institution in the context of sociology as an “establishment of relative permanence of a distinctly social sort”. Such an institution was said to be comprised of:

A set of mores or formal rules, or both, which can be fulfilled only by, people acting collectively, in established complementary capacities or offices. The first element represents consistency; the second concert or organization (Hughes, 1936: 180; Scott, 1995: 8).

Institutional theory can be defined as a body of knowledge in organisation studies that attempts to explain the creation, maintenance and diffusion of institutions, “consisting of cognitive, normative and regulative structures and activities that provide stability and give meaning to social behaviour” (Scott, 1995: 33). These institutions may be spread to different settings by various carriers such as cultures, structures and routines (Scott, 1995: 33), and may operate and affect world systems and broader society, organisational fields and their organisational populations, individual organisations and actors (Scott, 1995: 59).

Society in the West has several central institutions — the capitalist market, bureaucratic state, democracy, nuclear family, and Christian religion (Friedland and Alford, 1991: 232). DiMaggio and

Powell (1983) claimed that the greatest institutional influences of the twentieth century however, were the state and the professions. These institutions among others, shape preferences, interests and behaviour (Friedland and Alford, 1991; Scott, 1987), as well as maintain them. Institutions also provide individuals with vocabularies of motives, or socially acceptable justifications for past, present or future acts or programs (Mills, 1940; Friedland and Alford, 1991). They can also be potentially contradictory in that they can act in opposing ways (Friedland and Alford, 1991; Kitchener, 2002; Lounsbury, 2002; Thornton, 2002; Townley, 2002; Seo and Creed, 2002) and therefore open up multiple institutional environments (Scott, 1991) and logics (Mills, 1940; Friedland and Alford, 1991) to individuals, with the potential to create divergent competing institutional influences.

During the last 30 years, institutional theory has been used to explore the ways in which institutions can fundamentally constrain and shape individual and organisational behaviour (DiMaggio and Powell, 1991, 1983; Meyer and Rowan, 1977). Zucker (1977/1991), influenced heavily by the work of Berger and Luckmann (1967), argued that when actors describe, enact and transmit a social reality to others, this social knowledge can become institutionalised and assume the status of an objective fact, or rule like status (DiMaggio and Powell, 1991: 9), especially when its origins are lost (Zucker, 1977/1991). This assumption of socially constructed reality, operating from individual to world systems of analysis (Scott, 1995), makes institutional theory quite distinct from other theoretical traditions in organisation studies.

Jepperson (1991) attempted to portray the relationship between institutional theory, as it has been applied predominantly over the last 30 years<sup>39</sup>, and a number of other frameworks in organisation studies in Figure 61. This figure illustrates the different assumptions of relative order and social construction underlying the most common theoretical traditions within this field of inquiry.

The horizontal axis refers to the extent to which social explanations are realist or allow for a socially constructed reality (further discussion of the ontological and epistemological dimensions of reality are located in chapter two). High social construction implies that units are '*constituted*', whereas low construction units are socially pre-given (Jepperson, 1991: 153-154). The vertical axis

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<sup>39</sup> A discussion of the dialectical development of institutional theory into old and new streams is discussed later in this appendix. Neo-, or new institutional theory, has been the most dominant application since Meyer and Rowan (1977), Zucker (1977/1991) and DiMaggio and Powell (1983).

refers to the level of analysis employed in the social analysis, referring either to individualist positions or higher ordered structural explanations. In low order levels of analysis, explanations are typically single level explanations that give micro order causes primacy over more macro orders. The opposite is true for high order levels of analysis (Jepperson, 1991: 154).

**Figure 61: Lines of Theory in Organisational Analysis**

		Featured Levels of Analysis	
		Low Order (Individualist)	High Order (Structuralist)
Degree to Which Unit Socially Constructed	Low Construction (Realist)	Actor &/or functional reduction attempts; neoclassical economics; behavioural psychology; most neoinstitutional economics; some network theory	Social ecology; resource dependence; some network theory
	High Construction (Phenomenological)	Organizational culture; Symbolic interaction	Institutionalism

*Source: adapted from Jepperson (1991: 154)*

Most theories outside sociology, such as neo-institutional economics, behavioural psychology and some network theory, are low construction (realist) and low order (individualist) (Jepperson, 1991). Friedland and Alford have argued that public choice theory and agency theory would also fit within this typological description (Friedland and Alford, 1991: 233). These approaches are premised upon the operation of rational individuals whose choices are the primary cause of societal arrangements (Friedland and Alford, 1991: 232) as they seek to maximise their own utility.

This functionalist perspective has been the dominant and overarching paradigm in organisational analysis (Burrell and Morgan, 1979; Clegg and Hardy, 1996; Miller, Hickson and Wilson, 1996), which views management as being “fundamentally concerned with rational decision making in order to facilitate the smooth running and goal attainment of the modern, complex, structurally and functionally differentiated organization” (Miller et al., 1996: 293). It is heavily influenced by the positivist approach (discussed in further detail in chapter two) and has leanings toward natural science searches for regularities and causal relationships among variables (Bryman, 1989: 249). This approach has come under heavy criticism in organisation studies however. It is claimed that functionalism emphasises coherence and consensus rather than conflict, dissensus and operations of

power (Clegg and Hardy, 1996: 2); ignores the role of the market as more than just an allocative system but also as a cultural system that generates and measures value, and shapes individual choices (Friedland and Alford, 1991: 234), including utility formation (Friedland and Alford, 1991: 233); as well as plays down the limited cognitive ability of rational economic man (March and Simon, 1958), forcing reasoned behaviour but not necessarily irrational decisions (Miller et al., 1996).

The interpretive approach or symbolic interaction perspective, often operating under constructivist assumptions of multiple social realities (Pidgeon and Henwood, 2004; Charmaz, 2000) (discussed in greater detail in chapter two), can be understood only from the perspective of its participants, as they are active in the construction of their world (Bryman, 1989: 250). The social world to the functionalist is an external reality beyond the individual (Bryman, 1989: 250). The interpretivist approach emphasises the need to understand the social world by obtaining first hand knowledge of the subject under investigation (Burrell and Morgan, 1979: 6), whereas the functionalist approach emphasises scientific rigour through systematic procedures in surveys, questionnaires, personality tests and standardised research instruments (Burrell and Morgan, 1979: 7). They are, in effect, competing paradigms (Bryman, 1989). The symbolic interactionist perspective (including many studies of organisational culture) tends to adopt a lower order of analysis, particularly toward the level of the individual.

Population ecology (social ecology in Figure 61) and resource dependence, as well as some network theory, are low construction (realist) but high structure, and acknowledge the role of the environment as an important cause in social explanations. Resource dependency theory stresses the role of environmental constraints on organisational interdependence as organisations attempt to secure resources necessary for survival (Orru, Woolsey Biggart and Hamilton, 1991). At its heart, it claims that organisations are not able to generate internally all their needed resources or functions and therefore must enter into transactions and relations with the environment to supply these (Gornitzka, 1999). Resource dependency theory assumes that organisations have strategic autonomy to negotiate resources in their environments in the interests of organisational survival and power (Pfeffer and Salancik, 1978; Friedland and Alford, 1991). Because there may be a number of actions and structures consistent with survival, the criteria used to make decisions and structures become important and thus lead to the consideration of internal power differences. Therefore this model allows for strategic choice (Child, 1972) and rational decision making (Aldrich and Pfeffer,

1976/2002) within a realist ontological framework (Jepperson, 1991: 154) (discussed further in chapter two).

Population ecology models were developed against the popularity of adaptive organisational perspectives, such as those represented under the strategic choice perspective (Child, 1972), which proposed that managers or dominant coalitions scan the environment and formulate strategic responses and adjust structure accordingly (Hannan and Freeman, 1976-1977/2002). Population ecology applies the natural selection model and focuses on the issue of fit with the environment (Aldrich and Pfeffer, 1976/2002). Attention is directed primarily on competing forms of organisation (Scott and Meyer, 1983/1991: 109-110), where most changes come through the replacement of one form of organisation with another through selection, rather than adaptation (Hannan and Freeman, 1984/2002). When applied to organisations, social change is not unplanned or random but Lamarckian (Hannan and Freeman, 1984/2002), in the sense that social change transforms rather than selects individual units. However the match between action and environmental outcomes is random, particularly with respect to the future value of changes. If there are diverse interests in organisations, it is claimed that power determines the outcomes (Hannan and Freeman, 1984/2002). Population ecologists claim that competitive isomorphism (DiMaggio and Powell, 1983) can occur as each organisation experiences common environmental constraints (or selection) that force each organisation to resemble other organisations with the same sets of constraints (Hannan and Freeman, 1976-1977/2002).

In resource dependency theory, the unit of analysis is usually the focal organisation within the environment, accompanied by a corresponding assumption of a capacity for human agency and strategic choice (Child, 1972). In population ecology, the unit of analysis is the population of organisational forms and there is an assumption of futility of strategic action (Orru et al., 1991: 361). Both environments are preoccupied with the dominance of the technical environment (discussed shortly), including production and control processes, patterns of interorganisational exchange, regulatory processes and other factors related to efficiency and effectiveness (Orru et al., 1991: 361).

Network theory by contrast, operates across low and high order explanations, leading some to propose that this approach could be one way of linking micro and macro level interactions together (Granovetter, 1985). Network theory has focused on the weak and strong ties among individuals (Granovetter, 1973, 1982), measured either through cohesion (Coleman, Katz and Menzel, 1957) or by structural equivalence (those that occupy the same social position, such as competitors [Burt,



1987)) affecting adoption behaviour across groups of people. Network arguments do not however, preserve the content of social action, such as individual and organisational behaviour (Jepperson, 1991: 156).

Institutionalism is both high structure and high construction. Institutional theory suggests that actors and interests are highly institutional in their origins and operation, and in modern polity forms, are often constructed institutions themselves. Institutional theory thus rejects functional explanations and finds “adaptive storytelling” less persuasive (DiMaggio and Powell, 1991: 11-12; Kraatz and Zajac, 1996). Action references and a focus on actors have often been defocalised by institutionalism to promote sociological theory (Kraatz and Zajac, 1996: 158) (this documented weakness in institutional theory is discussed later in this chapter). Jepperson (1991) argues that these assumptions are reflected in the way institutional theory emphasises constructedness and high order effects through its dependence on formal organising (Meyer and Rowan, 1977), incorporation of organisational practices from the environment rather than from intra-organisational generation (Tolbert and Zucker, 1983), the importance of social and ecological ties between organisations (DiMaggio and Powell, 1983), and the differences in firms across nations due to politics (Jepperson, 1991: 156).

Institutional theory, in contrast to functionalist, population ecology and resource dependency theories, draws attention to the role of the institutional environment, as opposed to the technical environment, in affecting individual and organisational behaviour, particularly at a high order level of analysis. Technical environments are identical to competition markets in pure form (Scott and Meyer, 1983/1991) and have been defined as

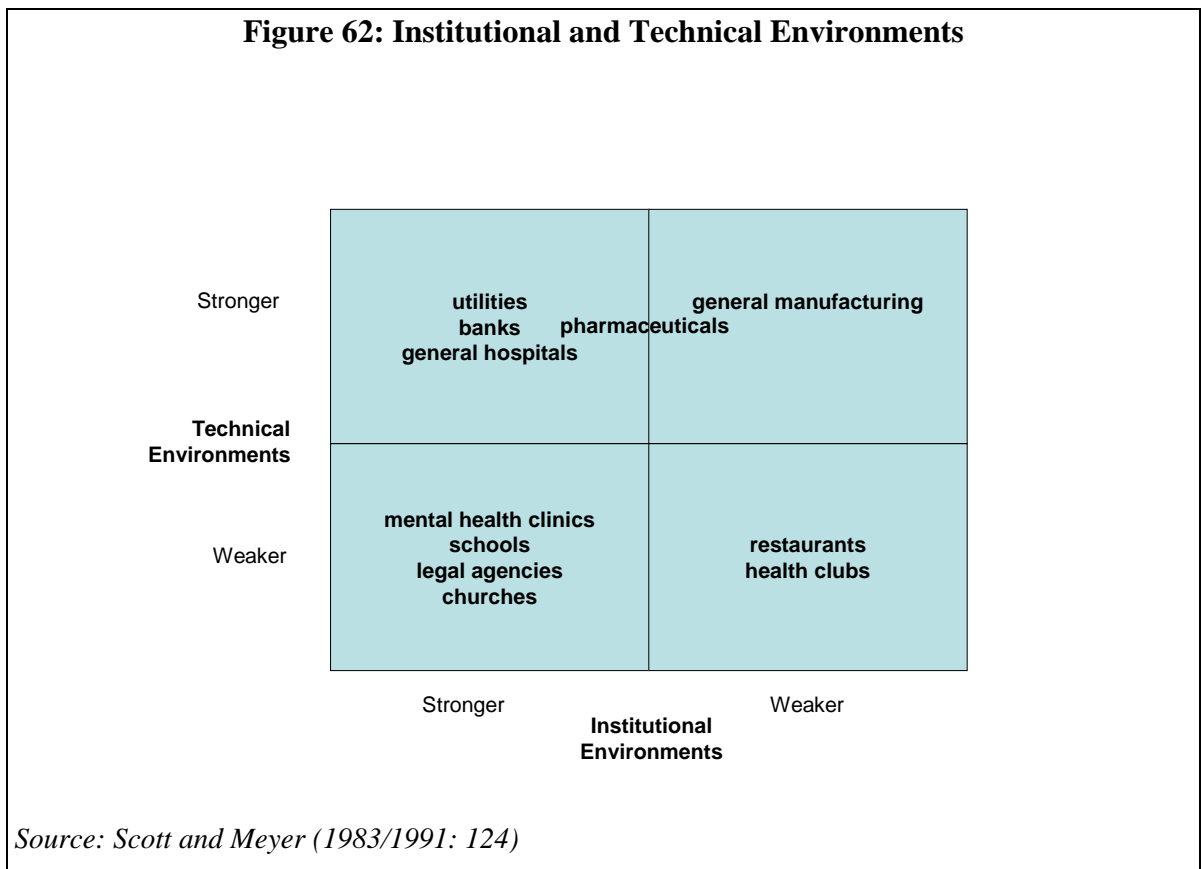
those in which a product or service is produced and exchanged in a market such that organizations are rewarded for effective and efficient control of their production systems (Scott and Meyer, 1983/1991: 123).

Institutional environments however, include the rules, belief systems and relational networks that arise in the broader societal context (Scott, 1992: 14). They are also

characterized by the elaboration of rules and requirements to which individual organizations must conform if they are to receive support and legitimacy. The requirements may stem from regulatory agencies authorized by the nation-state, from professional or trade associations, from generalized belief systems that define how specific types of organizations are to conduct themselves. Whatever the source, organizations are rewarded for conforming to those rules and beliefs (Scott and Meyer, 1983/1991: 123).

Scott and Meyer (1983/1991) noted that it can be difficult to distinguish between the influence of technical and institutional environments. For example, institutional rules are often framed as

technical rules. Likewise technical rules can become institutionalised over time after their purely technical value is lost (Meyer and Scott, 1992: 125). Both environments are capable of co-existing (Scott and Meyer, 1983/1991: 123) and influencing the development of organisational structures (Meyer and Scott, 1992: 1), often towards similar structural developments (DiMaggio and Powell, 1983). Figure 62 illustrates Meyer and Scott’s attempt to highlight the relative influence of institutional and technical environments in determining structures among different types of organisations.



The above figure highlights that it can be difficult to distinguish industries as neatly technical or institutionally focused, as most industries are subject to both environments (Powell, 1991). Not only are both environments capable of coexisting, but it has been argued that they are also not necessarily at odds with one another (Orru et al., 1991). The degree to which these environments are likely to impact on different kinds of organisations may differ however. In both institutional and competitive environments, rationality is important. However it is expressed differently. In institutionally strong environments, it is important to have a “rationale providing an account that

makes past actions understandable and acceptable to others, that renders the organization accountable for its past actions” (Meyer and Scott, 1992: 124).

Technical and institutional environments can have very different influences over organisational structure. Depending on whether the technical or institutional environment is more dominant, so the structures of the organisation are likely to be differentially arranged and attuned. Organisations are usually subject to one more than the other (Perrow, 1986).

Organizations arising in connection with technical flows closely control and manage them. Their structures act to regulate the flows, to buffer them from uncertainty, and thus to insulate them in some measure from external forces...By contrast, institutionalized organizations closely integrate their own structural arrangements with the frameworks established by the larger institutional structures. In doing so, they tend to buffer their structures from the actual technical work activities performed within the organization. Using such techniques as certification, secrecy and ritual, these organizations attempt to decouple their technical work from the organizational structure so that it can be more closely aligned with the institutional framework. Thus the technical organization faces in toward its technical core and turns its back on the environment, while the institutional organization turns its back on the technical core in order to concentrate on conforming to the institutional environment (Meyer, Scott and Deal, 1992: 46-47).

In competitive environments for scarce resources, competitive isomorphism (DiMaggio and Powell, 1983; Orru et al., 1991) results as organisations adopt efficient structures or risk failure. Yet even in these kinds of environments, there is a place for institutional explanations (Orru et al., 1991). In institutional environments, social pressure results in institutional isomorphism (Orru et al., 1991: 361-362). Organisations in common institutional environments look like one another as they respond to similar regulatory and normative pressure or face similar uncertainty. They may adopt a new structure due to dictates of patron organisations such as funding agencies, or because it is accepted practice in the sector (Orru et al., 1991: 362).

Among organisations that seek political power and institutional legitimacy, institutional environments are typically stronger (Orru et al., 1991).<sup>40</sup> Therefore, for organisations in these sorts of environments, such as schools (Meyer and Rowan, 1975/1992; Weick, 1976; Scott and Meyer, 1983/1991; Scott, 1987; DiMaggio and Powell, 1991; Scott, 1991; Meyer et al., 1992), hospitals (Burns and Wholey, 1993; Westphal, Gulati and Shortell, 1997; Arndt and Bigelow, 2000; Kitchener, 2002) and churches (Scott and Meyer, 1983/1991), efficiency is less important than conforming to community understandings (Meyer et al., 1992: 47). In fact, an argument has been

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<sup>40</sup> It will be argued in the next section of this appendix that universities are another type of organisation confronted with strong institutional environments.

raised that organisations with structures that conform to institutional rules tend to succeed in environments with established institutional structures (Meyer et al., 1992: 48).

This section has identified and defined the core elements of institutional theory, and contrasted these with other alternative theoretical traditions within organisation studies. The next section of this appendix argues that institutional theory is an appropriate conceptual framework to support investigation of the empirical research problem identified in chapter one.

## **INSTITUTIONAL THEORY AND THIS STUDY**

DiMaggio (1988: 6-7) argued that institutional theory is an appropriate theoretical framework for many types of research problems, including:

- Aspects of organisational life that are so exteriorised and intersubjective that actors do not question them;
- Explanations of most organisational phenomena in highly institutionalised fields;
- The process of institutionalisation and adoption of innovations (such as new technologies);
- Explanations of long term change, where change can be measured in the institutional base and the distribution of interests is stable; and
- Explanations of variation among national states or international structures.

DiMaggio's (1988) five arguments above can be used as a framework from which to discuss the application of institutional theory as a theoretical framework to explore the research problem of this thesis: *How did selected Australian universities evaluate and adopt various learning management systems in their teaching and learning programs, given claims of uncritical evaluation, problems and cautions in the higher education literature?*

### **Explanations for Actors Who Do Not Question Aspects of Organisational Life**

As a result of organisations being embedded in networks of social relations (Granovetter, 1985), organisational structures can therefore tend to reflect the myths of their institutional environment, rather than their technical work activities (Meyer and Rowan, 1977). These structures may also 'structure' (Giddens, 1979) the interpretive frameworks and schemas of organisational members, which they take for granted, and which enable them to recognise, interpret and negotiate strange and unanticipated situations (Ranson et al., 1980). Meyer and Rowan (1977) argued that empirical

work tended to show that many organisations maintained a gap, or loose coupling (Weick, 1976), between their formal structure and informal organisation. Organisations do this for the benefit of increased legitimacy (Meyer and Rowan, 1977; DiMaggio and Powell, 1983; Suchman, 1995), even when these structures are inefficient (Meyer and Rowan, 1977; Scott and Meyer, 1983/1991) or irrational (Selznick, 1996: 275).

When organisations in the same line of business are structured (Giddens, 1979) into an actual field<sup>41</sup> by competition, the state or the professions, powerful forces emerge that lead them to become isomorphic, or more similar to one another (DiMaggio and Powell, 1983). These fields often share a system of meaning, establish right ways of behaving, membership and relationships (Hinings et al., 2004; Lawrence, 1999). Under conditions of uncertainty in such a structured field, organisations may not only mimic the behaviour of others in their field (DiMaggio and Powell, 1983), but will mimic the behaviour of organisations with which they have some type of network via boundary-spanning personnel whom they trust (Galaskiewicz and Wasserman, 1989) in order to gain legitimacy (Deephouse, 1996). Isomorphic pressures have been argued to flow from a range of different social sources:

- Coercive pressures from the state (DiMaggio and Powell, 1983; Scott, 1987);
- The structure of the labour force (Zysman, 1994/2002);
- The financial system (Zysman, 1994/2002);
- Market-like control tactics or incentives (Scott, 1987);
- Normative pressure from the professions (DiMaggio and Powell, 1983; Powell, 1991);
- Pressures to follow or mimic other organisations (mimetic pressures) in times of uncertainty or new technology (DiMaggio and Powell, 1983; Scott, 1987);
- Historical structures set in place at the commencement of the organisation that persist over time as taken-for-granted assumptions (Scott, 1987); and
- Incorporation of structures by unplanned, adaptive, historically dependent processes (Selznick, 1996; Scott, 1987).

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<sup>41</sup> A field in institutional theory was originally defined as “sets of organizations that, in the aggregate, constitute an area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services and products” (DiMaggio and Powell, 1983: 148-9). Later authors have argued that fields tend to evolve around issues, not just markets or technologies (Hoffman, 1999).

Isomorphic institutional processes have been found to operate in a range of different settings. As civil service reforms were adopted in the US, they became progressively institutionalised and thus understood as a necessary component of a rationalized organisational structure. Later adopters of this innovation did not, therefore, adopt for technical merit but for legitimacy (Tolbert and Zucker, 1983). Similarly, early adopters of Total Quality Management (TQM) procedures in US hospitals did so for efficiency gains, while later adopters did so for legitimacy (Westphal et al., 1997). Coercive, normative and mimetic pressures to adopt a new bureaucratic organisational form among US national sport organisations were also found to be present (Slack and Hinings, 1994).

One derivative branch of institutional theory, management fashion, attempts to address the question “when and by what processes are technically inefficient innovations diffused or efficient innovations rejected?” (Abrahamson, 1991: 587). It is claimed that in times of uncertainty, particularly under conditions of goal ambiguity, financial instability and uncertainty about prevailing technologies (DiMaggio and Powell, 1983), organisations may imitate each other and organisations such as consulting firms, business mass media etc., that set fashions for others (Abrahamson and Rosenkopf, 1990; Abrahamson, 1991). Abrahamson argued that management fashion is both a process and an outcome, taking place when national norms of rationality and progress govern managerial behaviour (Meyer and Rowan, 1977). According to Abrahamson, a management fashion is

a relatively transitory collective belief, disseminated by management fashion setters, that a management technique leads rational management progress (Abrahamson, 1996a: 257).

Management fashions are argued to be weakly institutionalised practices that have not properly diffused into the field of practice (Abrahamson and Fairchild, 1999). Management fashion is both a fruitful field of inquiry for exploring the adoption of innovations in higher education (See further Birnbaum, 2000, and Pratt, 2005), as well as an important outcome from institutional explanations of change (Greenwood, Suddaby and Hinings, 2002).

It has been argued that governments encourage isomorphism across the Australian higher education sector through data requirements, relative funding models, research quantum and standardised quality rankings (Marginson and Considine, 2001: 177). The Australian Government may have also encouraged isomorphic adoption among Australian universities through their publication of government sponsored research through their Evaluations and Investigations program and special purpose technology grants. Yet at the same time, differential institutional capacities to compete led to the emergence of a hierarchical arrangement (vertical diversity within the higher education

system) (Marginson and Considine, 2001). The oldest universities accumulate significant political power and social status creating significant 'positional' advantage that increases over time. Academic standards at these oldest institutions become universal standards that produce academic and managerial norms (Marginson and Considine, 2001; DiMaggio and Powell, 1983; Powell, 1991). Less prestigious institutions seek legitimation by copying, or mimicking (DiMaggio and Powell, 1983; Scott, 1987), the more successful institutions while minimising the risks of uncertainty (Marginson and Considine, 2001).

In a market, emulation, rather than originality, is the quicker route to legitimacy and to a limited kind of success...the need for short term returns renders problematic those institutional experiments that require a longer time to come to fruition (Marginson and Considine, 2001: 217).

It is, therefore, argued that institutional theory could provide an appropriate lens through which to explain alleged instances of uncritical examination and adoption of various learning management systems among selected Australian universities, should they be found.

### **Explanations in Highly Institutionalised Fields**

Institutional theory has been most commonly applied to the education and health sectors (Scott, 1992: 15). Figure 62, discussed earlier, identified schools as one type of organisation in which technical environment pressures were relatively weak and institutional environment pressures were relatively strong. Higher education has been argued to be yet another type of educational context where the institutional environment can be particularly strong (Brint and Karabel, 1991).

Among various studies in higher education, institutional frameworks have been used to investigate how:

- Educational institutions can shape broader social values by focusing on the role of administrators in US adult education (Clark, 1956);
- Decision makers, choices, problems and solutions can become decoupled in an organised anarchy of a garbage can decision model, based on university decision making in the US, Denmark and Norway (Cohen and March, 1974; March and Olsen, 1976; Miller et al., 1996) (In this scenario, participants were particularly prone to mimicry [Cohen and March, 1974]);
- Societal expectations of acceptable budgetary practices impacted upon a university budget program in the US (Covaleski and Dirsmith, 1988);

- US universities are likely to adopt new publicised innovations, particularly when they are discussed in newspapers and the community, in order to maintain legitimacy and organisational survival (Meyer, 1992);
- US liberal arts colleges shifted towards vocational education (Brint and Karabel, 1991);
- Administrators in a US university sought to socially construct a new institutional identity among university staff (Gioia et al., 1994) and mimic the behaviour of those already in the top reference group of which they aspired to also belong (Gioia and Thomas, 1996);
- The academic identity of a Norwegian university and its organisational mission were changed to conform with an internationalised and standardised higher education industry (Stensaker and Dahl Norgard, 2001); and
- Academic drift occurred among universities in Europe and the US as less prestigious universities sought to resemble those perceived to be more prestigious (Morphew and Huisman, 2002).

Recent institutional scholarship has questioned the supremacy of the institutional environment over the technical environment in higher education. Many higher education commentators have noted the trend towards enterprise university models (Marginson and Considine, 2001; Slaughter and Leslie, 1997), with more business-like approaches, greater competition (Gioia et al., 1994; Marginson, 1997), and reduced government funding in the higher education field at large (Marginson, 1997). The response of many institutional theorists in higher education has been to draw upon resource dependency theory along with institutional theory, in recognition of the increased importance of the technical environment (Scott and Meyer, 1983/1991) in sociological explanations.<sup>42</sup> For example, institutional theory and resource dependency theory were used together to explain:

- Administrative differentiation in US colleges and universities (Tolbert, 1985);
- US liberal arts colleges acting against institutional pressures (Kraatz and Zajac, 1996) and the influence of executive migration (Kraatz and Moore, 2002);
- Change in European higher education and the role of the government in steering this change (Gornitzka, 1999);
- Shifts in Australian universities towards more enterprise models of governance (Marginson and Considine, 2001); and

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<sup>42</sup> The combination of institutional and resource dependency theories in particular, and other theories in general, has been the subject of some discussion within the institutional theory literature. This issue is discussed later in this appendix.



- Factors affecting the adoption of AACSB accreditation among US Business Schools (Casile and Davis-Blake, 2002).

Institutional theory is thus a highly appropriate theoretical framework for research in higher education. Although resource dependency theory has been used to supplement institutional theory in some studies of higher education, this does not detract from the value of institutional explanations in this sector. The fact that other theoretical perspectives have been combined with institutional theory has in fact expanded the explanatory power of this conceptual framework (for example, Oliver's (1991) much quoted work into organisational strategic responses to institutional forces and her work into the antecedents of de-institutionalisation[Oliver, 1992]).

### **Explanations for the Process of Institutionalisation and Adoption of Innovations**

Institutionalisation has been studied as both a process and as a property variable (Zucker, 1977/1991). However it has been criticised for its weakness in explaining change (Dacin, Goodstein and Scott, 2002). This weakness in institutional theory is addressed later in this appendix, as both a general weakness in institutional research and as an area in which this study can make a significant contribution.

Institutional theory has been a helpful framework to investigate the adoption of innovations over the past decades. Some examples of these studies include the adoption of civil service reforms across the US (Tolbert and Zucker, 1983), adoption of matrix organisational structures in US hospitals (Burns and Wholey, 1993), adoption of Total Quality Management (TQM) programs in US hospitals (Westphal et al., 1997), and the diffusion of CAPM technology among UK manufacturing companies (Robertson, Swan and Newell, 1996). Institutional theory has also been able to account for the adoption of different innovations across national borders, including the spread of ISO quality standards across 85 countries (Guler, Guillen and Macpherson, 2002) and the adoption of quality management practices by subsidiaries of a multinational company across 104 locations in ten different countries (Kostova and Roth, 2002).

The management fashion literature, as already noted, takes a great interest in exploring the adoption of innovations, particularly technically inefficient ones, with the assistance of institutional insights. A sizable body of scholarly work has been directed to this very issue of innovation adoption over a number of years (Abrahamson and Rosenkopf, 1990; Abrahamson, 1991, 1996a; Jackson, 1996;

Abrahamson, 1996b; Abrahamson and Rosenkopf, 1997; Kieser, 1997; Abrahamson and Fairchild, 1999; Mazza and Alvarez, 2000; Staw and Epstein, 2000; Newell, Robertson and Swan, 2001a; Scarbrough and Swan, 2001; Newell et al., 2001b; Benders and van Keen, 2001; Strang and Macy, 2001; Fiol and O'Connor, 2003).

As a result of the unique perspective of the institutional framework in explaining adoptions of innovations, several innovation scholars have turned to institutional explanations to account for observed adoption behaviour surrounding innovations (Wolfe, 1994; O'Neil et al., 1998). Even Rogers (1995) has noted the role of isomorphic processes (DiMaggio and Powell, 1983) in his much quoted discussion of the diffusion of innovations. Part of this turn may be accounted for by the non-rational assumptions underlying institutional theory explanations.

One reason for the scant attention to the spread of unsuccessful strategies is scholars' assumption, frequently present in strategic perspectives, that strategy selections are based on a rational choice perspective, which presumes that managers are efficiency orientated. Viewed from perspectives less reliant on assumptions of rationality, the persistence of inefficient strategy choices is unsurprising (O'Neil et al., 1998: 98).

In so far as learning management systems could be conceptualised as an innovation, whether they were technically inefficient or not, their adoption could certainly be accounted for within an institutional theory framework. In addition, the broader changes that Australian universities have undergone before adopting learning management systems could also be addressed following an emerging interest in explaining change within the institutional theory domain.

### **Explanations of Long Term Change**

Many institutional scholars have noted the need to take into account historical perspectives in their explanations of change (Tolbert and Zucker, 1983; Ranson et al., 1980; DiMaggio, 1991; Powell, 1991; Tolbert and Zucker, 1996; Greenwood and Hinings, 1996; Hirsch and Lounsbury, 1997b; Hasselbladh and Kallinikos, 2000; Mazza and Alvarez, 2000). Although institutional theory has been argued to be relatively weak for addressing change (this issue is addressed in much further detail later in this chapter), there are a significant number of historical studies of change, particularly at a field and population level of analysis. More recent institutional studies have investigated:

- Explanations of diversity among US large companies (Fligstein, 1991);
- The impact of nationalism on the publication of nineteenth century Finnish newspapers (Dacin, 1997);

- Shifts from editorial to market based institutional logic in higher education publishing (Thornton, 2002; Thornton and Ocasio, 1999);
- The historical development of the American film industry (Jones, 2001);
- Changes in the institutional practices of the US radio broadcasting industry (Leblebici, Salancik, Copay and King, 1991);
- The diffusion of the partner-associate governance structure among Dutch professional firms during 1925-90 (Lee and Pennings, 2002);
- Developments in AIDS related fields (Maguire et al., 2004); and
- The development of the digital photographic field (Munir, 2005).

Institutional theory therefore has the capacity to account for longer term shifts in the Australian higher education sector. For example, the Labor Government set in train the creation of a quasi-market for education with competition for students, industry and public funding (Marginson, 1997) through the coercive influence (DiMaggio and Powell, 1983; Scott, 1987) of the Dawkins Reforms (Dawkins, 1988). The strategies of Australian governments, both Labor and Coalition (Welch, 1996), used a range of market-like control tactics, incentives and sanctions (Scott, 1987) to shape the behaviour of public sector managers as agents of modernisation and marketisation (Marginson, 1997). These changes occurred in an environment of fiscal scarcity (Welch, 1996). As was argued in chapter one, many of these same changes were observed in other nation states (Slaughter and Leslie, 1997).

### **Explanations of Variation Among National States or International Structures.**

Institutional theory has also been used to account for observed variations between different nation states, as well as the role of different international structures upon these nation states. One of the early studies in institutional theory, at a time when functionalist contingency thinking prevailed after the late 1970s, examined the extent to which variations in the production activities of different industrialised societies could be attributed to national institutional influences, holding other contingent variables constant (Maurice, Sorge and Warner, 1980/2002). Since that time, other institutional studies have similarly investigated the combined operation of technical and institutional market forces in Taiwan, South Korea and Japan (Orru et al., 1991), and the rise of family business groups in the ASEAN region (Carney and Gedajlovic, 2002).

In contemporary analysis, one of the major influences on the Australian higher education system is the impact of globalisation (Pratt and Poole, 1998). Economic rationalism, or the domination of social policy by the language and logic of economics (Welch, 1996), was inspired by the rise of global competition and led national policy makers in Australia, the US and UK to reduce growth rates in state expenditure on discretionary programs, putting more into direct technological innovation and economic competitiveness (Slaughter and Leslie, 1997). A shift in ideological priorities from welfare to competitive nation state thus occurred in a number of western countries (Welch, 1996). Pratt and Poole (1998), citing the work of Lingard and Rizvi (1998), claimed that the OECD as a supranational institution is an institutionalising mechanism for global ideologies, including market liberalisation and new managerialism. Many higher education authors have also noted the common market-orientated logic now present in higher education sectors across many western countries (e.g. the US, UK, Canada, New Zealand and Australia) (Slaughter and Leslie, 1997), and the influence that Osborne and Gaebler (1992) had on many of these national governments (Seddon and Angus, 1999). Whitely (1994/2002) argued however, that national social institutions in many cases still retain a degree of power to resist the influence of these global institutions.

For this study, institutional theory has been argued as capable of accounting for the operation and interaction of various international and national institutions among local universities, particularly in so far as they might have affected the adoption of learning management systems in selected Australian universities. It is, therefore, argued that institutional theory can provide a suitable theoretical framework for investigating the evaluation and adoption of learning management systems without critical examination of their merit to their relevant institutions prior to their adoption, as was alleged by other researchers in Australia (Brabazon, 2002; Yetton et al., 1997) and North America (Berg, 2002; Noble, 1998b). This framework will provide a valuable analytic context for testing and theorising the major empirical findings of this study, particularly in chapter six. Before the details of this framework are developed further however, an overview of the historical development of institutional theory is discussed in the next section, to enable the identification of major contributions to this theoretical framework, discussed at the end of this appendix.

## OLD AND NEW INSTITUTIONAL THEORY

In his review of the development of institutional theory, Scott (1987) noted that there were several variations of institutional theory with some underlying similarity, but with little agreement on specifics. He also drew attention to alternative streams of institutional theory development, neglected from mainstream discussion at that time. The key question he raised for institutional scholars was to identify which version of institutional theory they were using. Two major streams of institutional analysis, 'old' and 'new' institutional theory (DiMaggio and Powell, 1991), have been the subject of some debate in the institutional literature (Greenwood and Hinings, 1996; Hirsch and Lounsbury, 1997b, 1997a; Selznick, 1996; Stinchcombe, 1997).

Old institutional theory, first coined by DiMaggio (1991), was characteristically represented by the work of Selznick (1949; 1957). Selznick and his students (Clark, 1956; Perrow, 1961; Stinchcombe, 1968) viewed organisational structure as an adaptive vehicle that was shaped in reaction to the characteristics and commitments of participants, as well as to influences and constraints from the external environment (Scott, 1987). Scott (1987) argued that Selznick's earlier works claimed that much of the change observed was adaptive and unintended. However in later work it was claimed to be more enacted, defined and defended by key leaders of the organisation, following Barnard (1938).

Institutionalised organisations were claimed to be concerned with their own self-maintenance as ends in themselves (Scott, 1987). Institutionalisation, according to Selznick, was  
to infuse with value beyond the technical requirements of the task at hand (Selznick, 1957: 17).

Old institutional theory was political in its analysis of group conflict, organisational strategy and the aspects of institutions that prevented actors from recognising or acting upon their interests (DiMaggio, 1988; DiMaggio and Powell, 1991). Old institutionalism focused on the cognitive forms of values, norms and attitudes. Participant's preferences were shaped by these norms; newcomers were socialised which led to internalisation of these organisational values, experienced as commitment (DiMaggio and Powell, 1991: 15).

These institutional theorists, drawing on the work of the Chicago School, emphasised fieldwork and symbolic interaction (Hirsch and Lounsbury, 1997a), structuration (Giddens, 1979, 1984), a focus on the dynamics of change (Hirsch and Lounsbury, 1997a), and the importance of history within a

holistic contextual approach, usually involving case studies (Hirsch and Lounsbury, 1997b, 1997a; Scott, 1987).

The turn from 'old' to 'new' institutional theory was led by Meyer and Rowan (1977), Zucker (1977/1991) and DiMaggio and Powell (1983), who downplayed conflicts of interest at the organisational level, and investigated how organisations respond to the myths of their institutional environments (Meyer and Rowan, 1977) by developing elaborate administrative structures (DiMaggio and Powell, 1991: 12). A focus on legitimacy was a key driving force and justification for mimesis (Selznick, 1996).

New institutional theory departs from the moral frame and moves to a primarily cognitive process. Normative obligations enter life as social facts (Zucker, 1977/1991), or taken for granted scripts, rules, and classifications. There is a move away from a focus on socialisation theory and internalisation, towards cognitive models that lead decision makers to reject some evidence, learning theories concerning how information is organised, and attribution theory related to how motives are inferred *post hoc* (DiMaggio and Powell, 1991: 15).

Institutionalisation under this stream refers to the process by which actions become repeated over time and are assigned similar meanings by self and others (Scott, 1987). Institutionalisation here is made up of three movements:

1. Externalisation — people take action;
2. Objectification — action is interpreted as having an external reality separate from self; and
3. Internalisation — objective work is internalised by determining the subjective structures of consciousness itself (Scott, 1987: 495).

Scott (1995) distinguished the new institutionalism from the old by noting that new institutional theory:

1. shifted attention from a normative to a cognitive focus; and
2. embraced a social constructionist rather than a realist perspective (these differences are discussed further in chapter two) (Scott, 1995: xv).

DiMaggio and Powell (1991) argued that old and new institutionalism assumed that institutionalisation constrained rationality, but did so through different sources. Old emphasised vested interests and political trade-offs; new focused on the relationship between stability,

legitimacy and the power of “common understandings that are seldom explicitly articulated” (Zucker, 1983: 5; DiMaggio and Powell, 1991). Old saw organisations as embedded in local communities tied by treaties; new saw environments penetrating the organisation,

creating the lens through which actors view the world and the very categories of structure, action, and thought (DiMaggio and Powell, 1991: 13).

Old viewed organisations as the key loci of the process; new focused on the sector or societal level and was interorganisational in focus (DiMaggio and Powell, 1991: 13). Old had a focus on institutionalisation increasing organisational diversity as it focused at the organisational level; new argued for homogeneity of organisations and the stability of these components (DiMaggio and Powell, 1991: 14). Further details of the distinctions between these two approaches, as summarised by DiMaggio and Powell (1991), are found in Figure 63.

What caused such a radical dichotomy between the two approaches? DiMaggio and Powell claimed that there was a shift in formal authority and organising capacity from local elites to a macro level, and a cognitive turn in social theory away from action theory to practical action (DiMaggio and Powell, 1991: 15).

Old theory with Selznick was claimed to be heavily influenced by Parson’s (1951) general theory of action, where cultural norms and social objects were internalised as part of the personality (DiMaggio and Powell, 1991: 16). Within the Carnegie school in organisation theory, Simon and March (1958) added a focus on the routine, taken for granted aspects of organisation life (DiMaggio and Powell, 1991: 18).

March and Simon (1958) taught us that organizational behaviour, particularly decision making, involves rule following more than the calculation of consequences (DiMaggio and Powell, 1991: 19).

Garfinkle’s (1967) work in ethnomethodology opened up the role of practical knowledge and cognition in face-to-face interaction. Social order, they argued, was not derived from the shared patterns of evaluation and social norms, “but is constituted, as practical activity, in the course of everyday interaction” (DiMaggio and Powell, 1991: 20).

Garfinkle shifted the image of cognition from a rational, discursive, quasi-scientific process to one that operates largely beneath the level of consciousness, a routine and conventional ‘practical reason’ governed by ‘rules’ that are recognized only when they are breached (DiMaggio and Powell, 1991: 20).

**Figure 63: The Old and New Institutionalisms**

	Old	New
Conflicts of interest	Central	Peripheral
Source of inertia	Vested interests	Legitimacy imperative
Structural emphasis	Informal structure	Symbolic role of formal structure
Organisation embeddedness in	Local community	Field, sector or society
Nature of embeddedness	Co-option	Constitutive
Locus of institutionalization	Organisation	Field or society
Organisational dynamics	Change	Persistence
Basis of critique of utilitarianism	Theory of interest aggregation	Theory of action
Evidence for critique of utilitarianism	Unanticipated consequences	Unreflective activity
Key forms of cognition	Values, norms, attitudes	Classifications, routines, scripts, schemas
Social psychology	Socialisation theory	Attribution theory
Cognitive basis of order	Commitment	Habit, practical action
Goals	Displaced	Ambiguous
Agenda	Policy relevance	Disciplinary

*Source: DiMaggio and Powell (1991: 13)*

Action for Garfinkle (1967) is scripted and justified by references to culturally available legitimising accounts (DiMaggio and Powell, 1991: 21). Berger and Luckmann (1967) added further to this cognitive dimension by noting how subjective meanings become objective facts through cognitive constructions. Taken together, DiMaggio and Powell argued that they added a micro-sociology perspective, implicit in Meyer and Rowan's (1977) work.

New work in social theory emphasised the cognitive dimension from the "cognitive revolution" in psychology (DiMaggio and Powell, 1991: 22). This theory of practical action departs from the rational, calculative aspect of cognition to focus on pre-conscious processes and schema that enter into routine, taken for granted behaviour, that is an emergent theory of practical action (DiMaggio and Powell, 1991: 22). DiMaggio and Powell further claimed that Giddens (1979; 1984) built on this foundation in his structuration model from ego psychology. However his sources were claimed not to be clear (DiMaggio and Powell, 1991: 23).

New institutionalism thus

reestablishes the centrality of cognition; it empathizes the practical, semiautomatic, non-calculative nature of practical reason; and it spurns the assumptions of intra- and inter-subjective consistency that were prominent in Parson's thought (DiMaggio and Powell, 1991: 24).



The cost of this shift is that new institutional theory has been slow to theorise the normative aspect of practical action, has overlooked Parson's (1951) arguments about the decision role of cognitive orientation in economic decision making that different "institutional domains evoke cognitive, cathartic, and evaluative orientations to varied degrees" (DiMaggio and Powell, 1991: 24). It has also failed to come up with an analytic construct as powerful as role systems to explain the relationship between persons and the positions they occupy in labour.

Hirsch and Lounsbury (1997a), whilst acknowledging DiMaggio and Powell's (1991) important contribution to the field in articulating the distinction between the two streams of institutional theory, claimed that Powell and DiMaggio were somewhat pejorative toward proponents of the more action and process-orientated old institutional theory (Hirsch and Lounsbury, 1997a).

When comparing the two, for example, to restrictively assert that the new institutionalism has a distinctly sociological flavor opens up the peculiar question as to what the flavor is of the old institutionalism. Because in their essay the castaway subject matters identified as swept out with the old include endogenous change, process, volition, organizations as units, informal relations, conflict, attitudes, and unanticipated consequences, one wonders how much of the discipline the new institutionalism will (and should) be able to address, refine, and redirect - unless, of course, the two perspectives become seen for what they really are, which is indeed complementary (Hirsch and Lounsbury, 1997a: 408).

These authors agreed with DiMaggio and Powell that the cognitive turn was important, however they did not believe this to be inconsistent with old institutional theory. This is because they claimed that neo-institutionalism's adoption of the phenomenological approach from Berger and Luckmann (1967) involved a socialisation of individuals and groups. That is, Hirsch and Lounsbury claimed that DiMaggio and Powell (1991) overlooked social constructionism built on values, norms and commitments (Hirsch and Lounsbury, 1997a).

Hirsch and Lounsbury were also highly critical of the way that DiMaggio and Powell (1991) selectively drew from Selznick's (1949; 1957) research and overemphasised the connections to Parsonian functionalism (Hirsch and Lounsbury, 1997a), with its overly static view of socialisation, norms, and values (Hirsch and Lounsbury, 1997a).

Selznick (1957, 1949/1965), however, emphasized the role of leadership and agency in creating and shaping institutions. Parsons lacked such active ingredients, focussing instead on the role of stability and integration (Hirsch and Lounsbury, 1997a: 412).

As a result of the dichotomous development of the newer stream of institutionalism theory away from its 'older' roots (Hirsch and Lounsbury, 1997b, 1997a), and a rather narrow conception of institutions (Stinchcombe, 1997), new streams of institutional theory have suffered from a number

of persistent weaknesses. These weaknesses have been highlighted by a range of institutional scholars, old and new, and have been addressed in the institutional literature to varying degrees.

The central problem in institutional theory, from which the majority of the other issues are derived, is its difficulty explaining institutional change. The next section of this appendix explores this weakness and the various attempts and recommendations that have been made to address this area in the literature, as well as in this particular study. It will be argued that integrating the insights of old and new institutional theory around this issue of institutional change will simultaneously provide both a robust theoretical framework for this study, and a major opportunity to contribute to the further development of this field of research. This appendix then concludes by exploring how a response to the empirical research questions of the first chapter might enable contributions to this body of organisational theory.

## **DIFFICULTIES EXPLAINING THE PROCESS OF INSTITUTIONALISATION**

From the very inception of the neo-institutional project, new institutional theorists have argued that institutionalisation is both a process and a finished state (Zucker, 1977/1991). Since that time however, new institutional theory has had great difficulty explaining how such institutional change occurs (DiMaggio, 1988; Zucker, 1977/1991, 1987/2002; Galaskiewicz, 1991; Powell, 1991; DiMaggio and Powell, 1991; Jepperson, 1991; Friedland and Alford, 1991; Brint and Karabel, 1991; Greenwood and Hinings, 1996; Hirsch and Lounsbury, 1997b, 1997a; Karnoe, 1997; Barley and Tolbert, 1997; Kondra and Hinings, 1998; Beckert, 1999; Clemens and Cook, 1999; Hasselbladh and Kallinikos, 2000; Lawrence et al., 2001; Wicks, 2001; Dacin et al., 2002; Seo and Creed, 2002; Phillips, Lawrence and Hardy, 2004; Hinings et al., 2004; Munir, 2005; Reay, Golden-Biddle and Germann, 2006; George, Chattopadhyay, Sitkin and Barden, 2006). For example:

The theoretical accomplishments of institutional theory are limited in scope to the diffusion and reproduction of successfully institutionalized organizational forms and practices. Institutional theory tells us relatively little about 'institutionalization' as an unfinished process (as opposed to an achieved state), about where institutions come from, why some organizational innovations diffuse while others do not, and why innovations vary in their rate and ultimate extent of diffusion. Institutional theory tells us even less about deinstitutionalization: why and how institutional forms and practices fall into disuse (DiMaggio, 1988: 12).

Since DiMaggio's (1988) paper, a number of institutional scholars have responded to his call and addressed some of these issues. For example, Oliver (1992) has provided a commonly cited

explanation accounting for processes of de-institutionalisation. Greenwood, Suddaby and Hinings (2002) have attempted to account for institutionalisation as an unfinished process through recourse to the management fashion literature. Finally, Lawrence, Winn and Jennings (2001) have completed a theoretical paper on the pace and stability of different institutional changes. There are still many outstanding issues to be dealt with however, the most pertinent of which have been raised in the following discussion.

In the introduction to the special edition on institutional change in the *Academy of Management Journal* in 2002, the editors noted that institutional theory has been criticised for its insistence on institutional persistence and homogeneity, yet institutions do change over time, are not uniformly taken for granted, and have particular effects as well as general effects (Dacin et al., 2002). The following subsections address a number of continuing weaknesses in institutional theory, particularly in relation to explaining institutional change.

### **Bringing Back Actors, Interests and Active Agency**

One of the problems with neo-institutional analysis is that the unit of analysis is usually the collective pattern of institutionalisation, not the process or the actors that create them (Karnoe, 1997; Zucker, 1977/1991). At work is an assumption that the process of diffusion is top-down and not bottom up from individuals (Karnoe, 1997: 421). Jepperson (1991) has argued that action references and a focus on actors have often been defocalised by institutionalism to promote sociological theory (Jepperson, 1991: 158).

Without such a focus on individuals in institutional explanations, our understanding of organisational level processes and wider explanations of change will be limited. Neo-institutional theory has therefore been lacking a capacity to address within group elements inside organisations (Greenwood and Hinings, 1996; Johnson, Smith and Codling, 2000; Stinchcombe, 1997; Wicks, 2001; Zucker, 1977/1991, 1987/2002).

Without a solid cognitive, micro level foundation, we risk treating institutionalization as a black box at the organizational level, focusing on content at the exclusion of developing a systematic explanatory theory of process, conflating institutionalization with resource dependency, and neglecting institutional variation and persistence. Although important insights can be gained by examining the content of institutions, there is an ever-present danger of making the neo-institutionalist enterprise a taxonomic rather than explanatory, theory building science. Institutional theory is always in danger of forgetting that labeling a process or structure does not explain it (Author's 1991 postscript in Zucker (1977/1991: 105-106)).

Coupled with this weakness in explaining micro level processes is the capacity to link the actions of individuals with broader field developments. Although various authors have recognised the capacity of institutional theory to provide such a wide scope for theoretical explanations (Zucker, 1977/1991; Dacin et al., 2002), institutional theorists have had great difficulty in examining this link.

The link between micro- and macro levels of analysis has not received much explicit attention from practitioners of the new institutionalism, most of whom move back and forth among ethnomethodology, phenomenology, and conditional resource dependence arguments (DiMaggio and Powell, 1991: 25).

The problem that new institutionalist research has run into is that most empirical efforts have focused on environmental changes that are not effectively linked to the activities of individuals and organizations (Hirsch and Lounsbury, 1997b: 83).

One of the consequences of this shift away from a focus on the role of individuals, action and interests, has been a movement to higher and higher levels of abstraction in explanations of institutional change.

The inability to address interests and the generative capacity of actors leads much of the new institutionalism into the logical fallacy of infinite regression to higher levels of abstraction (Zucker 1988). Institutions determine cultural scripts and organizational form and behaviour; left out are networks, interactions, and policy negotiations between individuals and organizations. Stability, persistence, and inertia are taken as givens with change an extraordinary disruption, usually externally generated; process is less important than outcome. Legitimacy is obtained by imitating the success of others (Hirsch and Lounsbury, 1997a: 410).

A number of scholars have therefore called for individuals, interests and a focus on active agency to be reintroduced back into institutional analysis (Zucker, 1977/1991, 1987/2002; DiMaggio, 1988; Powell, 1991; DiMaggio and Powell, 1991; Friedland and Alford, 1991; Fligstein, 1991; Brint and Karabel, 1991; Leblebici et al., 1991; Oliver, 1991, 1992; Holme, 1995; Greenwood and Hinings, 1996; Hirsch and Lounsbury, 1997b; Karnoe, 1997; Johnson et al., 2000; Wicks, 2001; Kraatz and Moore, 2002).

Institutionalization is a product of the political efforts of actors to accomplish their ends and that the success of an institutionalization project and the form that the resulting institution takes depend on the relative power of the actors who support, oppose, or otherwise strive to influence it (DiMaggio, 1988: 13).

Institutional theorists, by virtue of their focus, have tended to limit their attention to the effects of the institutional environment on structural conformity and isomorphism and have tended to overlook the role of active agency and resistance in organization-environment relations... Institutional theorists are capable of addressing a broad range of strategic responses to the institutional environment if they assume a potential for variation in the resistance, awareness, proactiveness, influence, and self-interest of organizations (Oliver, 1991: 151).

DiMaggio (1988) claimed that institutional theory already recognises at least two forms of interest implicit in current institutional theory: human preferences for certainty in uncertain conditions

(Zucker, 1977/1991; Hannan and Freeman, 1984/2002; DiMaggio and Powell, 1983) and organisational survival that lead to their acceding to the demands of other actors for resources and legitimacy (DiMaggio, 1988: 8). DiMaggio argued further that other institutional theorists have drawn attention to why some innovations become institutionalised and others do not, and have thus distinguished between technical and institutional sources of explanation, between peripheral and central elements of structure, between surface and organisational transformation and changes that don't receive support (DiMaggio, 1988: 9). He claimed that the system-level rhetoric used by theorists has prevented these interests becoming more explicit in the theory.

Without more explicit attention to interest and agency of the kind that institutional rhetoric has thus far obstructed, institutional theorists will be unable to develop predictive and persuasive accounts of the origins, reproduction, and erosion of institutionalized practices and organizational forms (DiMaggio, 1988: 11).

### **Institutional Change Literature**

Van de Ven and Hargrave (2004) published a comprehensive review chapter, summarising the development of the institutional change literature across a number of different dimensions. These authors, rather than focus on institutional theory *per se*, addressed the institutional change literature and its close relationships with other literatures on social and technical change. Van de Ven and Hargrave also observed institutional theory's poor capacity to explain institutional change.

...Neo-institutional theory's static view of institutions as immutable, persistent structural forces must be revised and extended. A focus on institutional change has been relatively neglected in the recent institutional literature (Van de Ven and Hargrave, 2004: 260).

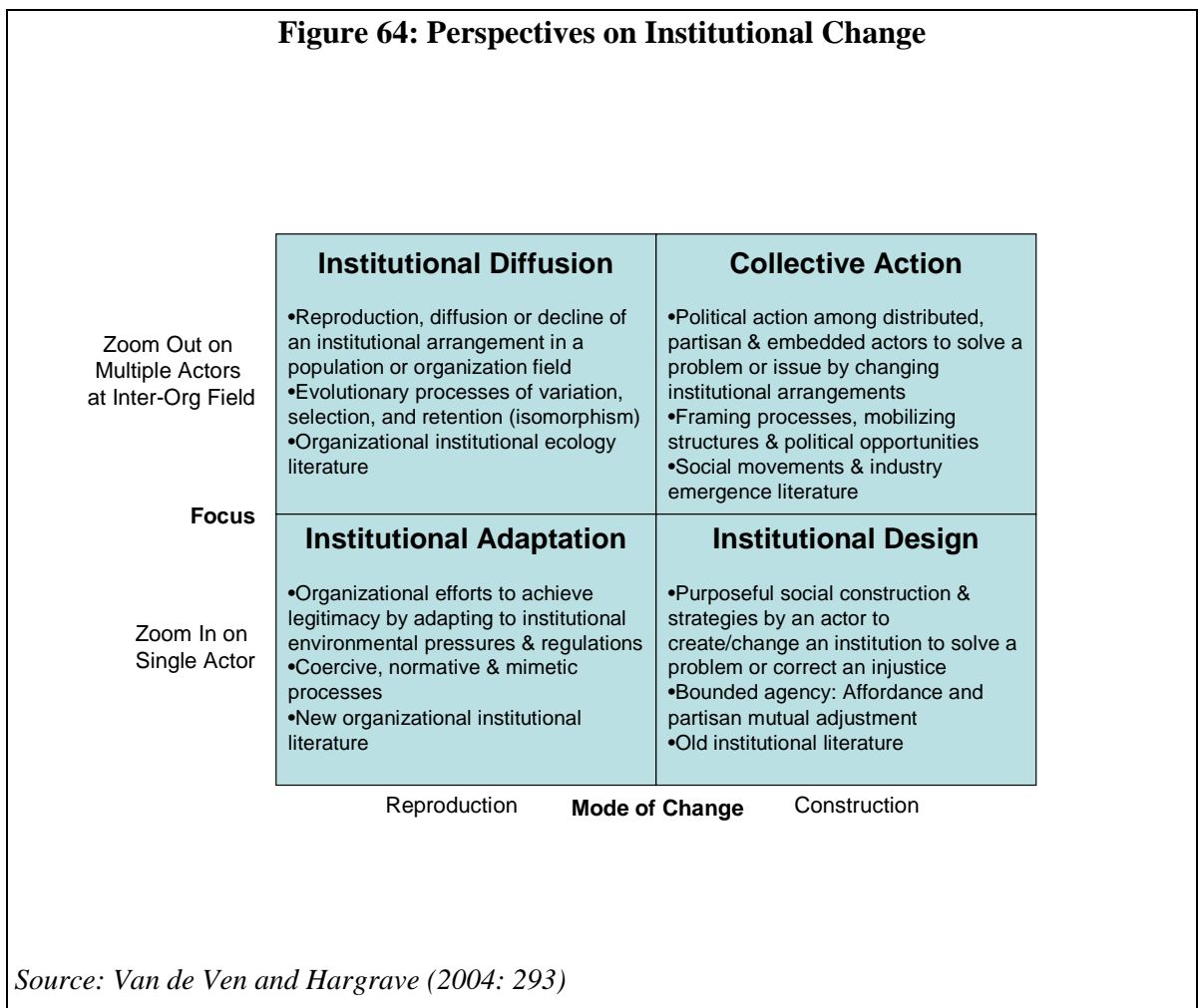
Van de Ven and Hargrave noted that neo-institutionalists instead tended to focus on the cognitive-cultural dimensions of change, as it fits institutional theorists' research question about how institutions reproduce and spread (Van de Ven and Hargrave, 2004: 261).

Much of the voluminous literature on institutional change focuses on the nature of this difference, what produced it, and its consequences. Somewhat less attention has been given to the processes of institutional change (Van de Ven and Hargrave, 2004: 261).

Van de Ven and Hargrave then proposed a definition of institutional change as "the difference in form, quality, or state over time in an institution" (Van de Ven and Hargrave, 2004: 261). They then claimed that this theory developed in two divergent ways. The first developed as a form of variance theory, looking at the role of independent and dependent variables in explaining change. The second development was as a process theory, looking at the temporal order and sequence of a discreet set of events based on a narrative (Van de Ven and Hargrave, 2004: 262). The authors claim that this

second stream was really concerned with the ‘how’ question. Most work to date was argued to be under this first variance order (Van de Ven and Hargrave, 2004: 262).

Focusing on this second set of process-oriented theory, Van de Ven and Hargrave categorised the institutional change literature into four different perspectives, based on the various mechanisms that explain change. These four perspectives are brought together in Figure 64.



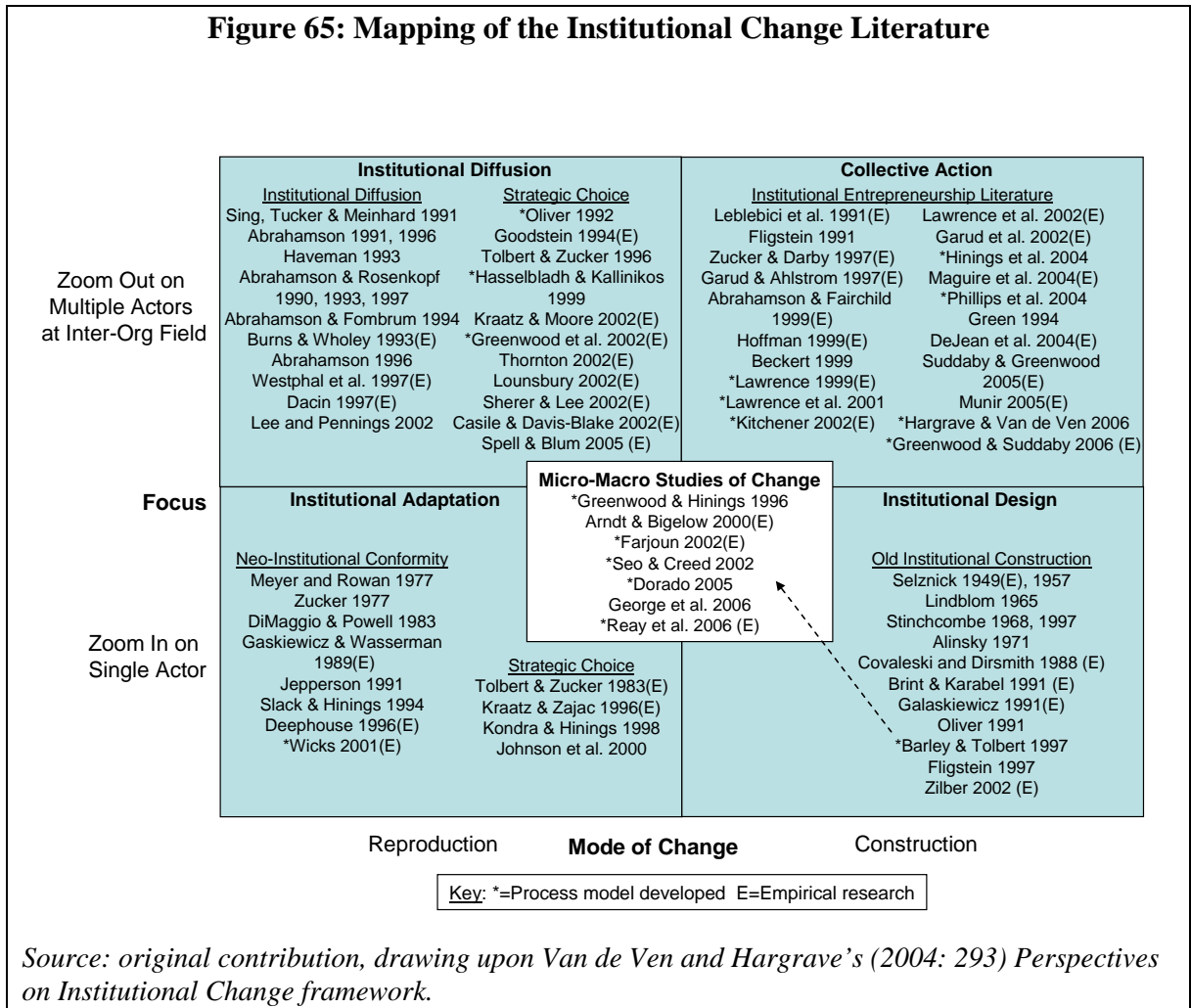
The horizontal axis separates the field into those studies that operate at a field level of inquiry from those at the level of the individual organisation. The vertical axis separates those studies that construct new institutions from those that reproduce existing institutions.<sup>43</sup>

<sup>43</sup> A more detailed discussion of each of the four quadrants is located after Figure 5 in this chapter.

Van de Ven and Hargrave's (2004) diagram is the only known categorisation of the institutional change literature at this time, and has been published again even more recently (Hargrave and Van de Ven, 2006) in recognition of its valuable contribution as a summarising device. Closer inspection of their work however, does reveal at least one major shortcoming. The authors have plotted the new institutional change literature, dubbed Institutional Adaptation, as a subgroup of institutional change that focuses on the single actor level of analysis. Given the prior discussion calling for more studies on individual change at this level of analysis, particularly at an individual and intra-organisational level of analysis, this is quite surprising. Most of the neo-institutional change literature cited by the authors was conducted at a field level of analysis, although it provided some clues as to how it might apply at an organisational level. Despite this conceptual weakness, the diagram has value in plotting the institutional change literature, as the following figure demonstrates.

Figure 65 is this author's attempt to map the most commonly cited institutional change literature among institutional scholars. This figure employs the same framework proposed by Van de Ven and Hargrave (2004) and Hargrave and Van de Ven (2006). However it contains additional minor modifications that account for variation and complexities among different research papers in this area. This figure attempts to separate the various institutional change studies into their representative perspectives, further differentiating them on the basis of whether or not they were primarily empirical or theoretical, whether they developed a process model (as opposed to an attribution model discussed earlier) to account for change, and the extent to which they allowed for a strategic choice or degree of active agency within that perspective. Figure 65 is referred to throughout the remainder of this appendix as a key illustrative tool in discussing a number of the difficulties in explaining the process of institutionalisation.

**Figure 65: Mapping of the Institutional Change Literature**



Van de Ven and Hargrave began their classification of this literature with the institutional design perspective, shown in the bottom right quadrant of Figure 65. In this quadrant, institutions are purposefully created or revised to address conflict or injustice, and emerge from purposeful enactment and social construction. This group is perhaps exemplified by old institutional theory. The focus of these studies is the single organisation or individual. From the old institutionalists, Selznick (1949; 1957) in particular is noted, especially his argument that an organisation only becomes an institution when its leader infuses it with value (Van de Ven and Hargrave, 2004: 266). Stinchcombe (1997) argued later that neo-institutional theory's conception of organisations responding to the myths of their institutional environment (Meyer and Rowan, 1977) contradicted the purposeful creation and staffing of institutions to guard important values that society wanted to protect (Stinchcombe, 1997: 10).



Several more recent studies are also capable of falling under the old institutional banner, certainly as far as they are typified as focusing on constructing change at a single organisational level of analysis. Covalleski and Dirsmith (1988) and Brint and Karabel (1991) both drew attention to the role of power and self-interest at the organisational and field level in their respective studies of institutionalisation in American Higher Education. Galaskiewicz (1991) investigated attempts by one organisation to institutionalise social responsibility among companies in the US again. Zilber (2002) looked at the active political efforts of new organisational members to infuse new meanings into existing practices in a rape crisis centre in Israel.

Barley and Tolbert's (1997) work was argued by Van de Ven and Hargrave (2004) to be one of the few process models from within the Institutional Design literature. In this paper, the authors drew on Giddens's (1979; 1984) structuration theory as a means to resolve the action-structure dichotomy in social science (discussed in further detail later in this chapter).

Van de Ven and Hargrave (2004) also noted a small literature on the tools that active agents can use to create purposeful change at an organisational level. They cited the early works of Lindblom (1965), Alinsky (1971), and Fligstein (1997).

The institutional adaptation perspective, located in the bottom left quadrant of Figure 65, refers to those studies at an organisational or individual level that describe how and why organisations conform to the environment, usually for legitimacy. These studies focus typically on the operation of coercive, mimetic and normative isomorphic mechanisms, as per the new institutionalism thesis. Within the neo-institutional conformity literature in this subset, there is a heavy emphasis on organisations conforming to the demands of the institutional environment (Meyer and Rowan, 1977; Zucker, 1977/1991; DiMaggio and Powell, 1983; Jepperson and Meyer, 1991; Slack and Hinings, 1994; Deephouse, 1996), although some allow for various network influences (Galaskiewicz and Wasserman, 1989). Wicks (2001) is one of the only empirical studies to investigate the influence of isomorphic forces at an intra-organisational level of analysis. All other studies within the same quadrant of Figure 65 consisted of either theoretical papers or empirical studies conducted at a field level, from which generalisations were extracted down to an organisational level of analysis.

After the call for greater recognition of the role of politics, strategic choice and active agency in institutional theory, several scholars set about introducing an element of strategic choice into their explanations and studies. Within the organisational level of analysis, they attempted to recognise

the strategic choices that are sometimes made on technical or strategic grounds (Johnson et al., 2000; Kondra and Hinings, 1998), occasionally at an earlier stage in the diffusion process (Tolbert and Zucker, 1983), or even against the expectations of neo-institutional predictions (Kraatz and Zajac, 1996).

The institutional diffusion literature, located in the top left quadrant of Figure 65, focuses on how and why specific institutions were adopted and diffused across a population or field of organisations. Much of this work draws on population ecology (Dacin, 1997; Haveman, 1993; Lee and Pennings, 2002; Sing, Tucker and Meinhard, 1991), with its various density and dependence arguments for legitimacy and competitive selection which assume strong pressures of environmental determinism. Several of these studies also draw upon network explanations (Burns and Wholey, 1993; Westphal et al., 1997) to account for the diffusion or spread of new institutional forms across a field of organisations. Van de Ven and Hargrave (2004) argued that much of the management fashion literature, particularly that produced by Abrahamson (Abrahamson, 1991, 1996a, 1996b; Abrahamson and Fombrun, 1994; Abrahamson and Rosenkopf, 1990, 1993, 1997), also falls under this same diffusion framework.

Within the institutional diffusion literature, various recent studies have also attempted to bring a degree of strategic choice into the diffusion literature (Hasselbladh and Kallinikos, 2000; Tolbert and Zucker, 1996). Oliver's (1992) seminal work on de-institutionalisation is often noted for the way that she recognised a host of political, functional/technical and social explanations in her framework. Goodstein (1994) modelled much of his work on Oliver's (1991) work, but drew on a field-level empirical frame for his analysis. Greenwood et al. (2002) proposed a process model for understanding the diffusion of institutions that took account of the role of institutional entrepreneurs and the professions in acting upon externally generated shocks that ultimately affected whether they institutionalised or became a fashion. Thornton (2002) and Lounsbury (2002) both conducted longitudinal studies that looked at the capacity of actors to choose their response under conditions of conflicting institutional logics in the wider field. Sherer and Lee (2002) and Casile and Davis-Blake (2002) investigated the combination of resource dependency and institutional frameworks in their explanations of change. Kraatz and Moore (2002) investigated the impact of executive migration upon the decisions of US liberal arts colleges in the 1970s and 1980s. Finally, Spell and Blum (2005) investigated the role of strategic choice and institutional factors in influencing the adoption of workplace substance abuse programs. Van de Ven and Hargrave (2004) have argued

that attempts to add such a strategic choice perspective to this literature actually bring this group much closer to the institutional design perspective (Van de Ven and Hargrave, 2004: 277).

Finally, the collective action models, located in the top right quadrant of Figure 65, focus on processes initiated by social movements and entrepreneurs pursuing technological innovations, with a particular interest in how new institutional arrangements emerge from interactions among interdependent partisan agents. In this grouping, there was an attempt to examine the political opportunity structures and framing processes surrounding institutional arrangements, as well as networks of distributed and interdependent actors who become embedded in these collective processes. This group took an interest in intentional efforts to produce change, but adopted an industry or interorganisational field as the unit of analysis, rather than the individual actor.

The earlier studies of Leblebici et al. (1991) and Fligstein (1991) both looked at major industry changes as a result of the actions of key individuals and organisations at a field level of analysis. Of current interest to many scholars is the study of institutional entrepreneurship, or those shaping institutions as they emerge to change the nature of industry dynamics (Lawrence, 1999), first called for by DiMaggio (1988). Various studies have looked at the influence of a range of different types of institutional entrepreneurs, including scientists (Zucker and Darby, 1997), researchers (Garud and Ahlstrom, 1997), authors (Hoffman, 1999), sponsors of new technological standards (Garud et al., 2002) and activists (Maguire et al., 2004). New institutional arrangements have also come about as a process of collaboration (Lawrence et al., 2002), central network positions (Greenwood and Suddaby, 2006) that identify institutional contradictions (Seo and Creed, 2002), and the devising of new measurement instruments for corporate social responsibility (Dejean et al., 2004). The most recent literature has taken a keen interest in the different mechanisms of power that entrepreneurs use (Lawrence et al., 2001; Greenwood and Suddaby, 2006), particularly the role of discourse as a key mechanism at their disposal (Abrahamson and Fairchild, 1999; Green, 2004; Munir, 2005; Phillips et al., 2004; Suddaby and Greenwood, 2005).

Figure 65 highlights the limited number of empirical studies of the micro processes of institutionalisation (Covaleski and Dirsmith, 1988; Wicks, 2001; Zilber, 2002). There has however, been a limited response to the call for greater recognition of the role of active agency and choice in institutional change studies, as has been demonstrated in this discussion.

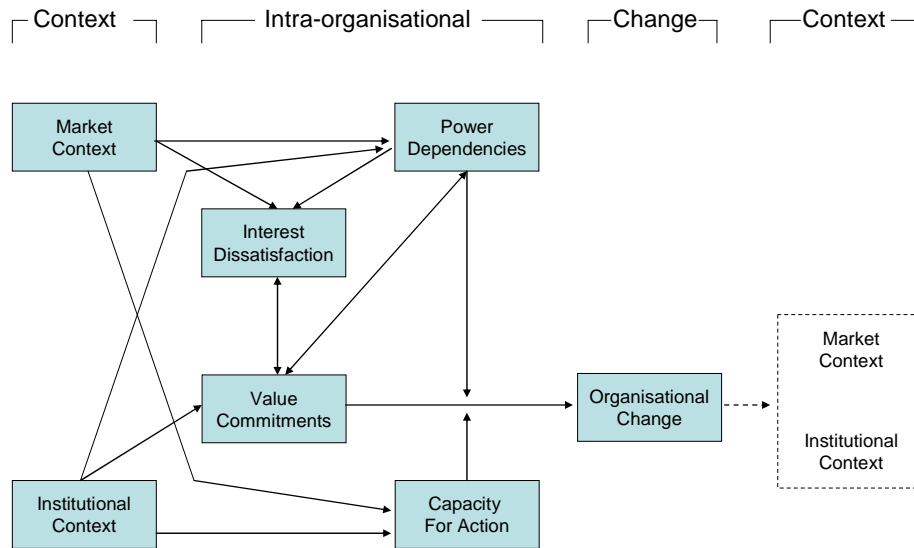
### **Micro-Macro Institutional Change Models**

Figure 65 finally notes a limited number of recent studies that have linked both micro (intra-organisational) and macro (field) levels of analysis, and have also simultaneously recognised the capacity of individuals and organisations to construct and reproduce their environments. Although the institutional entrepreneurship literature has provided a focus on the activities of a number of key individuals and their impact on the broader field, it has generally not linked these examinations to the intra-organisational dynamics that produce and are produced by these actions. Greenwood and Hinings (1996), Barley and Tolbert (1997), Arnt and Bigelow (2000), Farjoun (2002), Seo and Creed (2002), Dorado (2005), George et al (2006) and Reay et al. (2006) are the only known studies that have explicitly drawn attention to this link. Van de Ven and Hargrave do not make this distinction in either their 2004 or 2006 works.

Greenwood and Hinings (1996) proposed a process model (Figure 66) that linked the internal dynamics of the organisation with its institutional and technical environments in such a way as to recognise the old and new institutional literatures on institutional change, particularly as they might apply to understanding radical organisational change. Their model also argued for the need to recognise vested interests and political pressures at an intra-organisational and interorganisational level.

Arndt and Bigelow (2000) investigated how hospital administrators in an institutional environment used different impression management strategies to present innovative changes to their stakeholders in an environment of taken for granted structure that was heavily institutionalised. In a study of 15 not-for-profit hospitals, the authors claimed that hospital administrators created the impression of coercive and mimetic forces even though there were none directly bearing on them (Arndt and Bigelow, 2000: 513). These hospitals did not adopt innovations to increase their legitimacy as per traditional neo-institutional theory, but adopted innovations ahead of other hospitals and created institutional rationalisations for institutional forces in the early stages (Arndt and Bigelow, 2000: 513).

**Figure 66: Greenwood & Hinings' (1996) Institutional Model of Organisational Change**

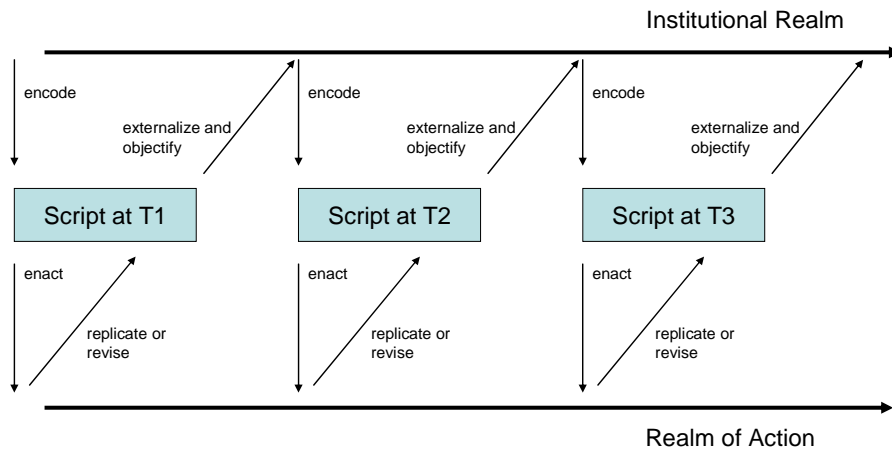


*Source: Greenwood & Hinings (1996: 1034)*

Barley and Tolbert (1997) drew upon Giddens' (1979; 1984) structuration theory and proposed their own sequential model of institutionalisation, illustrated in Figure 67. The vertical arrows in the model refer to the institutional constraints on action while diagonal arrows are modifications to the institution through action. Encoding refers to the processes of socialisation that occur and involve individuals internalising rules and interpretations of behaviour appropriate for certain settings. Enacting scripts means that actors follow them and thus encode institutional principles either consciously or unconsciously. Replication and revision of scripts were argued to occur mostly from intended and conscious attempts to do so, however were also likely to require exogenous changes in their environment before resistance to the previously negotiated order was likely to be put aside.

Changes in technology, cross-cultural contacts, economic downturns, and similar events increase the odds that actors realize that they can (or must) modify an institution (Burns, 1961; Ranson et al., 1980)...People can certainly conceive of alternatives without 'exogenous' changes in the situation. They may even act according to alternative visions of what social life should be like. However, their ability to ferment change is likely to be constrained by the intransigence of others who, in lieu of a disturbance in the status quo, are likely to resist reopening previously negotiated arrangements (Pettigrew, 1987). Thus, we believe that contextual change is usually necessary before actors can assemble the resources and rationales that are necessary for collectively questioning scripted patterns of behaviour (Barley and Tolbert, 1997: 102).

**Figure 67: Barley & Tolbert's (1997) Sequential Model of Institutionalisation**

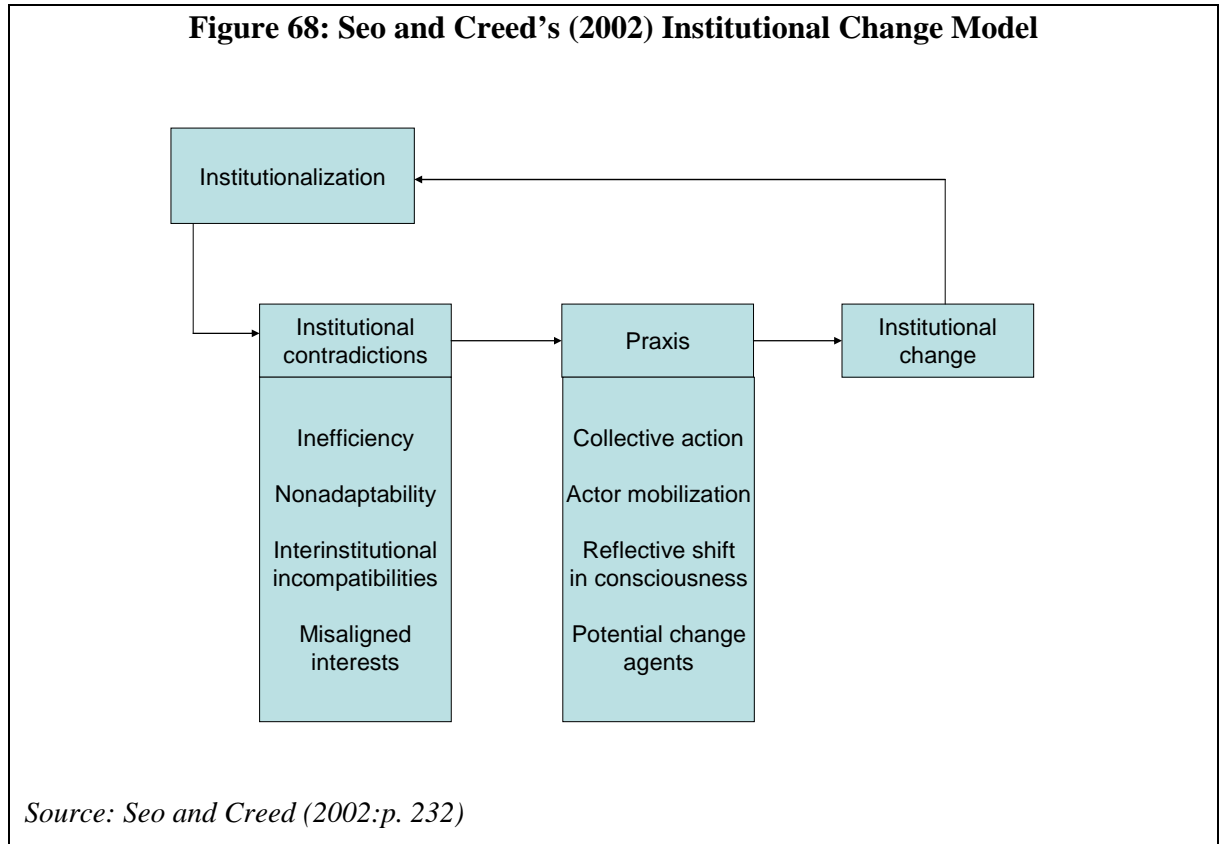


*Source: Barley and Tolbert (1997: 101)*

The final step of institutionalisation requires objectification and externalisation of patterned behaviours and interactions during the period in question, which involve disassociation of patterns with particular actors and particular historical circumstances. The authors subsequently noted that when such a change does take place, the mechanisms through which these changes are encoded and preserved remains an issue to be researched (Barley and Tolbert, 1997: 112).

Farjoun (2002) attempted to draw together a dialectical framework that recognised the contested internal and external influences on organisational decisions and institutional development, particularly within emerging and turbulent fields. Farjoun's model suggests that the very processes of institutionalisation will foster both convergent and divergent forces, including the setting up of endogenous changes from a range of functional, political and social sources (Greenwood and Hinings, 1996; Oliver, 1992). Although internal to the institution, they can also result in external changes in technology, competition and uncertainty. These can result in contradictions in different functional, political and social sources, and lead to opposition from actors with alternative templates who may exploit these contradictions to transform institutions (Oliver, 1991). The path of their

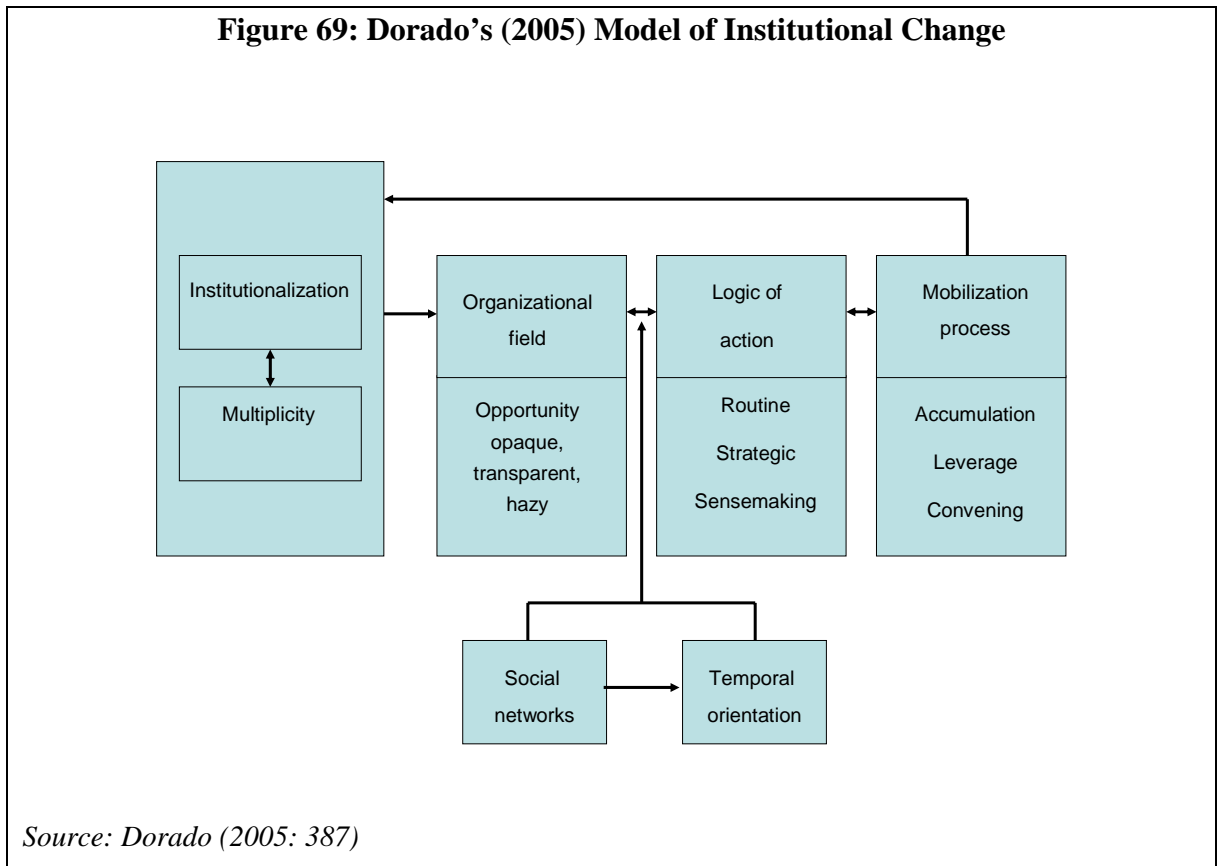
advancement however, is likely to be mediated by historical institutional developments that set up conditions, both internally and externally.



Seo and Creed (2002) similarly proposed a dialectical institutional change model (Figure 68) that depicted the historical development of institutional contradictions and human praxis (defined as “political action embedded in a historical system of interconnected yet incompatible institutional arrangements”[Seo and Creed, 2002, p.223]) as the key mediating mechanisms linking institutional embeddedness and institutional change. Social work was assumed to be in a continuous state of becoming, premised on assumptions of:

- social construction;
- Loosely coupled and fairly autonomous social patterns interconnecting at multiple levels and multiple sectors;
- Contradictions occurring through conflicts, ruptures and inconsistencies between these social systems; and
- Free and creative reconstruction of social patterns on the basis of reasoned analysis.

Dorado (2005) provided another model (Figure 69) that attempted to integrate much of the work in the institutional change field by proposing a process model that accounts for different levels of analysis and different modes of explanation. Dorado argued that institutional change can take the profile of entrepreneurship, partaking or convening. It rebuilds the factors commonly seen as defining institutional change: agency, resources and opportunity (DiMaggio, 1988).



Dorado argued that agency could be routine (Giddens, 1984), strategic (DiMaggio, 1988) or sensemaking (Weick, 1995). Which form actors take depended on their temporal orientation to the past (routine more likely), present (sensemaking more likely) or future (strategic more likely) (Emirbayer and Mische, 1998). Three processes of mobilisation could then follow:

- Accumulation (support and acceptance emerge as the uncoordinated actions of countless actors converge [Van de Ven and Garud, 1993]);
- Leverage (politically skilled actors mobilise support and acceptance [Stinchcombe, 1968]);
- or
- Convening (creation of collaborative arrangements [Lawrence et al., 2002]).



Actors were claimed to identify opportunities for change. However, their ability to do so depended on objective conditions in the organisational field being either impacted by the number and overlap of field referents or by the degree of institutionalisation in the field. These conditions could range from opaque (low multiplicity of arrangements and high institutionalisation), hazy (high multiplicity of arrangements and low institutionalisation) or transparent (moderate multiplicity and institutionalisation). Actors may also perceive these differently depending on their social networks and temporal orientation.

George, Chattopadhyay, Sitkin and Barden (2006) attempted to develop further the cognitive underpinnings of institutional change by integrating the predictions of prospect theory and threat-rigidity hypothesis with an institutional model of change. Their model (Figure 70) focused on an organisational decision maker's interpretation of environmental pressures in predicting isomorphic or non-isomorphic change, depending on whether such pressures were perceived to address primarily threats or opportunities in relation to organisational control or resources.

Finally, Reay, Golden-Biddle and Germann (2006) investigated the micro processes of legitimating change (a new structural nursing role) within a nursing context in Canada. These key micro processes involved cultivating opportunities for change, fitting the role into prevailing systems, proving the value of the new role, and celebrating small wins along the way.

Whilst there has been much activity directed towards understanding institutional change at a range of levels, including recognition of the role of active agency and the operation of different interests in institutional explanations, there is still much work to be undertaken in understanding the micro processes of intra-organisational change and how the activities of these individuals affect broader macro institutional developments. It has been argued that such a development could be enabled by ensuring that the unit of analysis is the change process itself, rather than the collective pattern of institutionalisation (Karnoe, 1997).

**Figure 70: George, Chattopadhyay, Sitkin & Barden's (2006) Cognitive Underpinnings of Institutional Persistence and Change**

		Perception of environmental situation	
		Potential loss	Potential gain
Attribute of organization affected by loss or gain	Resources	<p>Nonisomorphic response (P1)</p> <p>Example: potential loss of funding to a university results in the adoption of new budgetary practices (Covalski &amp; Dirsmith, 1988)</p>	<p>Isomorphic response (P1)</p> <p>Example: Potential for gaining legitimacy (and related resources) causes cities to mimic other cities by adopting civil service practices used by those more established cities (Tolbert &amp; Zucker, 1983)</p>
	Control	<p>Isomorphic response (P2)</p> <p>Example: Decision makers in activist organizations adopt structures and procedures that conform to the expectations of their many constituents so as to retain control (Elsbach &amp; Sutton, 1992)</p>	<p>Nonisomorphic response (P2)</p> <p>Example: The rise of market logic in the field of finance provides an opportunity for the creation of professional finance associations that stake claims for the control and governance of their field (Lounsbury, 2002)</p>

*Source: George, Chattopadhyay, Sitkin and Barden (2006, p.349)*

### **Exogenous and Endogenous Mechanisms of Change**

Another major weakness of institutional explanations of change is the identification of the mechanisms through which change is brought about and their relationship to the change investigated. Depending on which change perspective is adopted from Figure 65, there are a range of different anticipated responses. As a generalisation, the institutional adaptation and diffusion literatures on change typically argue for exogenous sources of change that determine the choices and changes of individual organisations and the broader field at large. Similarly, the institutional design and collective action literatures argue more strongly for the role of key organisations or individuals constructing, shaping and directing these mechanisms of change.

As a result of few studies exploring micro and macro explanations of change, two continuing weaknesses in addressing institutional change have been raised in the literature. The first major weakness is the issue of how the early non-isomorphic changes came to be viewed as legitimate in the first instance (Leblebici et al., 1991; Munir, 2005; Scott, 1987; Reay et al., 2006). There have

been many debates in the field about the relative location of this change focus, such as whether it stems from environmental jolts (Meyer, 1982; Tushman and Anderson, 1986); from areas of the field least subject to isomorphic processes, such as from the field periphery or even outside the field (Powell, 1991); or whether these changes flowed from endogenous sources, such as private agreements within the field and new analogies used to make sense of phenomena (Leblebici et al., 1991), or perhaps the actions of key individuals (Barley and Tolbert, 1997).

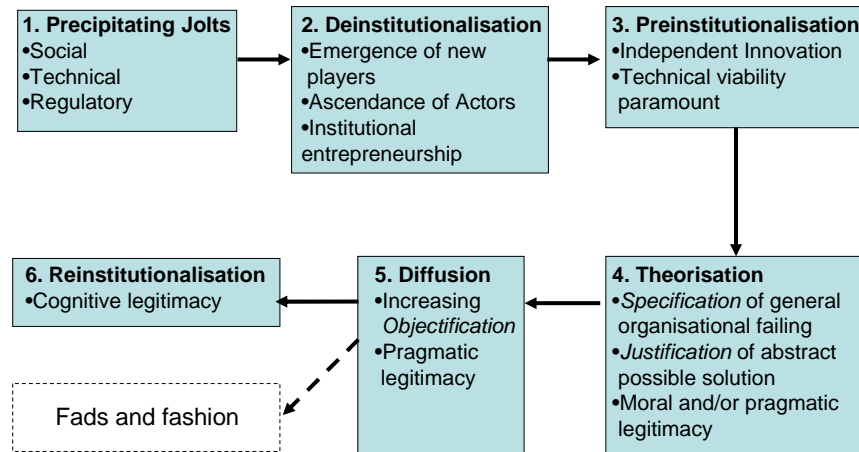
One of the most commonly cited models on institutional change around which some authors have claimed there is developing some degree of consensus (Munir, 2005: 94), is a model produced by Greenwood et al. (2002), shown in Figure 71. This model assumes that change originates from outside the field, drawing upon Hoffman's (1999) study of events (or 'jolts'), and his work in noting the social construction of these events as they were studied. Jolts may take the forms of social upheaval, technological disruptions, competitive discontinuities, or regulatory change. Following these jolts, new players may enter the field and de-institutionalisation of established practices can begin. This process then follows the first pre-institutionalisation, and then leads to theorisation, a process in which actors justify the innovation or why the existing one must be maintained. Widespread diffusion and institutionalisation then occurs.

Munir (2005) argued that theorisation, rather than being just one discrete stage in the process, actually spans the entire process, and is the critical event that brings these changes to the field's attention. Munir claimed that this process then brings the social construction processes back into Greenwood et al.'s model.

Theoretically, Munir's paper raises the broader issue of identifying the relevant mechanisms of institutional change. His thesis is consistent with wide interest in the use of discourse by institutional agents to bring about the changes they desire (Abrahamson and Fairchild, 1999; Green, 2004; Munir, 2005; Phillips et al., 2004; Suddaby and Greenwood, 2005).

More recent papers have explored endogenous changes emanating from the centre of the legal field as a result of network positions exposing institutional contradictions to key change agents (Greenwood and Suddaby, [2006] drawing on Seo and Creed, [2002]). Others have also conducted research into the micro processes of legitimising change within the nursing profession (Reay et al., 2006).

**Figure 71: Greenwood, Suddaby and Hining’s (2002) Model of Institutional Change**



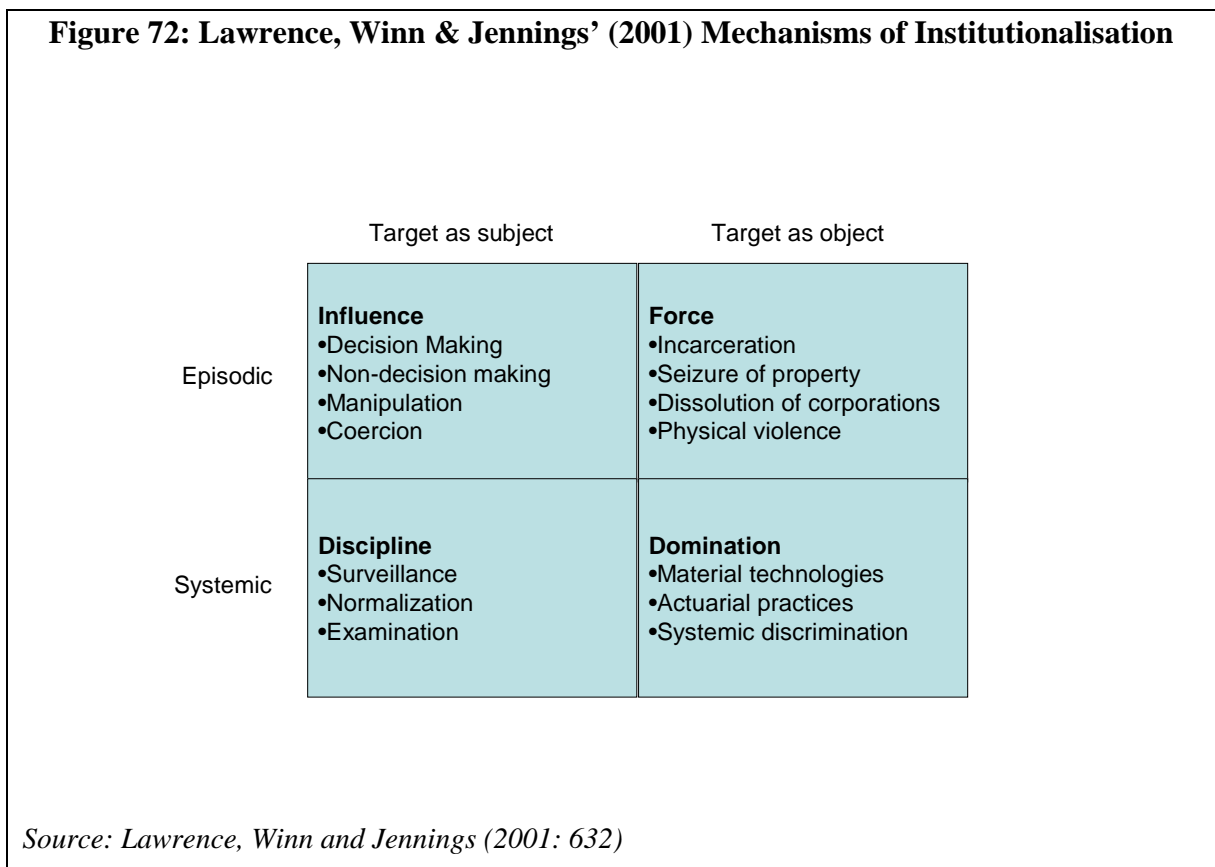
*Source: Greenwood, Suddaby and Hinings (2002: 60)*

The second significant issue raised in the literature is the relationship between the mechanism of change employed, and the relative pace (“the length of time taken for an innovation to become diffused throughout an organizational field”[Lawrence et al., 2001, p.627]) and stability (“the length of time over which an institution remains highly diffused and legitimated”[Lawrence et al., 2001, p.628]) of institutionalisation. Lawrence, Winn and Jennings (2001) are the only known theorists to have explored this issue to date with their theoretical model linking these factors. They proposed that rather than investigate institutional change through the mechanisms of coercive, normative and mimetic influences which do not lend themselves to easy examination of temporal processes, that the mechanisms of power and their relationship to different subjects be brought to the fore.

In other words, a central feature of the institutionalization of an innovation is the set of power relations that supports the process. We argue that such power relations cut across the coercive, mimetic, and normative pressures and allow us to trace the temporal dimensions of institutionalization more directly. Therefore, we develop a typology of institutional mechanisms based on the forms of power agents might employ to support an instance of institutionalization (Lawrence et al., 2001: 629).

A range of agents might choose to use such powers of influence (from individuals through to the state). Lawrence, Winn and Jennings drew upon Clegg’s (1989) Circuits of Power framework in

their analysis. In bringing their work together, they noted four different uses of power, depending on whether or not its exercise was systemic<sup>44</sup> or episodic<sup>45</sup>, and changed agents' assumptions about the capacity for active agency of those affected by such change. Those in power who would treat their targets as subjects assumed their subjects were capable of agency; those who treated their targets as objects assumed that their choices were irrelevant (Lawrence et al., 2001). Figure 72 presents these authors' typology of the institutional mechanisms that evoke change.



Combinations of these different forms of power were then argued to lead to different levels of speed and stability of institutionalisation. The authors suggested that this article complemented Oliver's (1992) de-institutionalisation paper. The issue of agents themselves was also not brought to the fore in their paper. However the authors did argue that integrating them more fully into this work would

<sup>44</sup> "Systemic forms of power work through the routine, ongoing practices of organizations" (Lawrence et al., 2001: 629).

<sup>45</sup> "Episodic power refers to relatively discrete, strategic acts of mobilization initiated by self-interested actors" (Lawrence et al., 2001: 629).

add further to this model. Likewise, investigating the issue of multiple actors has not been explored (Lawrence et al., 2001: 641).

### **Institutions that Constitute and are Constituted By Actors**

Another major issue that is often raised within the institutional change literature is how institutional change is possible if actors are conditioned by the very institutions they wish to change. Seo and Creed referred to this challenge as the “paradox of embedded agency” (Seo and Creed, 2002: 226). This issue flows not just from the previously discussed micro-macro division, but is actually part of a much broader sociological debate associated with the relationship between structure and action.

Ranson, Hinings and Greenwood (1980) were among the first institutional scholars to point out that structure is a complex medium of control that is continually produced and recreated in interaction. Yet structure also shapes that very interaction. That is, structures are constituted as well as constituting. Ranson et al. suggested that such structures are likely to change when organisational members review their interpretive schemes, when contradictions arise in the values and interests that lead to them, when resource availability and other sources of uncertainty undermine dominant coalitions and shift the base of power, when there is a change in the situation contingencies (e.g. size, technology etc), or when these situational constraints become contradictory.

Leblebici et al. (1991) argued that such structures could be changed by fringe players who introduce new practices that are subsequently adopted and gain legitimation by existing players. Thus new patterns of transactions are produced as these new practices are transformed into conventions and then institutionalised practices. Once institutionalised, they create new competitive pressures to seek alternatives outside their bounds (Leblebici et al., 1991: 359). Thus the source of such change is endogenous.

Holme (1995) proposed that nested systems could be a way around this dilemma. This view involved conceptualising new institutions as built from existing institutions, such that there could be first and second order institutions from which institutional change could originate from either level. There is thus a bias towards endogenous explanations of change in accounting for institutional change (Holme, 1995: 401).

Barley and Tolbert (1997), in response to the same dilemma, drew upon Giddens's (1979; 1984) structuration theory and proposed their own sequential model of institutionalisation, illustrated in Figure 67 previously. Their model proposed that action and structure are linked through the conscious and intentional actions of individuals, but not without exogenous changes in the environment to justify a revision of the structural arrangements that powerful others will set aside.

Seo and Creed (2002) proposed their model of institutional change based on actors taking advantage of institutional contradictions as a way in which endogenous sources of change could be recognised within both organisational and field level perspectives. Greenwood and Suddaby (2006) built their model of institutional entrepreneurship on this same foundation of institutional contradictions being acted upon by agents with power to effect change.

### **Drawing Upon Other Theoretical Frameworks**

Another major issue that some institutional scholars have raised in addressing change relates to the way in which some theorists have combined institutional theory with other theoretical perspectives in explaining institutional change. Figure 65 highlighted many of these different perspectives, including the addition of population ecology and a greater focus on power and agency.

One of the more contentious additions to institutional theory has been the popular inclusion of resource dependency theory (Pfeffer and Salancik, 1978) with institutional theory, the probable result of the recognition of both institutional and technical environments affecting organisations. Much of this literature is seen under the strategic choice, old institutional theory and institutional entrepreneurship headings in Figure 65. At the beginning of this appendix, a number of similarities and differences between these two theories were identified. In sum, both of these approaches promote high level structural explanations. However, resource dependency is more realist in its explanations, without acknowledging the social construction of reality as institutional theory does.

The problem with this combined approach, some theorists have argued, is that it can be difficult to distinguish between the two sources of explanations at different times (Zucker, 1977/1991, 1987/2002; Tolbert and Zucker, 1996). Tolbert and Zucker (1996) have argued that to "purify" the institutional model from its resource dependency "impurities", attention would have to be directed to a phenomenon that was not subject to either law or the withholding of critical resources, or where the material benefits associated with the structure were not readily calculable.

Other institutional theorists however, have called for the introduction of active agency and economic considerations into institutional theory (Greenwood and Hinings, 1996; Kondra and Hinings, 1998; Oliver, 1992). Indeed, some institutional scholars have found that in certain institutional environments, such as US higher education, the predications of neo-institutional theory were insufficient to account for change in those organisations in the absence of resource dependency explanations (Kraatz and Zajac, 1996).

Contemporary attitudes towards this issue seem to encourage a more eclectic institutional theory that draws upon institutional, technical and social sources of change, following Oliver (1992) (Dacin et al., 2002). Such efforts appear to be more interested in building bridges rather than walls between the two approaches in advancing explanations of institutional change (Zucker and Darby, 1997). Future research may heed the original cautions of this approach however, and seek to identify the different parts that each of these theories might contribute to explanations of change. For example, Sherer and Lee (2002) concluded from their study of institutional change in large law firms that resource scarcity drives change, however legitimacy enables it to occur.

### **Explaining Emerging Industries and New Technologies**

In his review of institutional theory in 1995, Scott claimed that the early field of institutional theory was biased towards mature and stable fields (Powell 1991), whereas emerging and turbulent fields were relatively unexplored (Scott, 1995: 147). As institutional theory has matured, so has its interest in emerging fields.

One of the key questions that institutional scholars with an interest in emerging industries and new technologies have asked is how new organisations, entrepreneurs and industries develop the legitimacy they require to be taken for granted and accepted by other organisations, such as government, given the liability of newness (Aldrich and Fiol, 1994) and the critical importance of establishing legitimacy (Zimmerman and Zeitz, 2002). This question is in many ways similar to the challenge of explaining how the early non-isomorphic changes came to be viewed as legitimate in the first instance.

Various institutional studies have sought to investigate the politics and strategies involved in structuring the forensic accounting industry (Lawrence, 1999), developing cochlear implant



technologies (Garud and Ahlstrom, 1997), fostering the development of new biotechnology firms (Zucker and Darby, 1997), establishing pricing conventions in the online database industry (Farjoun, 2002), institutional entrepreneurship in the computer industry (Garud et al., 2002), treatment of AIDS (Maguire et al., 2004), and establishing corporate social responsibility among for-profit business organisations in France (Dejean et al., 2004). As can be seen in Figure 65, the great majority of these studies are part of a contemporary interest in the activities of institutional entrepreneurs in constructing change across organisational fields.

Maguire et al. (2004) argued that mature fields represent well structured configurations of actors who are aware of their involvement in a common enterprise, and, where there is an identifiable pattern of domination, subordination, conflict and cooperation. In emerging fields, there is little coordinated action. Mature fields have widely diffused institutions that are highly accepted by actors, whereas emerging fields are more narrowly diffused and only weakly entrenched (Lawrence et al., 2002). Emerging fields therefore open up opportunities for opportunist institutional entrepreneurs (DiMaggio, 1988; Fligstein, 1997). Typical isomorphism mechanisms are also argued to be weak here.

Whilst much has been learned about the roles and strategies of various institutional entrepreneurs, studies of emerging industries remain a fruitful terrain for institutional theorists and represent a somewhat slighted area of research. Although various studies have explored the key roles of individuals as institutional entrepreneurs, there is still much to be done in comparing the role of both individual and organisational entrepreneurship efforts (Maguire et al., 2004), and investigating the environmental conditions that lend themselves to institutional entrepreneurship (Zimmerman and Zeitz, 2002: 429).

### **Reconciling the Old and New Institutionalisms**

Earlier in this appendix, the development of institutional theory into old and new streams was discussed in some detail. Following this analysis, a number of shortcomings in institutional theory's attempt to account for change were explored, including a lack of focus on individuals, interests and active agency; debates related to the actual mechanisms of change and where they resided; problems with examining structures that constitute and are constituted by actors; the challenge of drawing upon additional theoretical frameworks, and the recognition of the importance of studying emerging industries and technologies. One of the final issues that periodically arises within the

eclectic body of institutional theory is the call for a reintegration of old and new streams of institutional theory. It is argued that such a reintegration would help to address many of these concerns.

Several of the old institutional theorists have called for new institutional theory to recognise the contributions of the old institutional analysis. Selznick (1996) for example, has argued that the new approach deflates rationality, system and discipline, and may even be post-modern and deconstructionist. Instead, he argued that the new theory must find its place in the traditions of the old that was deeply interested in the vitality and coherence of institutions. Stinchcombe (1997) has similarly argued for the need of new institutional analysis to recognise the central role of people in the study of institutions.

In short, the trouble with the new institutionalism is that it does not have the guts of institutions in it. The guts of institutions is that somebody somewhere really cares to hold an institution to the standards and is often paid to do that. Sometimes that is somebody inside the organization, maintaining its competence. Sometimes it is an accrediting body, sending out volunteers to see if there is really any algebra in the algebra course. And sometimes that somebody, or his or her commitment, is lacking, in which case the center cannot hold, and mere anarchy is loosed upon the world (Stinchcombe, 1997: 17-18).

Hirsch and Lounsbury (1997b) have also noted this same weakness of new institutional theory to recognise the valuable contribution of people. They further argued that in doing so, it would actually undercut the very distinction that the framers of new institutional theory would seek to uphold.

The problem that new institutionalist research has run into is that most empirical efforts have focused on environmental changes that are not effectively linked to the activities of individuals and organizations... This ambiguity regarding the neoinstitutional theory of action is at the core of its weakness... If neoinstitutional researchers allow for interests and political action to enter into institutional explanations, however, their clear bifurcation between old and new institutionalism will be undercut (Hirsch and Lounsbury, 1997b: 83).

Selznick (1996) was one of the first theorists to question the splitting of the two streams and recommended reintegrating them again, as change can emanate from both internal and external environments.

Institutional theory traces the emergence of distinctive forms, processes, strategies, outlooks and competences as they emerge from patterns of organizational interaction and adaptation. Such patterns must be understood as responses to both internal and external environments (Selznick, 1996: 271).

Hirsch and Lounsbury (1997b) have called for a similar reintegration to encourage multiple levels of analysis, a focus on political arrangements, and a study of the mechanisms of how and why change occurs.

Also needed is a careful delineation of how various levels of institutional structure inform each other and how political action and commitments change institutional structures. The current framing of neoinstitutionalism does not allow for a satisfactory accounting for how and why change happens. What are the mechanisms?...We argue that efforts to synthesise these perspectives would be a step toward reconciling some of our current inabilities to address action and change (Hirsch and Lounsbury, 1997b: 85).

These authors argue further that such a combination would actually help integrate a focus on micro and macro levels of analysis, a key weakness of the current institutional literature already discussed.

Analytically, institutionalist thought has gained from learning to acknowledge the more structural mechanisms of the new and recognizing their importance and/or role in complementing old studies of single organizations, organization sets, or industries and the understanding of the politics and institutions that surround them. The expanded intellectual division of labor made possible by studies at different levels of abstraction taking institutions as dependent (old) and independent (new) variables offers an exciting prospect for expanding the discipline's capacity to explain multiple aspects of the same phenomenon (Hirsch and Lounsbury, 1997a: 410).

Reintegration of the two streams would involve a renewed focus of the new institutional analysis on the relationship between the activity of individuals and organisations and broader environmental and institutional changes. A study of the micro and macro determinants of change has been a continuing weakness in institutional analysis. However, such a study would actually improve multiple level explanations of the same phenomenon, particularly how and why change occurs. Past discussion of this issue around the literature on Figure 65 indicated that there are few such studies in institutional theory.

Responding to this challenge, Greenwood and Hinings (1996) put together their Institutional Model of Organisational Change (Figure 66), which sought to combine the approaches of old and new institutionalism by investigating the processes of change within individual organisations, in the context of an organisational field. Their model also combined institutional insights with recognition of the need to include interests and active agency in these explanations. Greenwood and Hingins proposed that the key theoretical question that could integrate both institutionalisms in exploring change was:

What are the processes by which individual organizations adopt and discard templates for organizing, given the institutionalised nature of organizational fields (neo institutionalism) (Greenwood and Hinings, 1996: 1041)?

Hirsch and Lounsbury (1997b) similarly called for more historical studies that could examine the mechanisms through which major changes and events were accomplished at a micro and macro level of analysis.

We also need to get back to the fundamentals of how change happens. What are the basic motors of change, and how do organizational actions interact with macro forces to shape and influence outcomes (Hirsch and Lounsbury, 1997b: 86).

Only one known empirical study has sought to combine the insights of both old and new institutionalism at a micro and macro level of analysis to date (Arndt and Bigelow, 2000).

Given the limited number of studies that have combined the insights of old and new institutional theory at a micro and macro level of analysis, it is argued that this study has a significant opportunity to contribute to the further development and reconciliation of institutional theory. A fuller discussion relating to how this research could contribute to the institutional theory literature, particularly around the issue of institutional change, is discussed in the next and final section of this appendix.

## **OPPORTUNITIES TO CONTRIBUTE TO INSTITUTIONAL THEORY**

This appendix began with a general introduction to the core concepts of institutional theory, and those from other theoretical traditions that have been applied within it. These concepts were defined and related to one another, as well as to a range of other commonly applied frameworks within organisation studies. Figures 61 and 62 framed the essence of much of this discussion.

It was then argued that institutional theory was a particularly suitable theoretical framework to explore the research problem raised in chapter one of this thesis. This appendix then drew upon five arguments from DiMaggio's (1988) work as a framework to argue for the contribution of an institutional theory conceptual framework to the empirical research problem identified in chapter one.

Finally, a review of the institutional change literature was discussed within the context of several dichotomies, tensions and new directions in the institutional theory literature. At the broadest level, this appendix identified a weakness in institutional theory's capacity to explain the process of institutionalisation, even though this has been recognised as a fundamental tenet of the theory since at least 1977 (Zucker, 1977/1991). Within the institutional change literature, several particular difficulties were identified from which further contributions to this theoretical literature could be made. Figure 73 summarises three opportunities for major contributions to institutional theory.

### **Figure 73: Opportunities for Contributions to Institutional Theory**

1. Develop micro level explanations of institutional change, particularly within individual organisations, and explore the relationship between individuals within organisations and the broader field (i.e. explore the illusory micro-macro link). It was argued that this could be enabled by adopting a unit of analysis that focused on the processes of institutional change and the vested interests, political pressures and active agency of individual actors that underlie them.
2. Investigate the sources and mechanisms that facilitate institutional change, particularly those that legitimate non-isomorphic change, and explore how these impact upon the pace and stability of institutional change.
3. Integrate the old and new institutionalisms by addressing the above suggestions.

This study could make a modest contribution to some of the above areas. Research questions one and two help to uncover the processes and mechanisms of institutional change within selected universities, and the influences that different individuals with vested interests, political influence and active agency exerted on these processes. These questions could address a significant weakness in institutional theory in explaining the process of institutionalisation. More particularly, following calls from the literature, these questions could also explore how institutional change occurs within individual institutions, here universities made up of active agents with vested interests and political strategies.

Research question three addresses the impact of the evaluation and adoption of various learning management systems on a range of university outcomes. In addition to assessing impact on educational and financial outcomes, this research could also seek to account for the extent to which these decisions influenced the subsequent pace and stability of the institutionalisation processes associated with these adopted technologies. This question therefore provides an opportunity to evaluate the predictions of Lawrence, Winn and Jennings (2001) with respect to the relationship between various mechanisms of institutional change (research question two), and the pace and stability of institutionalisation (research question three).

The final research question could assist to reconnect the much needed study of intra-organisational change processes with broader developments in the field. This appendix has already discussed the need to further explore the micro-macro link within the institutional change literature. Building up from individual organisational explanations to the broader field level contrasts with the usual top-

down approach of the institutional diffusion literature and much of institutional theory (Karnoe, 1997: 421). This question also enables exploration of the location of the institutional change pressure, particularly whether such pressures were primarily endogenous or exogenous. This question could therefore address the previously discussed weakness of institutional theory in identifying the location and nature of these triggers of institutional change. To the extent to which early organisational examples of institutional change can be found, it may also be possible to address the question of how the early non-isomorphic changes in the field came to be seen as legitimate in the first instance. This thesis therefore attempts to contribute simultaneously to both the higher education and organisation studies literatures.

## **Appendix Three: Coding and the Assistance of Qualitative Software**

### **CODING OF TEXTS**

The “heart and soul” of textual analysis is coding (Ryan and Bernard, 2003). Many authors who have written on coding have cited the work of Strauss (1987) and Strauss and Corbin (1998; 1990) for their advice on coding approaches (Miles and Huberman, 1994; Neuman, 2003; Ryan and Bernard, 2003). This is because grounded theory analysis begins with the open coding of a set of empirical indicators or actual data of actions and events (Strauss, 1987). This kind of analysis is necessary at the start of the analytical process to generate initial categories, properties and tensions, and help the researcher to think about the relationships between them (Strauss and Corbin, 1998).

Codes are indicators of a concept the analyst derives from them with increasing certainty, based on constant comparison of indicator to indicator (Strauss, 1987). The researcher then codes and names these as indicators of classes of events and actions. By comparing indicator with indicator, the researcher notes similarities and differences which result in coded categories. Indicators are then compared to the emergent concept and codes sharpened to achieve best fit with the data. Coding also involves discovering and amending categories and associated subcategories in the same lines of data, or around them in the broader text, or even in different texts (Strauss, 1987).

Some qualitative authors have suggested that codes are formed from the conceptual lens of the study, whether consciously identified or not (Miles and Huberman, 1994). Grounded theory researchers have argued against this imposing of “extant theories”, or one’s own beliefs on the data, arguing for a more emergent process that helps to keep developed theory true to the subject’s views of the world (Charmaz, 2000: 515) and allow the data to speak for itself (Strauss and Corbin, 1998: 59).

Strauss (1987) has argued that codes may be developed to indicate conditions, interaction among actors, strategies and tactics, as well as consequences (Strauss, 1987: 27-28). Conditions are sets of events or happenings that create the situations, issues and problems pertaining to a phenomenon. They explain why and how people respond in certain ways, and can arise out of time, place, culture, rules, regulations, beliefs, power, etc. They can be seen in phrases like ‘because’, ‘since’, ‘as’ or ‘on account of’. Conditions may have many different properties, including micro or macro

influences, be stable or change over time, and combine with others factors. Strauss further argued that researchers should look for causal (influences on phenomena), intervening (mitigate or alter the impact of causal conditions, often out of contingent events) and contextual variables (patterns of conditions that intersect at a particular time and place to create a set of circumstances that led to the observed phenomenon).

Strategic or routine tactics refer to how people act — actions/interactions. They can be routine or more strategic. This coding class represents what people and units do and say.

Finally, consequences may be intended or unintended, and affect the conditions for the next round. Consequences may be seen in phrases such as ‘as a result’ and ‘because of’ (Strauss, 1987).

Glaser (1992) took issue with Strauss’ (1987) framework, and claimed that Strauss’ push for conditions, consequences and strategies failed his quality test for relevance, and results in forcing the data (Glaser, 1992: 53). Glaser proposed instead that codes should emerge through constant comparison.

Codes can range from being descriptive to interpretive, and can also include the setting, definition of a situation, perspectives, ways of thinking, processes, activities, events, strategies, relationships, and methods (Miles and Huberman, 1994). It is probable that there will at times be multiple codes for each chunk of data (Miles and Huberman, 1994). What is most important in coding however, is ensuring that there is a good structure behind the codes, with well supported definitions and terms that are close to the data they describe, where possible (Miles and Huberman, 1994).

To assist researchers in the open coding process, Strauss developed the following rules of thumb (Strauss, 1987: 30):

1. Look for in-vivo codes used by respondents (Glaser and Strauss, 1967);
2. Give a provisional name to each code, whether in-vivo or constructed by the analyst;
3. Ask a battery of questions about words and phrases in line by line analysis;
4. Move quickly to dimensions that seem relevant to given words and phrases; and
5. Remember that these dimensions should quickly call up comparative cases or lead to various conditions, actions/interactions and consequences.



Strauss (1987) also suggested writing frequent memos during the coding process, for writing down the different thoughts, categories, subcategories and possible explanations and further samples. Attempts should also be made to 'dimensionalise' the different items coded. Strauss (1987) and Strauss and Corbin (1998) also suggested that not every word be coded, but the document should be scanned for relevant instances, or the different instances or variations of those concepts (Pidgeon and Henwood, 2004: 637). These authors also suggested the substantive literature could be consulted to help examine the data from the core texts, however coding should not be drawn from substantive theory unless it fits the text on a line-by-line basis (Strauss, 1987: 283). Miles and Huberman (1994) finally suggested that when open coding in case studies, code the research data from one site before the next or going back.

Following open coding, grounded theorists then recommend researchers move onto axial coding, although this type of coding can be done at the same time as open coding (Strauss and Corbin, 1998; Charmaz, 2000). Axial coding refers to the act of relating categories to subcategories along the lines or axes of their properties and dimensions (Strauss, 1987: 64). Categories are a problem, issue, event or happening that is defined as significant to the respondents (Strauss and Corbin, 1998). A subcategory is a category that answers questions about the phenomenon of interest, such as when, where, why, who, how and with what consequences, giving greater theoretical power (Strauss and Corbin, 1998). Properties are the general or specific characteristics or attributes of a category, whereas dimensions represent the location of a property along a continuum or range (Strauss and Corbin, 1998: 117). Strauss and Corbin (1998) suggest trying to locate each property of a category along its dimensions, promoting a grouping according to these attributes. Linking of these takes place at a conceptual level, not a descriptive one (Strauss and Corbin, 1998).

Categories turn description into conceptual analysis by specifying properties analytically (Charmaz, 2000: 517).

Axial coding progresses by:

1. Laying out the properties of a category and dimensions that begins during open coding;
2. Identifying a variety of conditions, actions/interactions and consequences associated with a phenomenon
3. Relating a category to its subcategories through statements denoting how they are related to each other; and
4. Looking for cues in the data that denote how major categories might relate to each other (Strauss and Corbin, 1998: 126).

Other grounded theorists have suggested making use of the six C's in coding at this level: causes, contexts, contingencies, consequences, covariation and conditions (Pidgeon and Henwood, 2004: 639; Kan and Parry, 2004). These line up with the independent variable, dependent variable, context, moderating variables, correlations and intervening variables in "equivalent nomothetic concepts" (Kan and Parry, 2004: 472). Despite the fact that this was criticised by Glaser (1992) for forcing, there is still great value in this framework, particularly if an emerging analysis framework is adopted, such as in this research.

Strauss and Corbin (1998) suggested three additional techniques that could be used to develop axial codes further at this stage of analysis:

1. The flip-flop technique, where concepts are turned upside down or inside out to gain a different perspective on the extremes or opposites to bring out important properties;
2. Systematic comparison to the researcher's own experiences and the literature, to help sensitise the researcher to properties in the data; and
3. Watching for uncritical bias by accepting all explanations of respondents, such as 'always' and 'never'.

After the development of the axial codes, it has been suggested that these codes be "tried out" on the next data set or case study for fit (Miles and Huberman, 1994). A range of questions could then be asked on this data, such as "What are the conditions under which it holds?" "When does it need to be qualified?" (Miles and Huberman, 1994). Strauss and Corbin (1998) proposed that their conditions-action/interaction-consequences matrix be revisited each time to investigate how these categories change in each case.

Following axial coding, the grounded theorist then moves onto selective coding. This stage involves the researcher deciding which category or categories are central to the research project, in pursuit of a core category. Subordinate categories must then be systematically related to the core category (Strauss, 1987: 69). Unrelated minor categories that do not relate to the core category are then encouraged to be discarded (Strauss, 1987).

The first step in selective coding involves identifying the central category that represents the main theme of the research. It is a few words of what the whole research is about and is itself an abstraction. It must be able to handle lots of variation and can evolve out of a list of existing

categories or be more abstract. Strauss (1987: 36) provided some criteria for choosing this core category:

1. Must be central and all other categories relate to it;
2. Must appear frequently in the data;
3. Explanation evolves is logical and consistent — no forcing;
4. Name or phrase sufficiently abstract to help other research in other areas;
5. Theory grows when refined with other concepts; and
6. Able to explain variation as well as main points in data. That is, when conditions vary, the explanation holds. The core category should be able to explain alternative cases in terms of the central idea.

Strauss and Corbin (1998) proposed that analysis should be concluded by mapping the relationship between the conditions, consequences and actions/interactions. They claimed that this will rarely follow a linear path (Strauss and Corbin, 1998: 183), and may involve a complex interplay between many possible conditions residing in the past, present or future anticipated, or even in contingencies considered (Strauss and Corbin, 1998: 184). Further, they also recommend considering the role of individual, group, sub-organisation, family, organisation, institutional, community, regional, national and global influences. Finally, the interplay between macro and micro conditions and how these affect not only each other, but their actions/interactions and consequences and next round effects should also be considered.

This thesis, in adopting a grounded theory analytical framework discussed in chapter two, makes use of the coding protocols suggested by the previous grounded theory authors. These coding procedures have not been conducted manually however, as there are now a range of different qualitative software tools that have been designed to assist with this kind of analysis.

## **CODING AND THE USE OF QUALITATIVE SOFTWARE**

Before computer programs were developed to assist with qualitative data analysis, emergent data analysis approaches involved taking two copies of all work, and cutting up the second by analytic tags to get all the information out on particular topics (Lee and Fielding, 2004). A related challenge was, therefore, moving backward and forward between chronologically and topically organised data. Computer based approaches to storage, searching and operation have been argued to be far superior to manual approaches, and also assist with audit trails (Lee and Fielding, 2004: 534).

Qualitative data analysis software can help to search, mark up, link, reorganise data, represent or store one's own reflections, ideas and theorising. Some of the most cogent reasons for using such software are for consistency, speed, representation (for example, drawings and diagrams) and consolidation (pulls all the different types of data together) (Weitzman, 2003: 316-317).

Researchers need to be careful of the conceptual assumptions that can underpin some programs, such as having hierarchical relationships among concepts. Sometimes relationships will be non-hierarchical; if so, another program should be used or the research should work around this feature by keeping a code map pinned to the wall (Weitzman, 2003).

Simply put, software can provide tools to help you analyze qualitative data, but it cannot do the analysis for you, not in the same sense in which a statistical package like SPSS or SAS can do, say, multiple regression (Weitzman, 2003: 314).

Most software packages now provide good support for code-based analysis and more conceptual work, with much of the analysis often tied to grounded theory approaches (Lee and Fielding, 2004: 539). Theory building programs have code and retrieve functions that can analyse relationships between codes and data, as well as help develop higher order classifications, formulate propositions which fit the data and test how they apply, as well as develop visual connections between the codes to help conceptualisation (Lee and Fielding, 2004: 532). The role of simple tables and matrices however, such as those used by Miles and Huberman (1994), should also be considered (Lee and Fielding, 2004: 532). A range of possible qualitative software programs was recommended, including Atlas, Hyperresearch, and NVivo (Lee and Fielding, 2004: 532). The next section of this chapter explains and justifies the use of NVivo software in this research.

## **NVIVO QUALITATIVE SOFTWARE**

NVivo, formerly Nudist, is qualitative data analysis software designed explicitly to keep up with most qualitative approaches, including grounded approaches, through its memo, coding, analysis and charting functions (Bazeley and Richards, 2000; Charmaz, 2000; Kan and Parry, 2004; Soliman and Kan, 2004). NVivo has been argued to be effective particularly in consolidating data and theory, exploring the data consistently, and for its speed and representation to assist in theory building (Soliman and Kan, 2004; Weitzman, 2003). Its ease and flexibility of coding and memoing were also noted (Soliman and Kan, 2004: 4). In a grounded study of leadership, NVivo was successfully used to:

- Store and categorise interview transcripts, memos and other documents;

- Create categories through computer-assisted coding;
- Conduct searches relevant to analysis to generate reports;
- Move and link data as higher order themes emerged; and
- Create basic hierarchical models of codes (Kan and Parry, 2004: 473-474).

Despite NVivo's strengths as an appropriate software tool to assist grounded data analysis, there have been several criticisms noted of this package. First, Glazer (1998) has argued against the use of software in general, as he claims that it tends toward pattern analysis and description, rather than theory building (Soliman and Kan, 2004: 3). Others have argued that using NVivo can lead to lazy research and shortcuts (Soliman and Kan, 2004), and the risk of becoming locked into a "one-dimensional view of qualitative research" (Charmaz, 2000: 521).

Soliman and Kan (2004) have countered these criticisms, however, by asserting that the methodology and researcher must drive the software, and not the other way around. They argue that when researchers do not reflect upon the conceptual assumptions behind the software, then these criticisms can be justified (Soliman and Kan, 2004: 4). This is not the case when a well thought through methodological framework and researcher direct the software however (Bazeley and Richards, 2000).

A final criticism of the NVivo software that Soliman and Kan noted was that at higher levels of theoretical abstraction, presumably when moving towards core category codes, the software became slower, immobile, and visually constrictive. These authors suggested that more manual orientated approaches, such as using large paper displays, be used instead.

## Appendix Four: Case Study Interview Questions

The following semi-structured interview questions were submitted to the UTS Human Research Ethics Committee in December 2004. As semi-structured interviews however, the actual questions asked were much more reactive with the previous responses of the case respondent, and were therefore not likely to be uniform across interviews.

### Respondent Details (recorded in writing)

- a. *Name:*
- b. *Position and university:*

### Context of Adoption (first of the interview questions)

1. *When did this university first adopt internet-based online learning technologies within its teaching programs?*
2. *How would you describe this university and the broader higher education sector at that time?*
3. *To what extent did this university make use of other technological innovations within its teaching programs at that time?*

### Construction of an Online Learning Agenda

4. *How was the agenda for online learning constructed? i.e. How did online learning come to be first considered within this university's teaching programs?*
5. *What were the main arguments in support and opposition of adopting online learning at that time?*
6. *Who were the main proponents of these various arguments?*

### Critical Evaluation of Online Learning

7. *To what extent do you believe this university critically evaluated online learning at that time?*
8. *Who was responsible for this evaluation and what was the process they followed, if any?*
9. *To what extent do you believe other factors, parties or interests may have affected this evaluation?*

### Decision Making and Adoption

10. *To what extent did this university adopt online learning technologies at that time?*
11. *Who was responsible for making this decision and what was the process they followed, if any?*
12. *To what extent do you believe other factors, parties or interests may have affected this decision?*

### Reflection upon the Central Research Problem

13. *In your opinion, why do you believe this university adopted online learning?*

### Other Sources

14. *Which other parties do you recommend I speak to in researching this issue?*
15. *What documents can you recommend or supply that provide further information about these matters?*

## Appendix Five: Field Level Interview Questions

The following semi-structured interview questions were submitted to the UTS Human Research Ethics Committee in December 2004. As semi-structured interviews however, the actual questions asked were much more reactive with the previous responses of the field respondent, and were therefore not likely to be uniform across interviews.

### **Respondent Details (recorded in writing)**

- a. *Name:*
- b. *Position and university:*

### **Context of Adoption (first of the interview questions)**

1. *When did you first become aware of internet-based online learning technologies being considered by universities in Australia?*
2. *How would you describe the broader higher education sector in Australia at that time?*

### **Construction of an Online Learning Agenda**

3. *How was the agenda for online learning constructed? i.e. How did online learning come to be first considered within Australian universities' teaching programs?*
4. *What were the main arguments in support and opposition of adopting online learning at that time?*
5. *Who were the main proponents of these various arguments?*

### **Critical Evaluation of Online Learning**

6. *To what extent do you believe Australian universities critically evaluated online learning at that time?*
7. *Who was responsible for these evaluations and what was the process they followed, if any?*
8. *To what extent do you believe other factors, parties or interests may have affected these evaluations?*

### **Decision Making and Adoption**

9. *To what extent did various Australian universities adopt online learning technologies at that time?*
10. *Who was responsible for making these decisions and what was the process they followed, if any?*
11. *To what extent do you believe other factors, parties or interests may have affected these decisions?*

### **Reflection upon the Central Research Problem**

12. *In your opinion, why do you believe universities in Australia adopted online learning?*

### **Other Sources**

13. *Which other parties do you recommend I speak to in researching this issue?*
14. *What documents can you recommend or supply that provide further information about these matters?*

## **Appendix Six: Refereed Publications Produced During this Thesis**

### **REFEREED JOURNAL ARTICLES**

- PRATT, J. (2005) The Fashionable Adoption of Online Learning Technologies in Australian Universities, *Journal of the Australian and New Zealand Academy of Management (JANZAM)*, 11, 57-73.

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- PRATT, J. & ALEXANDER, S. (2004) Network Theory's Contribution to an Institutional Examination of the Adoption of Online Learning Technologies in Australian Universities. *20th EGOS Colloquium*, Ljubljana, Slovenia.
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