



Challenging hierarchies: The impact of e-learning

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Abstract. New developments in e-learning and increasingly sophisticated learning technologies are beginning to make a major impact in U.K. universities. It is clear that universities need to change to accommodate the impact of technology on learning. Communication technologies that are free from time or place constraints provide new challenges to universities on how they should be organised. The paper reflects on the university's strategic planning process and outlines the development process of an e-learning initiative. Examples of the emergent change agenda are identified and finally possibilities for future development are explored. It is clear that the impact of e-learning will require universities to re-think fundamentally their thinking and therefore their strategies in a whole range of areas. There has been much focus on technological advancement but much less on how technology impacts on strategic planning. This paper addresses this gap in the literature by examining one university's strategic responses to this challenge of e-learning. The learning attached to this case study could be used to help other universities respond to the change agenda brought about by e-learning.

Introduction

Modern universities, UK and worldwide, are typically large and complex organisations; many of them have turnovers in excess of £100M per annum and are responsible for more than 2,000 staff and 20,000 students. The range of courses offered, the diverse nature of their students and the continuing change that characterises higher education compounds their complexity. Additionally there is increasing pressure from central Government for universities to achieve ever-higher levels of performance and improve value for money, as evidenced by the 2003 White Paper. Indeed governments across the world are keen to explore ways in which they can reduce their contribution to the funding of universities by encouraging commercial investment, academic partnerships and economies of scale. At the same time they appreciate the necessity of raising the skills and qualification attainment of their populations. The higher education marketplace has become much more competitive with students having an abundance of performance information from which they can select their preferred university. Educational patterns are also changing rapidly: there are many more part-time students, mature students and students from more diverse backgrounds, often with lower levels

of qualification. Further there is little sign of these developments abating in the future.

New developments in e-learning and increasingly sophisticated learning technologies are beginning to make a major impact in UK universities, partly in response to these trends. As Inglis et al. (2002, p. 33) emphasise, "The key factor now driving change is technology". Inglis et al. continue by noting changes in education: "In both education and training there is a shift to offering greater flexibility in relation to time, place, pace, entry and exit" (p. 33). Advances in technology coalesce with the requirement for universities to be more flexible. More universities in the USA and the UK are starting to embrace the use of technology to deliver programmes. Education leaders in the USA, e.g. Drucker (1993) and Oakley (1997), predict that, unless universities change radically, they will cease to exist in the twenty first century. As far back as 1967, McLuhan visioned 'the global village' and Hanna (2000, p. 8) prophesies that "McLuhan's concept of the global village is about to come to life for every person on the planet". E-learning and the Internet are seen as the ideal medium to create a global village (Inglis et al. 2002; Laurillard 2002; Evans and Nation 2000) and universities are expected to be at the centre of the move towards the 'global village' Wilson (2000, p. 39) highlights this:

... some of the biggest changes for universities will stem from further advances in I.T. ... a capacity for interactive networking which will connect any university to a global audience.

As David Seymour, President of Qsystems, claims: "We are kidding ourselves if we believe that educating people for the year 2000 is essentially the same as educating them for the year 1975. Everything has changed – technology, lifestyles, cultures. Our educational systems must change as well" (Buck 1997, p. 19). Communication technologies that are free from time or place constraints provide new challenges to universities on how they should be organised. The Higginson Report on the use of new technologies in further education concluded that:

colleges are looking to new technologies and their applications to learning to help them improve productivity, to manage planned growth, to help reconstruct the curriculum in modular and unitary forms, and to keep track of an increasingly heterogeneous student population (Helm 1997, p. 41).

It is clear that universities need to change to accommodate the impact of technology on learning. And hence coping with and controlling change in modern universities represents a very formidable management challenge for

vice-chancellors, their management teams and governors – even when judged against many other public or private sector organisations. Universities have been encouraged by Government to undertake strategic planning in order to be more effective in managing such change. Indeed by 2000 Higher Education Funding Council for England (HEFCE) were reporting that

The importance of good strategic planning is recognised throughout higher education. Good progress has been made over a long period to improve the rigour of strategic planning (p. 2).

Although there are different examples of strategic planning models in operation in UK universities (Jarzabkowski 2001), the models not unexpectedly depict strategic planning as a rational deliberate process, namely direction setting, resource allocation, monitoring and control. Mintzberg (1989, p. 29) comments “Virtually everything that has been written about strategy-making depicts it as a deliberate process. First we think, then we act. We formulate then we implement”. He challenges the deliberate strategy process stressing that it “precludes learning once the strategy is formulated: emergent strategy fosters it” (Mintzberg 1989, p. 32). Mintzberg however advocates both deliberate strategy and emergent strategy, thus combining control from deliberate strategy and learning from emergent strategy. These approaches could be viewed as end points on a continuum. This paper explores the impact of an e-learning project on the strategic planning process in one university.

The aim of the paper is to explore how the existing practices and hierarchies in the case study university have been challenged and, in some instances, changed as a result of the introduction of e-learning. The paper examines and discusses the adoption of e-learning at the University of Glamorgan over the last two years and in particular the impact of e-learning on the university’s strategic planning process, both deliberate and emergent strategy will be analysed. The paper first discusses the University of Glamorgan’s new strategic planning process. Examples of the emergent change agenda are identified and strategic challenges are extrapolated and finally possibilities for future development are explored. As other universities approach similar adoption processes this topic is important and of wide interest to those managing the transition to e-learning.

The strategic planning process

The University of Glamorgan is a new university. It became a university in 1993 having been a Polytechnic, College of Technology and School of Mines previously. This heritage has influenced the development of the University as its focus has been firmly on vocational courses, teaching rather than research,

servicing disadvantaged post-industrial communities and a network of partner colleges taking higher education to similar communities across Wales. During the Autumn Term of the 1998–1999 session the University of Glamorgan undertook a fundamental review of its strategic planning processes, with the assistance of an external consultant. The outcome of this exercise was documented in a *Guide to Strategic Planning and Management* that was agreed in January 1999. The implementation of the new processes was geared towards the development of a new style of strategic plan for 2000–2001 onwards. The purpose of the new style of strategic planning was to provide a top-level plan to achieve the University's *vision* and *mission*, together with a strategic framework for departmental plans. It was intended that the new approach would generate a focus around which the University's staff could work towards achieving the *vision* and *mission*. Key to success would be the ability to be seen to address the key strategic issues that were relevant to the future of the University. The new strategic framework would establish the business objectives that would form the basis of managers' personal objectives so that their objectives were explicitly tied to the achievement of the University's strategic objectives. Finally the new style would provide the means of assessing the strategic performance of the University both against its own objectives and its competitors.

The introduction of the new processes was progressed as a management of change programme with staff involved throughout in order to obtain commitment to the new processes. The University elected to follow a continuous improvement cycle approach. This started with an analysis of strategic issues and the setting of the University's overall direction. Staff were then mobilised and their commitment secured to the University's direction. The strategies were implemented and finally performance was to be measured and overall direction changed if necessary.

The starting point for setting strategic direction was the *vision*, or where the Governors and the Directorate were aiming to position the University within ten years. The *mission* was to comprise the fundamental purpose of the University, its top-level direction and its values. Thus in 2000 the University adopted a new vision and mission which were translated into SMART (Specific, Measurable, Agreed, Realistic and Timed) strategic goals. The University's performance against each strategic goal was to be measured at regular intervals. These measurements were to provide a good indication of the University's overall performance, highlight any areas of under-performance and provide the stimulus for the University to improve continuously its performance. The new style strategic plan started with a summary of the University's core business in the higher education marketplace. It placed particular emphasis on the range of academic subjects that

the University intended to concentrate on in the short and longer term. It then covered, briefly, the other core business functions. The plan also set out how the University intended to deal with the unique aspects of its higher education responsibilities, such as serving the local community. For the University of Glamorgan this articulation of twin aspirations of regional impact and quality academic provision was a step-change in focus. Finally the plan set out the University's values. They were an important statement of the University's beliefs and behaviour or, in other words, its culture.

It is worth noting that, although the University had stated that it would serve local and regional communities, its *Teaching and Learning Strategy* at that point did not explicitly show how that engagement was to be delivered. The new Strategic Plan stated that the University had moved forward vigorously with its new *Teaching and Learning Strategy* which was geared towards promoting greater flexibility in learning styles and strategies, and supporting them through staff development programmes. The *Teaching and Learning Strategy* provided the framework within which academic schools and support departments could work together to achieve those aims, including continued investment in ICT infrastructure and learning resources. There was no mention of the potential of e-learning, let alone delivery via e-learning. Despite engaging in strategic change processes the University had not identified at this stage either the implication of technological change or the means by which it would take forward that part of its vision concerned with serving local and regional communities.

Thus, by 2000 the Strategic Plan had started to place strategic emphasis on alternative teaching and learning methods. With the start of the developed strategic planning process, it had been agreed that it was timely to review the present position on initiatives in teaching and learning innovation, and to co-ordinate and disseminate good and active practice. The University then identified that it would be necessary to invest in appropriate technology to meet the future needs and expectations of students and other stakeholders, and to deploy the energies of the academic staff more efficiently in student support.

At grass roots level lecturers in many departments were beginning to explore the area of computer-assisted learning as a way of meeting the aspirations of new students many of whom increasingly had experienced computer-assisted learning before coming to University. Many lecturers also believed that computer-assisted learning might offer the potential to address the learning needs of students coming to University with less formal qualifications and educational experience, as well as the ability to reach students who were unable to travel to study. Nonetheless many bemoaned the lack of direction or support for developments in this area.

There was a sea change, however, as a result of a successful Objective One bid to the European Union for the development of an E-College across Wales. The University is in an Objective One area of the European Union, which means that it is able to apply for significant match funding for activities to bring about economic, social or cultural re-generation. The successful bid made it possible to undertake a large scale investment programme to recruit additional and expert staff, buy software and hardware for the University and partners, and laptops and on-line network connections for students. This was a collaboration in business and management education with the University's partner colleges across Wales, delivered through flexible, shared learning. This was made possible by the established network of partners the University has with the further education network in Wales; this was to represent a significant step change in Welsh higher education. The E-College initiative was launched on March 1st 2001 in Brussels. E-College provides on-line a BA in Enterprise, an MA in Professional Development, a Foundation Degree in Business Administration and finance modules. To date there are over 600 students enrolled on these programmes and the demand continues to grow. The E-College project has made an important impact on the strategic planning of the University. Although the formal strategic plan had identified the need to explore more flexible models of teaching and learning, the strategies for the adoption of e-learning emerged and continue to emerge through the E-College project. This is a good example of Mintzberg's (1989) emergent strategy,

Strategies can form as well as be formulated. A realized strategy can emerge in response to an evolving situation, or it can be brought about deliberately, through a process of formulation followed by implementation (p. 30).

Senge (1990) argued very strongly that learning organisations require all employees to be involved in change processes and it should not just be senior managers driving top-down change. Martin (1999) and Wright (2003) explore university change based on Senge's work; Martin's study reveals from a sample of 161 university staff there was an assumption that strategy would be passed down the hierarchy. In addition Martin's study (1999) revealed a break down of communication between leaders and staff and the result was staff felt powerless victims of change. Wright (2003) although focussing on the enhancement of quality of teaching in universities argues convincingly for organisational democracy rather than coercive managerialism. The E-College initiative reveals how one university undertook this transition of combining top-down deliberate strategy with bottom-up emergent strategy.

Very early in the E-College project it became apparent that e-delivery offered exciting opportunities for delivering to the ever more diverse backgrounds of students which the University recruits in response to the Government's aim of extending participation to 50%. The challenge for the University would therefore be to mainstream the managed learning environment with all of its attendant questions of funding streams and HR issues.

Toffler (1985) suggests that significant organisational change only occurs when three conditions are met:

First, there must be enormous external pressures. Second, there must be people inside who are strongly dissatisfied with the existing order. And third, there must be a coherent alternative embodied in a plan, a model, or a vision (p. 14).

The first condition for change identified by Toffler was met easily as a result of enormous external pressures on universities not only from governments and stakeholders but also from global competitors. The second condition for change, insiders dissatisfied with the existing order, is being driven both by changes in the external environment such as funding opportunities and also by internal debates on the nature of learning and teaching and the development of life-long learning. The E-College project provided the impetus for the third condition for change identified by Toffler (1985), namely the creation of a plan or vision for change.

The emergence of new demands highlighted through the E-College project placed significant pressure on the University to adapt and undergo significant change. Mintzberg (1989) highlights that a move from a stable but complex environment to a dynamic one requires organisational structures to adjust and become for more responsive to change. Examples from the change agenda are provided in the next section of the paper.

The change agenda and strategic challenges

The issues that have emerged in the move from traditional assumptions and values to those assumptions and values associated with e-learning and the strategic challenges, which emerge, are discussed next.

Hierarchical challenges

It became clear at the start of the project that a range of staff, academic, technical, administrative and staff with new composite skills from different departments across the University and across the Welsh further education

network needed to work together. Existing administrative structures were problematic and hindered interdisciplinary arrangements. There were very few examples of staff from so many different areas of the University working together in one group, the boundaries between academic departments and support departments were well protected by tradition and culture; this now needed to change.

The development of an e-learning environment led to the creation of multi-disciplinary teams, including staff from Academic Registry, Learning Resources Centre, Human Resource Development, Marketing, Student Information Systems, Information Systems, Student Services, the partner colleges and the academic schools. It is clear that the success of the project rested upon an integrated team involving all the University's support departments working alongside the Business School from the beginning, as in an e-learning environment the support is required at the start and is immediately transparent to the e-learner when they log on-line (Salmon 2002). Nunan et al. (2000) highlight the importance of integration,

Information technologies are bringing structural change to serve areas, causing a convergence of roles and functions between registry, library, corporate services, production and teaching support and student services (p. 72).

The blurring of traditional departmental boundaries has been particularly evident in the development of modules on-line and represents an important change within universities. This however is posing challenges, especially to heads of department who may see this blurring as a threat to their power. The new paradigm has also created new relationships between further education partners and between further education and higher education. Further education staff, and colleges, are assuming new roles which will necessitate new agreements, funding models and quality controls. These changed roles will also threaten the prevailing hierarchies and pre-conceptions about the status of further education vis a vis higher education.

The collegial nature of academic life is also challenged by the fundamental change in the learning paradigm that both strategic planning and e-learning bring. Berlant (1998) explores the academic's introduction to strategic planning:

The strangeness of negotiating the odd intimacy of institutional association with colleagues we know well but barely know; the hierarchies of professorship that mediate, though it's never clear how, the personal relationship among faculty members; the interpersonal effort involved in the daily grind of professorship; the strain of optimistic institution building in this difficult context (pp. 107–108).

This “strangeness” of dealing with colleagues from outside the security of shared disciplinary assumptions – colleagues without an academic tradition even – exposes the academic to new and different concepts and approaches. E-learning then challenges the pedagogic base of their professional activity.

It is clear that the University needs to reduce the rigidity of boundaries between departments and in particular between academic schools and support departments. This need to re-cast boundaries on a more flexible basis than before is an inevitable result of technological change. Beardwell and Holden (2001) note that one consequence of greater flexibility is

. . . the attendant delayering of managerial hierarchies and the attempted breakdown in the typical pyramid structure of organisations . . . (p. 155).

Organisational change

As stated earlier, universities are inherently resistant to change: thus in order for significant change to occur it is essential that there is support from the top of the university. Muilenburg and Berge (2001) stress

Without a shared vision . . . a strategic plan and key players within the organization who are knowledgeable and supportive of distance learning, implementing a distance learning programme is a slow and difficult process (p. 8).

This does not contradict Mintzberg’s (1989) thesis as he advocates strategy emerging in response to a changing situation or brought about deliberately through a process of formulation. The University is already engaged in strategic change processes and quality enhancement processes. As a result of e-learning fundamental changes are happening – not just a shift in norms, structures, processes but also an essential alteration of views, perspectives and understanding of the organisation, these will be explored later in the paper. As Hanna (2000, p. 28) emphasises

the success of these change processes depends both on the organisation’s ability to undergo a significant shift in values, vision and direction and on the ability of stakeholders to understand and accept a new conceptualism of the organisation.

Technical expertise

Firstly it should be noted that earlier attempts by the Business School to introduce e-teaching had failed because staff lacked the knowledge and skills to develop a course on-line and no funding stream was available to support this

sort of development. The success of the E-College project was due in large part to European funding which allowed the hiring of instructional designers and multi-media experts to support the academic staff. This very important barrier was overcome as a result of the input of technical support staff as a result of the creation of a central technological facility.

It is a common experience with ICT that it brings many advantages for as long as it works. However when it stops working it is a source of considerable frustration. Many new e-learners (and e-moderators) will come to e-learning with that in-built prejudice. It is therefore imperative that the technology works all the time. E-learning uses a variety of software packages, Internet technologies and hardware platforms. Many of these are maintained by external organisations outside of the direct control of the University. Moreover many are new and liable to rapid change. The credibility of the University's e-learning will be dependent upon using the newest technologies and techniques – and using them successfully. This poses real strategic, financial and managerial challenges. The early stages of e-learning implementation saw an understandable wish to assert maximum control by centralised operation. However increasing confidence and maturity is likely to bring about a move away from centralisation to more devolved and flexible technological provision. The challenge will be to respond to this without sacrificing control, accountability or consistency.

Psychological problems

Technology potentially poses problems at many levels including some staff in the University feeling threatened and insecure as a result of the introduction of e-learning. It is apparent that some staff feel their jobs are being threatened by technology and others who feel unable to cope with the technological changes and are as a result feeling insecure. The responses have ranged from those who lament the growth of technology and foresee a loss of human interaction to those who see the changes as control mechanisms brought in by management and reducing their power and autonomy. There is clearly a major staff development agenda associated with a change of this magnitude. Those threatened by lack of technical expertise may be assisted easily and quickly with training but those with negative attitudes, who feel their power base or core values are being threatened will be more difficult to change. Prendergast (2001) noted a number of concerns affecting educators including the issue of 'technofear' especially amongst traditional older teachers. He reported that 'it is hard to change the mentality of some teachers' (p. 2).

Staff development

The University agreed that human resources strategy and practice would be central to the successful delivery of the strategic programme. This was to include a programme of staff development to enhance the traditional teaching and learning function and to take advantage of the opportunities of the twenty-first century, especially e-learning. It was also to include an active programme of recruitment of staff with the expertise(s) necessary to deliver via a high quality managed learning environment. Right from the start of the project staff development was identified as a crucial element without which the project could not succeed. The very different nature of the students' learning experiences would mean that it would be essential for there to be a structured staff development programme for all kinds of staff who were to be involved, followed up with rigorous evaluation and reflection.

Prendergast (2001) highlighted the importance of this and notes that

many organizations failed to plan for realistic staff training, when introducing this medium. This often resulted in people with little or no understanding of the medium being expected to undertake tasks of which they had insufficient knowledge. The hardest part of introducing CSCL was to motivate and train the educators and trainers (p. 2).

Legal issues

Issues surrounding copyright, data protection and intellectual property rights are at an early stage of understanding. We underestimated the problems of obtaining copyright clearance, the lack of knowledge of academic staff regarding rights regulations and the debates on intellectual property rights continue. The pace of technological change is such that the legal implications are yet to be tested in court. Nevertheless although development must still proceed even if the legal situation remains unclear institutions will find that consideration of the legal issues may slow development, this certainly has been our experience. Similarly as statute and case law evolve institutions must be prepared to revise their practices in the light of emerging law. The impact of legal considerations is exacerbated because one of the fundamental advantages of e-learning is the facility to operate beyond national borders – but this opens institutions up to the requirement to be aware of international law and the national laws of all participating countries. As yet we have only operated E-College within Wales but we are now moving into global markets and these additional factors will need to be considered.

Role of academics and staff contracts

The pedagogy and the finances of e-learning have implications for academic staff contracts. The academic's engagement with development, delivery and assessment of learning materials is fundamentally different to the traditional model – and a greater variety of staff are involved in those areas. However there is little direct experience of the time it takes to e-moderate which means that issues such as staff compensation, incentives and timetables all have to be addressed. The financial model sees a considerable investment of academic time in the development phase. The economies of scale that e-learning facilitates creates large student populations. This has caused us to reflect on the need to find new categories of staff to support the students' academic progress at a price that the market will bear and which ensures that academics are free to pursue their role of extending learning methods, research and scholarship. These HR issues need to be explored as e-learning projects are scaled up to accommodate large numbers of learners across the world. Thus the skills required of academics might be less those of teacher/performer and more on innovation, research and development.

Managerial issues

The University's experience with E-College has mirrored that of Beer and Eisenstat (2000) who found that:

Increasingly the implementation of strategy requires more managers at lower levels who can lead teams that co-ordinate key strategic initiatives across functions, business units or geographic borders ... people who had worked closely with the top team – a significant management-development experience that changed their own perspective and the perspective of the senior team about employee capabilities (p. 39).

The new roles taken on by staff with differing backgrounds and skills included leadership and managerial responsibilities. A project team was set up and instructional designers, technical support staff, Learning Resources Centre staff and lecturing staff took on leadership and managerial responsibilities. The traditional line of accountability and control became fuzzier. Those in traditional managerial and leadership roles were less well equipped to assume those roles with E-College because of the novelty of the development and its technologies, the multi-disciplinary approach and the sheer speed of development. Universities will increasingly want to train and enthuse staff to take on these kinds of roles – and will then want to ensure that those skills are exploited to the full once any project is completed.

Student-support

Provision of student support i.e. Learning Resources Centre, Student Services, tutors and administrators is essential. The paradigm shift where the learner, at the centre of her/his learning process, calls upon many expert sources (Paquette 1998, p. 21), the move from teaching to learning, the move from lecture centred to student centred requires a very robust system of support. The University already had a student charter but this required change to incorporate a learning service agreement in which the level of support to the e-learner was set out. This e-learning environment required enhanced levels of student support and higher expectations from students in an electronic environment in terms of speed of response. We have not yet moved to 24/7/52 but the message from e-learners, especially those in employment, is that they require support outside of the normal working day. There may be a need to redefine student support services as the nature of student support will change not least because the nature of the students themselves has already and will continue to change. Students in an e-learning environment are more autonomous learners. They are geographically distant. They come from more diverse backgrounds and are far more likely to see themselves as clients as well as learners or students. Thus the nature of pastoral and educational support will change with learning resources professionals, administrators and IT staff all providing the kind of essential support to learners that has traditionally been the preserve of academics. This change must be managed with the attendant stresses on resource allocation and professional expectations.

Funding

UK funding of higher education has been based upon students completing recognised HE qualifications or parts thereof (credits). The move to e-learning opens up the need to find robust ways of funding learning rather than end qualification, as already we are finding that, for the first time, students are valuing learning as much as, if not more than, qualifications. Thus this development has exposed a tension between the Government's policy objective to encourage lifelong learning and its funding methodologies. Similarly the University's own strategic planning poses questions of balancing policy objectives (opening up higher education to new and different learners) with financial prudence, ensuring that there is sufficient income to fund both investment and recurrent activities. Until funding policy has caught up with lifelong learning on the ground there is a real danger that growth and development will be held back.

The University had now placed e-learning at the heart of its strategic development.

The University will acquire the teaching and learning skills needed to complete in the emerging UK and international e-learning markets, both on and off campus, by investing heavily in the development of production and support systems for e-learning (Strategic Plan 2001).

The roll out of e-learning across the University and its partners will require a significant investment in staff, hardware, software and training and development. The scale of this investment is such that no one British university can be expected to be able to take this forward on its own. The strategic challenge therefore will be to build alliances with other higher education providers to share development costs and risks and commercial partners and funders/investors so that the economies of scale can be acquired. At the same time the University will have to make strategic choices of its own to allocate resources away from traditional delivery. This is bound to have a dramatic impact on the culture and ethos of the University.

Conclusions

The strategic challenges for the case study university and other universities is clear but in order to seize the challenges we need to continue to evaluate and learn from the E-College project. Mintzberg (1989) stresses that, "purely deliberate strategy precludes learning once the strategy is formulated, emergent strategy fosters it" (p. 32). In agreement with Mintzberg we believe that universities need both types of strategy making. Indeed we believe that our e-learning experience demonstrates that a dynamic and flexible interplay between deliberate and emergent strategy assists with the management of change – where reflection and evaluation (and consequent action) are essential components of change in new settings. The emergence of e-learning has provided a good example of emergent strategy coupled with the University's deliberate strategy making processes. The learning attached to this emergent strategy could be used to help other universities respond to the change agenda brought about by e-learning.

When the University started a more formal approach to strategic planning it could have been expected that it would utilise the traditional model where the long term goals were identified and resources and action plans were put in place to deliver them. Whilst this is still a key feature of the University's planning it has seen strategic planning move on so that Hofer's (1973) incrementalist view of planning and Mintzberg's (1989) ideas on emergent strategy are just as important – where strategy attempts to understand the external opportunities and match these to the organisation's capabilities and learning is part of the strategic processes. Hofer expects more managers to

be involved in the delivery of plans – and the University has seen many more staff at all levels taking responsibility for the change agenda. This is a major feature of Senge's et al. (1999) notion of sustaining momentum in a learning organisation. It is clear that the impact of e-learning, and in the future mobile learning, will require universities to re-think fundamentally their thinking, and therefore their strategies, in a range of areas including human resources, estates, pedagogy, quality assurance, funding, management and commercial and educational partnerships. Inglis et al. (2002, p. 189) confirm our findings:

For most organizations, the transition to electronic delivery will represent a significant shift. It will involve major changes to the organization: changes in staffing, procedures, infrastructure, and most of all to the culture of the organization.

Information and communications technologies (ICT) are forcing major changes in the location, development, methodology, delivery, support, evaluation and timing of education delivery. Although it provides real opportunities it also poses threats that need to be addressed. Grasping the full potential of ICT will require a substantial shift in human resources policies including recruitment, contracts, training and development and innovative payment systems. Lecturers will become learning facilitators, co-ordinators of learning experiences and this shift will have dramatic implications for human resources strategies.

Staff roles and responsibilities and staff structures are in transition and this paper offers an insight into the ways one university is leading the changes. There is no doubt that e-learning offers an opportunity to challenge arrangements in most sections of the University. This has explicitly questioned the University's organisational structures and therefore the University has to re-consider both its academic and managerial arrangements. Laurillard (2002, p. 241) argues that the delivery infrastructure should never be in the foreground, rather it should be supporting the dialogue on learning. Whilst we agree with the overall sentiment we argue that at present at the University, the delivery infrastructure associated with e-learning is at the foreground but as a result, there is a refocusing on the many processes of the University.

Whilst the authors recognise that one size does not fit all and the case study university's experiences of strategy will not suit all universities as Sloman (2003, p. 1), in his analysis of the change agenda associated with e-learning, observes,

A strategy and agenda can only be constructed within the context of the particular circumstances found in each organisation. . . . However, some problems can be overcome by a better understanding of where others have found appropriate solutions. This is not the time to reinvent the wheel.

The learning attached to our e-learning strategy will help other universities respond to the change agenda associated with the introduction of e-learning. Rosenberg (2001, p. 32) stresses "Many efforts often underestimate the complexities of the interactions between e-learning and the organisation, with so many stakeholders and business variables in the mix, a more strategic approach is necessary to ensure that e-learning has the best possible chance to succeed".

In this paper we have shown how strategic processes associated with e-learning not only address issues of technology and learning but also address issues of change, culture, leadership and staff development. The University's expectations of strategic planning have changed in a relatively short period since their introduction in 1999. Strategic planning in a period of turbulent change such as that brought about by the introduction a new delivery mode (e-learning in this case) is about organisational self-learning. It has become as much a voyage of self discovery for staff at all levels, as it is about directing the University's destiny.

References

- Beardwell, I. and Holden, L. (2001). *Human Resource Management – a Contemporary Approach*. London: Prentice Hall.
- Beer, M. and Eisenstat, R. (2000). 'The silent killers of strategy implementation and learning', *Sloan Management Review*, vol. 41(4). Massachusetts Institute of Technology, Summer, pp. 29–40.
- Berlant, L. (1998). 'Collegiality, crisis and cultural studies', in Watson, D. (2000), *Managing Strategy*. Bucks: Open University, Bucks, pp. 105–116.
- Buck, M. (1997). 'The global demands for change', in Field, J. op. cit., pp. 19–28.
- Drucker, P. (1993). *Post-Capitalist Society*. New York: Harper.
- Ehrmann, S. (1995). 'Flashlight', *Change* 27(2), 20–27.
- Evans, T. and Nation, D. (eds.) (2000). *Changing University Teaching*. London: Kogan Page.
- Hanna, D. (2000). *Higher Education in an Era of Digital Competition*. Atwood: Madison.
- HEFCE (2000). 'Strategic planning in higher education', *HEFCE Report 00/24*.
- Helm, P. (1997). 'Teaching and learning with the new technologies: For richer, for poorer; for better, for worse', in Field, J. (ed.) (1997), *Electronic Pathways. Adult Learning and the New Communication Technologies*. Leicester: National Institute of Adult Continuing Education (England and Wales), pp. 41–49.
- Hofer, C. (1973). 'Some Preliminary research on patterns of strategic behaviour', *Academy of Management Proceedings*, 46–59.
- Inglis, A., Ling, P. and Joosten, V. (2002). *Delivering Digitally*. London: Kogan Page.
- Jarzabkowski, P. (2001). 'Strategy as social practice: An activity theory perspective', working paper, *Aston Business School*. Birmingham, research.abs.aston.ac.uk/wpaper/0117.pdf
- Laurillard, D. (2002). *Rethinking University Teaching*. London: Routledge Falmer.
- Martin, E. (1999). *Changing Academic Work. Developing the Learning University*. Buckingham: SRHE/Open University.

- McLuhan, M. (1967). *The Medium is the Message: An Inventory of Effects* (with Quentin Fiore, Harmondsworth, Allen Lane). The Penguin Press.
- Mintzberg, H. (1989). *Mintzberg on Management, Inside our Strange World of Organisations*. New York: Free Press.
- Muilenburg, L. and Berge, Z. (2001). 'Barriers to distance education: A factor analytic study', *The American Journal of Distance Education* 15(2), 7–22.
- Nunan, T., Ricmor, G. and McCausland, H. (2000). Cited in Rich, T. (2001) op. cit.
- Oakley, B. (1997). 'Will universities survive the knowledge economy?', *Interface*, IEEE Newsletter, April, p. 72.
- Paquette, G. (1998). 'Virtual learning centers for XXIst century organisations', *The Virtual Campus, Trends for Higher Education and Training* (by Verdejo, F. and Davies, G.). London: Chapman and Hall.
- Prendergast, G. (2001). 'Creating effective online collaborative educators', pp. 1–7. www.abacuslearningsystems.com.
- Rich, T. (2001). 'E-learning futures. Report of AUA study group', *Perspectives Policy and Practice in Higher Education* 5(3), 68–77.
- Rosenberg, M. (2001). *E-Learning*. New York: McGraw Hill.
- Senge, P. (1990). *The Fifth Discipline. The Art and Practice of the Learning Organisation*. London: CenturyBusiness.
- Senge, P., Kleiner, A., Roberts, C., Ross, R., Roth, G. and Smith, B. (1999). *The Challenge of Sustaining Momentum in Learning Organisations*. London: Nicholas Brealey.
- Sloman, M. and Rolph, T. (2003). *Change Agenda*. London: CIPD.
- Toffler, A. (1985). *The Adaptive Corporation*. New Yrk: McGraw-Hill.
- University of Glamorgan (1999). *Guide to Strategic Planning and Management*.
- University of Glamorgan (2000 and 2001). *Internal Strategic Plan*.
- Wilson, A. (2000). 'Strategy and management for development' in Scott, P. (eds.) (2000), *Higher Education Re-Formed*. London: Falmer Press, pp. 29–44.
- Wright, S. (2003). 'Enhancing the quality of teaching in Universities', *LTSN Generic Centre. Learning and Teaching Support Network*, pp. 1–14.

