

FACTORS FOR SUCCESS IN DUAL MODE INSTITUTIONS

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Introduction

The objectives of this study are to present an overview of international practice in dual mode universities in 2005, and by analyzing what works well, what doesn't and why, to develop a Best Practice Framework. We hope that the study and the framework will be useful to single mode institutions, be they face to face or distance mode, that are contemplating a move into dual mode delivery. The study may also inform the discussions of government ministers and policy makers contemplating policy initiatives in dual mode education to meet the ever-increasing demand for university places in a cost-effective manner. Finally we hope that the Best Practice Framework may assist existing dual mode providers to improve the quality of their course offerings by providing a checklist of key considerations in the effective implementation and evaluation of dual mode programmes.

Context

In 1992, Greville Rumble pointed out the vulnerability of dedicated distance teaching universities to competition from dual mode universities. (Rumble, 1992: 94-118) His argument was that the latter, usually conventional campus-based universities offering opportunities for distance learners to take the same courses as on-campus learners and earn the same qualification, had significant competitive advantages in terms of cost, choice of courses and learner convenience over the dedicated distance learning provider. In 2004, Professor Jim Taylor, Deputy Vice Chancellor of the University of Southern Queensland (USQ), one of the most innovative dual mode universities in Australia, went even further in posing the question, "Will universities become extinct in the networked world?" (Taylor, 2004) He argued that the present traditional approaches based on conventional classroom teaching and learning and a hierarchical, bureaucratic academic structure would not be capable of meeting the escalating demand for higher education in the knowledge society, and that universities must therefore adapt or face the fate of the dinosaurs.

Today, the dedicated distance education (DE) universities and dual mode providers (DMPs) continue to survive and fulfill their mission of expanding access to education for previously disadvantaged groups, but the significant differences between distance, dual mode and face to face education have been eroded by the pervasive presence of internet-based technologies in all three modes. For many institutions, as Taylor predicted, survival in an increasingly globally competitive world has necessitated change and the search for new markets.

The labels 'virtual education', 'on-line learning' and 'e-learning' have emerged to describe the application of ICT to enhance distance education, implement open learning policies, make learning activities more flexible and enable these learning activities to be distributed among many learning venues. (Farrell, 2001:142) Thanks to the global reach of internet-based technologies, virtual education now occupies a point beyond distance at one end of the continuum from distance to face to face, while at the other, as shown in the Table below, flexible, blended and distributed learning, which incorporate elements of tutor mediated and self-directed, resource-based on-line learning, feature in the life of most on-campus students.

Table 1 Typical range of delivery options in US campus university in 2002

Proportion of content delivered online	Type of Course	Typical Description
0%	Traditional	Course with no online technology used – content is delivered in writing or orally.
1 to 29%	Web facilitated	Course which uses web-based technology to facilitate what is essentially a face-to-face course. Might use Blackboard or WebCT to post the syllabus and assignments, for example.
30 to 79%	Blended/Hybrid	Course that is a blend of the online and face-to-face course. Substantial proportion of the content is delivered online, typically has some face-to-face meetings.
80+%	Online	A course where the vast bulk of the content is delivered online. Typically has no face-to-face meetings.

(Allen and Seaman, 2003: 6)

The heady optimism created by the technology boom of the late 1990s, coinciding as it did with increased demand for higher education and training and reduced government funding, also saw the emergence of new providers keen to exploit every perceived market niche. They included fully online universities in both the public and private sectors, university for-profit spin-off companies, public and private partnerships, national and international consortia, and the extensive penetration of e-learning into the corporate training market and into traditional campus teaching (Bates 2005a: 68).

Not all the new ventures have survived and significantly, many, though by no means all, that have now disappeared were new to distance education. They failed to appreciate the lessons learned by successful distance education providers that while technology can facilitate low cost access to and delivery of content, effective student support in the form of systematic interaction between teacher and learner is a necessary component of all successful programmes and is by no means cheap to achieve (Ryan and Stedman 2002:46).

It is very interesting to note that among the new providers that have thrived, the private, for profit University of Phoenix, which has been extremely successful over the past ten years in offering both distributed face to face courses through a network of campuses and online tutor-mediated learning through the University of Phoenix on-line, has now launched Flexnet, “the Online Education with class” (<http://www.phoenix.edu/virtualtour>). This dual mode provision enables undergraduate students to complete a module in 5 weeks, of which the first and the last weeks would include a four-hour face-to-face intensive on-campus experience and the remaining time would be spent in

structured on-line tutor-mediated group and individual activities in the virtual classroom environment.

Bates (2005a *ibid*: 64) calculates that in 2002-3 there were 9 million distance learners world-wide and that there were still more distance students in print- and broadcast-based DE programmes (5 million) than in fully on-line programmes (4 million). Three million of those learners in 2003 were in the Commonwealth. (COL, 2003: 3) By 2005 their number had already reached an estimated 6 million. (Daniel, 2005)

While it remains a distinct activity from e-learning, distance education, like face to face education, is changing, with more players and different forms of organization designed to lever the benefits of new technology in learner-teacher interaction and administrative systems support.

The title of the UK Quality Assurance Agency (QAA)'s Code of Practice: "collaborative provision and flexible and distributed learning (including e-learning)" (QAA, September 2004) indicates the difficulties inherent in trying to clearly assign learning opportunities to a particular pigeon hole in today's world of disaggregated delivery.

UNESCO (2002:20) characterizes distance education in positive terms as opening access to education and training provision, freeing learners from the constraints of time and place, and offering flexible learning opportunities to individuals and groups of learners.

In its Code of Practice however, the QAA defines flexible and distributed learning (FDL) in terms of what it does not do; indicating the radical change that it represents from the individual academic-centred paradigm of conventional face to face teaching that it has grown out of. Thus, such programmes:

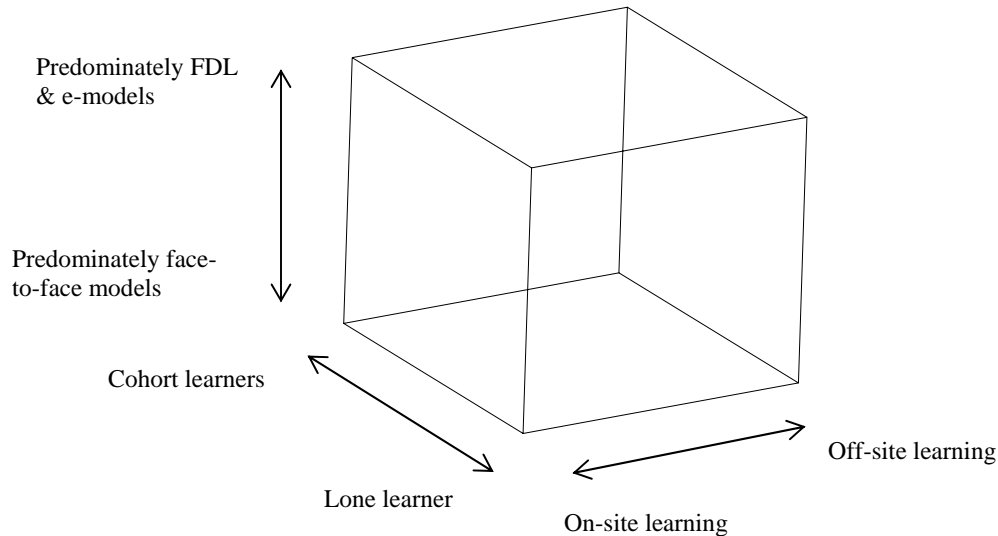
- Do not require a student's place of study to be physically located within the awarding institution;
- Do not assume that a student's programme of study is necessarily delivered directly by the awarding institution;
- Do not assume that the student is necessarily directly supported by staff of the awarding institution;
- Do not assume that a student is routinely working with other students; and
- Do not necessarily require assessment of a student's achievement to take place at the location of the awarding institution.

(QAA 2004 *ibid*: 6)

FDL embraces a continuum of pedagogical opportunities. At one end of the continuum of programme delivery, learner support and assessment are all provided by staff of the awarding institution at the awarding institution. The other end of this continuum could be represented by an individual 'distance learner' who may have no direct contact with the awarding institution, its staff or other students. Between these extremes is a spectrum encompassing various FDL elements as part of on-campus study, and a range of forms of arrangements involving the awarding institution and, perhaps, support-providing and/or collaborating partner organizations. In addition, wherever located, the student might be engaged in learning, support and/or assessment which are ICT or Internet based, (e-learning). The QAA therefore suggests a three dimensional model in which a student's experience

of learning at any one time may be represented as a function of the size of the group of learners, the location of learning and the mode of learning.

Figure 1: Student Learning Experiences: A Three-Dimensional Model



(QAA 2004 *ibid*: 7)

It follows from this that conventional organizational structures and processes designed for an earlier paradigm will no longer be appropriate in an increasingly complex, disaggregated and technology-enabled environment. Moreover, in providing freedom for their students to choose the mode of study, institutions must accept the responsibility to ensure that the quality of the outcomes of the educational experience is consistent across modes. That can only be achieved if there is parity of esteem between both modes, and there is ample evidence from this study and from the literature that where there is disparity, it is distance education that is perceived to be second best. The study will explore some of the reasons for and consequences of this situation and propose ways in which it may be avoided in setting up a dual mode operation.

Dual Mode Education Providers

In choosing the seven institutions that are the subject of the case studies that form the basis of this report, we have sought to include examples from different geographical and technological contexts and to cover the spectrum of learning environments described above. The motivation for engaging in dual mode education and its scope differ from institution to institution and there are examples of notable success as well as of disappointments and failure to fulfill the expectations of the learners engaged in distance mode study. The selected institutions include universities from Australia and New Zealand, where dual mode education has been successfully practiced for more than thirty years; regional universities from the South Pacific and the West Indies that serve small, diverse and sometimes remote populations across a wide geographical area; traditional research universities in North America and the UK for whom distance education and e-learning have opened the doors to new international markets for their programmes; and a traditional university in India, typical of many

in the South Asian region which boast a huge population of off-campus students studying for their degree by correspondence. The institutions are:

The University of South Australia (see <http://www.unisa.edu.au/etd/teach.asp>)
Massey University (New Zealand) (see <http://extramural.massey.ac.nz/welcome.htm>)
The University of the South Pacific (see <http://www.usp.ac.fj/dfl/dflvision.htm>)
The University of the West Indies (see <http://www.dec.uwi.edu/>)
The University of British Columbia (Canada) (see <http://det.cstudies.ubc.ca/>)
The University of Leicester (UK) (see <http://www.le.ac.uk/>)
The University of Delhi (India) (see http://sol.du.ac.in/About%20Us/about_sol.htm)

In 2003 COL issued a pamphlet in its Knowledge Series entitled Open and Distance Learning Policy Development (Particular reference to Dual Mode Institutions). It takes as its starting point that a policy environment friendly to open and distance education delivery and practice must contain the following values:

- Commitment to maintaining academic quality and standards in all programmes, irrespective of mode of delivery;
- Equal consideration for student, professional and community esteem across all modes of delivery;
- Guaranteed access for DE students and faculty to a range of services comparable to those available for on-campus students;
- Sufficient training for and numbers of staff to successfully deliver DE programming
- Commitment to providing or finding financial resources for the DE programme.

(Bottomley and Calvert 2003:6)

The extent to which the institutions listed above have been able to embody these principles in their policy statements and actualize them in their practice will be explored in the report.

Patterns of Dual Mode Delivery

Dedicated distance teaching universities have never caught on in North America. Nevertheless, in common with other jurisdictions like Australia where education is a state or provincial rather than a federal remit, conventional multi-campus State universities in the US such as the University of Wisconsin have historically accepted the responsibility to provide outreach teaching offering access to relevant educational opportunities for the citizens of the state (see <http://www.uwex.edu/about/history/>). Such outreach units have often been at the forefront of innovation in technologically empowered delivery. However, the increasing ease of access to the Internet has created a demand for change to the traditional on-campus teaching paradigm and on-line, web-based, delivery of information and interactions has attracted the attention of mainstream educators to the idea of distance education in a way that no other technology managed to do (Moore 2000:3).

In response to student demand for a more flexible and rich learning environment and in the face of escalating costs and reduced state funding, the phenomenon of distributed or blended learning which

combines the use of conventional face to face and on-line learning is emerging as a preferred option on US campuses. A survey of US campuses published in 2003 revealed that 81% of all US institutions of higher education offer at least one fully online or blended course; 34% of institutions offer complete online degree programmes and among public institutions, where the public good vs public expenditure crunch is felt most keenly, 97% of institutions offer at least one on-line course and 49% offer at least one on-line programme. (Allen and Seaman 2003 *ibid*: 2)

In Australia, where dual mode universities have operated successfully for more than 30 years, the quality and reputation of distance provision in dual mode universities has been assured by the development of an integrated structure in which courses are planned, developed and taught by the same academic staff to students who are able to receive an identical qualification whether they are located on or off campus. Special resources are provided for distance study and systematic forms of support are provided for all aspects of the distance student's engagement with the institution. Since on- or off-campus describes a mode of study rather than a category of learner, students have always been able to move between study modes at their convenience.

The move to flexible delivery in the Australian context has been partly driven by changes in the socio-economic context of higher education that have forced universities to compete for income to sustain their operating costs. Since the local market is finite, they have aggressively pursued international opportunities, particularly in South East Asia. In order to meet the needs of this lucrative off-shore market, they have had to develop and deliver resource-based teaching and on-line learning.

In this environment, Flexible Learning describes a technology-enabled move by leading providers of dual mode education to make the resources of sophisticated online platforms available to all students so as to add value to existing offerings and services particularly for on-campus students, and flexible delivery 'the provision of learning resources and the application of technologies to create, store and distribute course content, enrich communication and provide support and services to enable more effective management of learning by the learner' (King 1999: 271) In both the North American and Australian models described above, on-campus learners have been the primary beneficiaries of the introduction of technology-based learning techniques first developed in the off-campus context.

It is possible to identify particular characteristics of face-to-face, distance and on-line learning that determine the different requirements for the effective operation of labour and materials to achieve their goals. These are summarized in Table 2.

Moves from face-to-face or traditional distance education to online education represent significant changes in the assumptions on which teachers, learners and support staff go about their business and to the technological infrastructure and skill base that support the moves. Achieving a migration from the "post-box and hard text" delivery of conventional distance education to online requires at least three preconditions. First, the technical infrastructure needs to be transparent to users. Second, its operational framework must address teaching and learning decisions when it describes its functions. Third, systematic and local professional development in online teaching and learning using a "just-in-time" and "just-for-me" approach must be available to academics.

(Nunan, Reid, Mc Causland 2002 :10)

Table 2 Key characteristics of different modes

Face-to-face education (Teacher centred)	Distance education (Resource centred)	Online education (Learner centred)
Instruction based on teacher performances	Instruction contained in materials	Instruction based on access, materials and interactions – all can be cumulative
Located in time, place and with fixed groups of people	Time and place more flexible	Flexible personal access, not limited in time or space
People are scheduled	Materials are scheduled	Asynchronous opportunities, choice determines
Ephemeral experience	Lasting resources	Ephemeral or lasting
High marginal cost limits scalability	High fixed cost requires large scale operation	Variable fixed and marginal costs
Materials support teacher	Materials support learner	WWW-based resources produced just-in-time by (and for) teachers and learners

Reproduced from Nunan, Reid and McCausland 2002 *ibid*: 10

Taylor (2000:2) identifies 5 generations of Distance Education Technology:

- The Correspondence Model;
- The Multimedia Model;
- The Telelearning Model;
- The Flexible Learning Model;
- The Intelligent Flexible Learning Model.

and charts their characteristics in terms of their flexibility as to time, place and pace of study, the refinement of the learning materials, the level of interactivity characteristic of the predominant media used and the impact on institutional variable costs. The results are shown in Table 3.

While USQ has adopted the fully automated 5th generation web self-service model for both its on- and off-campus learners, it should be noted that the delivery generations are not necessarily linear, exclusive or discrete and many institutions are using a different technology mix that is appropriate for their environment. Individual institutions are in the best position to apply technology to teaching and learning in a manner that acknowledges the influences of such variables as “the type of subject matter, the specific objectives of the course and not least the student target audience” (Taylor 1995:2). Nevertheless, it is clear that by harnessing the power of the Internet, dual mode providers can apply the learner centred values and best practices of interactive distance education to all learners irrespective of mode of study.

Table 3: Flexible Delivery Technologies – A Conceptual Framework

Models of Distance Education and Associated Flexible Delivery Technologies	Characteristics of Delivery Technologies					
	Flexibility			Highly Refined Materials	Advanced Interactive Delivery	Institutional Variable Costs Approaching Zero
	Time	Place	Pace			
First Generation – The Correspondence Model <ul style="list-style-type: none"> • Print 	Yes	Yes	Yes	Yes	No	No
Second Generation – The Multi-media Model <ul style="list-style-type: none"> • Print • Audiotape • Videotape • Computer-based learning (eg CML/CAL) • Interactive video (disk and tape) 	Yes	Yes	Yes	Yes	No	No
<ul style="list-style-type: none"> • Print • Audiotape • Videotape • Computer-based learning (eg CML/CAL) • Interactive video (disk and tape) 	Yes	Yes	Yes	Yes	No	No
<ul style="list-style-type: none"> • Print • Audiotape • Videotape • Computer-based learning (eg CML/CAL) • Interactive video (disk and tape) 	Yes	Yes	Yes	Yes	No	No
<ul style="list-style-type: none"> • Print • Audiotape • Videotape • Computer-based learning (eg CML/CAL) • Interactive video (disk and tape) 	Yes	Yes	Yes	Yes	Yes	No
Third Generation – The Telelearning Model <ul style="list-style-type: none"> • Audioteleconferencing • Videoconferencing • Audiographic Communication • Broadcast TV/Radio and Audioteleconferencing 	No	No	No	No	Yes	No
<ul style="list-style-type: none"> • Audioteleconferencing • Videoconferencing • Audiographic Communication • Broadcast TV/Radio and Audioteleconferencing 	No	No	No	No	Yes	No
<ul style="list-style-type: none"> • Audioteleconferencing • Videoconferencing • Audiographic Communication • Broadcast TV/Radio and Audioteleconferencing 	No	No	No	Yes	Yes	No
<ul style="list-style-type: none"> • Audioteleconferencing • Videoconferencing • Audiographic Communication • Broadcast TV/Radio and Audioteleconferencing 	No	No	No	Yes	Yes	No
Fourth Generation – The Flexible Learning Model <ul style="list-style-type: none"> • Interactive multimedia (IMM) • Internet-based access to WWW resources • Computer mediated communication (CMC) 	Yes	Yes	Yes	Yes	Yes	Yes
<ul style="list-style-type: none"> • Interactive multimedia (IMM) • Internet-based access to WWW resources • Computer mediated communication (CMC) 	Yes	Yes	Yes	Yes	Yes	Yes
<ul style="list-style-type: none"> • Interactive multimedia (IMM) • Internet-based access to WWW resources • Computer mediated communication (CMC) 	Yes	Yes	Yes	No	Yes	No
<ul style="list-style-type: none"> • Interactive multimedia (IMM) • Internet-based access to WWW resources • Computer mediated communication (CMC) 	Yes	Yes	Yes	No	Yes	No
Fifth Generation – The Intelligent Flexible Learning Model <ul style="list-style-type: none"> • Interactive multimedia • Internet-based access to WWW resources • CMC, using automated response systems • Campus portal access to institutional processes and resources 	Yes	Yes	Yes	Yes	Yes	Yes
<ul style="list-style-type: none"> • Interactive multimedia • Internet-based access to WWW resources • CMC, using automated response systems • Campus portal access to institutional processes and resources 	Yes	Yes	Yes	Yes	Yes	Yes
<ul style="list-style-type: none"> • Interactive multimedia • Internet-based access to WWW resources • CMC, using automated response systems • Campus portal access to institutional processes and resources 	Yes	Yes	Yes	Yes	Yes	Yes
<ul style="list-style-type: none"> • Interactive multimedia • Internet-based access to WWW resources • CMC, using automated response systems • Campus portal access to institutional processes and resources 	Yes	Yes	Yes	Yes	Yes	Yes

Issues of economic necessity and competition have forced USQ and the University of South Australia (UniSA) to embrace high tech solutions in order to survive. In other jurisdictions in our study, where provision for off-campus study has hitherto remained less efficient and effective than its on-campus counterpart, it may be useful to identify the factors militating against the successful implementation of a fully integrated dual-mode model.

One of the reasons for adopting dual mode methodology rather than establishing a single mode distance teaching university (DTU) is a perceived lack of the economies of scale that make DTUs a cost effective solution to the provision of educational opportunities in countries such as Thailand or Indonesia. Where numbers of off-campus learners are significantly smaller than the numbers of students on campus, as has been the case in the Australian context, individual academic staff have been able to fulfil their academic commitment to the off-campus learner in terms of providing course materials and assessment.

It is clear that within this model, economies of scale are limited by the capacity of the individual academic to handle the student numbers (Daniel 1999:296). Prebble (2005) reports that at Massey University, while Faculty commitment to the 50% of their students registered for distance mode study is high, the fact that individual academics take the leading role in every aspect of planning, drafting, delivering, assessing and examining their XM (extra-mural) courses has a downside:

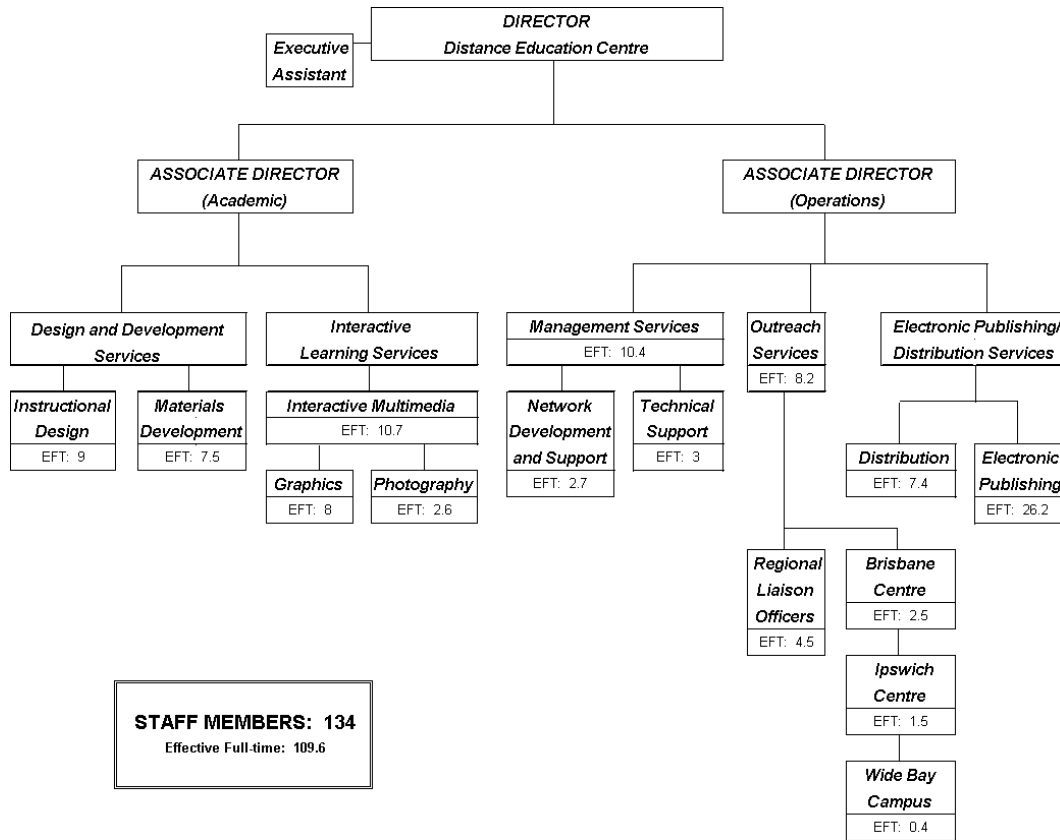
- Excessive academic workload;
- Difficulty in scaling up the model to handle large numbers;
- Occasional problems with quality management.

In order to support both learners and teachers working in the distance mode, successful dual mode universities have usually established a specialized Distance Education Unit which acts as a repository of current knowledge of the theory and practice of distance education. The Unit would normally include specialists in educational design and technology as well as housing a dedicated student enquiry service. The educational design specialists would be responsible for liaison with Faculty who are tasked with the development and delivery of courses to all students to ensure that the needs of off-campus students are adequately catered for. The DEU would be administratively responsible for the effective conduct of the university's DE activities.

In USQ, which became dual mode in 1977, distance education is now the core business of the university and the planning, development, implementation and evaluation of DE methodologies and technologies have been thoroughly institutionalized. The Flexible Delivery Committee, chaired by the VC and consisting of all of the senior officers of the university, meets monthly to set the corporate agenda and associated priorities. Their decisions are operationalised through the Distance Education Centre as shown in Figure 2.

While the responsibilities assumed by the Centre reflect the 5th Generation model of distance education practiced by the university, the core functions of instructional design, materials development and delivery and student support are common features of effective DE units across the spectrum of delivery technologies. As Bates (2000:8) suggests, while on-line teaching requires a different approach to course development and tutoring, many of the design principles and nearly all the student support requirements transfer well from print-based correspondence education to on-line learning, whether for on-campus or off-campus delivery. The awareness of the importance of instructional design and student support systems, combined with already existing funding and infrastructures, reduces the risk of failure in online learning for existing dual mode or dedicated distance teaching universities compared with new institutions entering the market.

Figure 2: The Structure and Staff Establishment of the Distance Education Centre at USQ



(Reproduced from Taylor 1997:11)

Another model adopted in dual mode universities is to decentralize distance education to each Faculty or School. Bates (2000 *ibid*: 3) reports evidence that when distance education is decentralized to Faculties and Schools, activity tends to decline compared with a centralized system, except in areas where there are major profit making or revenue generating possibilities for Faculties.

Stumbling Blocks to Successful Implementation of Dual Mode Education

One of the key factors that has impeded the development of a fully integrated dual mode system of delivery in some traditional face to face institutions has been resistance from the academic staff. This may be born of concerns about additional workload; perceptions of the status of external students vis a vis their full time counterparts; or the fact that the design and development of distance teaching materials carries little weight in terms of career path aspirations (Freeman 2004: 50). Moran and Myringer (1999: 62) suggest that the resistance is born of insecurity and the tension that exists between the academics’ desire to offer individualized learning and the standardization that is inherent in self-instructional learning packages. This leads to alienation born of a perceived loss of authority and a sense of redundancy that is often compounded by a skills and knowledge gap in matters related to advanced technology and curriculum development that needs to be addressed by staff

development. Olcott and Wright (1995:5-17) include the fact that distance education is considered inferior to traditional face-to-face teaching; a perception of inadequate compensation, training and incentives for faculty teaching on DE programmes; and a lack of institutional support to the list of barriers they propose. They conclude that without an administrative infrastructure to support distance teaching faculty, the barriers will outweigh any incentives.

The case of the University of the West Indies (UWI) provides an excellent example of typical reasons for the introduction of dual mode education and of the problems that may beset attempts to integrate the two modes unless adequate attention is paid to the issues raised above.

Founded in 1948, UWI had, by the mid-1990s, long been accustomed to its position as the region's primary tertiary education provider. The university structure was characterized by the comparative strength of its three campuses and the weakness of the centre. By then however,

offshore educational institutions and internal private providers had been aggressively penetrating the region's higher education market, and had been meeting with increasing success. These competitors exploited the tremendous potential of distance education as a revenue earner. The levels of success... were due, in part, to their more flexible and accessible entry requirements and study arrangements. These arrangements attracted students who perceived UWI to be more intractable about admissions and programme completion requirements

(Harvey and Williams 1996:4)

In 1996, faced with a new mandate to play a greater role in regional human development, UWI embarked upon a process of transition to dual mode operation, but the process has been fraught with difficulties (Morgan 2000:108). Koul (2000: 236) identifies 15 areas of dysfunction caused by the unrealistic nature of the basic assumptions that underpinned the original planning process which it may be helpful to summarise here:

1. The model assumed that all Faculty had 20% of unused time that they could devote to DE operations. Faculty disputed this, though they would have been willing to work for DE in their own time for extra pay;
2. Administrative units did not uniformly accept responsibility for DE related work, to the extent that DE students are not counted as those of the university and they are treated indifferently;
3. Existing rules and regulations are insensitive to the needs of DE students, leading to bitterness and disaffection among the students;
4. Faculty indifference or antagonism results in poor quality delivery to DE students, and a strong faculty power base results in a 'toothless' DE Centre without authority to demand results;
5. Failure to cost services properly and lack of understanding of or concern for DE operations leads to inefficient use of funds;
6. Low priority given to DE work leads to delays and results in a poor reputation;
7. The special Board created to oversee DE is subservient to other senior boards that are well recognized and well entrenched within the institutional ethos, so that its power to effect change is severely hampered;
8. DE work is given no place in the scheme of career advancement in the university and is therefore scoffed at;
9. Conflicts between Faculty and instructional designers lead to delays in course production and delivery;
10. Mandated local tutorial support is not always available at all local centres.

The consequences for the students were inevitable:

- Confusion with registration, selection of courses and award of exemptions;
- Delayed and/or piecemeal supply of study materials, defective instructional design and confusion in assignment handling;
- Confusion in the organization of teleconferences, absenteeism among course coordinators, local tutors and students and indifference to learners' enquiries;
- Delayed appointment/non-availability of tutors, and demotivating size of tutorial groups;
- Confusion in the conduct of examinations, distribution of wrong question papers, loss of answer scripts, problems with remarking or review of scripts, inordinately delayed and lost results.

Koul's prescription for corrective action includes:

- The establishment of an effective and well documented quality assurance system relating to academic and administrative functions;
- A concerted effort to bolster the key major operations that DE depends on - support services, course preparation, dispatch and distribution of materials, recruitment and training of tutors, accurate scheduling of teleconferences and top level functionality of the digital network;
- Modification of relevant rules, regulations and related practices and associated changes to administrative structures and work culture;
- Dedicated and independent budgeting to ensure appropriate investment in DE;
- Investing in technology and training to maximize the use of technology mediated learning; and
- Establishing a Board that is able to formulate policies and implement them effectively.

The School of Correspondence Courses and Continuing Education (SCCE) of the University of Delhi offers a good example of the type of dual mode provision available in South Asia in which a prestigious face-to-face institution offers its programmes via correspondence to matriculated students who were unable to gain a place on a full-time on-campus programme at the university.

SCCE has been offering traditional correspondence-based courses to students since 1962. Demand for full-time undergraduate places in Delhi far exceeds supply, and applicants who fail to secure a full-time place at the university often prefer to study by correspondence at the University of Delhi than to enrol on a programme at the Delhi-based Indira Gandhi National Open University (IGNOU). The number of students who register with the School has increased enormously over the years. At present almost two-thirds of undergraduate level students (some 75,000 per year) are enrolled in what the University calls its 'non-formal stream. (Dighe 2005).

The university has been considering ways of improving and updating its provision of traditional correspondence-based courses since the early 1990s. Eight major committees have reported to successive Vice-Chancellors of the university between 1990 and 1999. In 1999 the Executive Council took a decision to convert the SCCE into the Campus of Open Learning, but an operational plan was only tabled for the Council's consideration in 2003 and the vision of a modern, efficient institute of open learning is still some way from being realised.

This case study again reveals the difficulties inherent in making change in traditional institutions, where the weight of entrenched vested interests promotes inertia and the processes of institutional governance grind exceedingly slowly. Theoretically, in the case of the University of Delhi, as in similar traditional universities in Sri Lanka which offer a comparable, largely unsupported model of correspondence education to 'non-formal' or 'external' students, there is an established principle of parity between the core elements of degrees awarded by the traditional campus-based system and those offered by correspondence which allows transfer between the two modes. In practice, of course, any traffic tends to be one-way, and students studying by correspondence rarely manage to obtain a place on a full-time course. Under this principle of parity, the academic home of all courses and programmes offered by correspondence is in the various Departments and Faculties of the university, for whom correspondence course students, given the present rudimentary support they receive, represent a significant source of income. It follows that the establishment of a Faculty of Open Learning with the freedom for curricular innovation would threaten the status quo and has been strongly resisted. Paradoxically, it is the argument that the loss of parity of esteem between degree holders would be most detrimental to correspondence students that has been used to delay the move to properly supported distance education provision that could transform their learning experience to one that would be more in line with that enjoyed by their full-time on-campus counterparts.

In all of the case studies, the influence of the existing institutional culture emerges as a significant factor in the effective implementation of dual mode delivery. King (2005:64) describes the centralized managerial approach at UniSA that enabled the new vision of flexible delivery to prevail despite initial reservations on the part of academic staff and existing DE students. Bates (2005b: 55) demonstrates how the devolved strength of the Faculties in a traditional university led to a proposal to disperse the staff of the Distance Education and Technology Department to support Faculty efforts in on-line learning at UBC. Perraton (2005a) confirms that in the case of UWI, where faculty members had tenure, job descriptions that did not include distance education, and heads of department who were unenthusiastic about distance education, there was little anyone could do to get DE work out of them.

In the case of USP, Chandra (2000:6) reports that until the early 1990s, distance education was seen as an adjunct to face-to-face teaching and was therefore given lower priority by staff members. "It was common for instance for Heads of Department to defend delays in the turnaround of assignments by indicating that staff had onerous on-campus commitments, clearly implying that they did extension work over and above their 'normal' workload, and face-to-face students received priority attention."

In 1990 less than 50% of courses at USP were able to present the results of extension students for approval by the university's Academic Committee. The situation was turned around within a three year period by the Deputy Vice Chancellor who, as Chair of the Academic Committee, underlined the importance of preparing results in time for approval by the committee by writing to staff to tell them that if they did not perform, it would be taken into account during the review of staff for contract renewals and promotion.

The USP experience points up the importance of

- Proactive leadership at senior level;
- Strong vision in relation to telecommunications and learning technologies;

- Key role of staff development (with particular attention to course development and the effective use of technology in teaching);
- Appropriate resourcing for and devolved management of the University Centres, permitting the Centre Directors to be the university's eyes and ears- acting as a conduit to senior management on how the university is perceived in the region.

In 2004 USP was contemplating a change from distinguishing between distance and conventional classroom learning to the adoption of flexible learning in which instructional materials would be developed to serve both the classroom and the distance learner, studying under various circumstances with a range of communication infrastructures, including very limited access in remote regions of USP territory. As one advisor noted, operationalising the vision will be difficult without the redirection of established operating budgets to reflect the strategic commitment to the initiative by giving more political clout to the course development team to enforce university models, to provide incentives to attract faculty, and offer rewards to recognize their involvement. (Uegama, 2005)

Establishing an equitable reward system for academics engaged in both modes of delivery is probably one of the most difficult management tasks facing senior administrators in a dual mode institution. Perraton and Creed (1999:27) report three different approaches that have been successfully applied to remuneration for course development undertaken in addition to existing face-to-face teaching duties. The first is to estimate the length of time taken to develop a given quantity of course materials and then compute a course writing fee for the task based on a fixed point on the salary scale. The second method is to look at other possible sources of income for the potential course writer such as examination marking in order to calculate a fee. The third approach, followed by many Australian universities, is to require academic staff to be responsible for teaching a number of student units per year. They may do this either by conventional face-to-face teaching or by preparing flexible learning materials. In such a system materials development attracts no additional remuneration. It is assumed that the extra work in the year the materials are developed is compensated by the reduction in hours spent teaching in subsequent years.

Costing Dual Mode Education

At the heart of many of the difficulties of dual mode institutions that have struggled to achieve parity of esteem between the modes is the issue of funding. Historically, government funding for Australian universities was made on a per full-time student equivalent basis irrespective of the mode of study. From time to time the practice was questioned in the light of the claims made by dedicated distance teaching universities for the cost effectiveness of the distance mode. However, as Rumble (1992 *ibid*: 100) observed, the price which distance education has paid for their comparative cost advantage over campus based teaching is to limit both the range of subjects taught and the level of student support services. Guiton (1992:99) noted that, in the case of Murdoch University, differential funding by study mode would effectively undermine the principle of parity between the modes, and do much to destroy the motivation for schools of study to participate. He suggested that parity of funding may therefore be a critical precondition for an effective dual mode university structure.

Rumble (2001:76) defines the factors which in combination drive the costs of any educational system, all of which are susceptible to management control:

- Course populations;
- The number of courses offered;

- The lengths of course lifetimes;
- The media and technologies chosen;
- The extent to which cost-inducing actions, for example, the use of copyrighted materials, are avoided;
- The extent to which costs are placed on students, either as tuition, or by moving the system boundaries so that activities the institution might once have paid for are now paid for by students (e.g. access to tutorial and library services);
- The extent to which the institution employs people on contracts *for* service (i.e. salaried posts) to develop courses and teach students, rather than on contracts *of* service (i.e. hired as casual labor, to be paid by the manuscript/script/tutorial hour/test marked, etc.);
- The extent to which the institution adopts working practices that reduce the costs of labor by, for example, designing courses to be wrapped-around existing textbooks rather than developing new materials, and using author-editor models of course design, rather than big course team models;
- The use of technology to increase the student load per academic or administrator;
- Increases in the teaching load of academic staff at the expense of other functions - for example, research and public service;
- 'Labour for labour' substitution - the replacement of expensive academic labour by student and adjunct labour, in order to reduce staff costs.

Within a traditional (1st – 3rd Generation) DE environment the unit cost of a particular course is determined by three main factors: the fixed cost of course development, which is in part a function of the sophistication of the media used to teach it; the number of students enrolled; and the recurrent cost of the tutorial support offered to students. (Perraton 2005b: 270). The development of e-learning however also changes the cost structure of distance education and the institutional costs of a fully developed e-education system would include:

1. Developing e-materials;
2. Teaching (and assessing) students online;
3. Accessing the web site;
4. Administering students online;
5. Providing the infrastructure and support within which e-education can operate;
6. Planning and managing e-education at the macro-level.

Rumble (2001 *ibid*: 78)

The cost of developing e-learning materials varies greatly depending on the sophistication of the media employed but is generally accepted that it is more expensive to develop media rich e-learning material than paper-based print. Nevertheless it is clear that cost savings will be derived by the electronic distribution of materials which reduces the cost of postage and shifts the cost of printing on to the student. However, where e-learning has been introduced in both face to face and distance teaching institutions, e-tutoring has been found to greatly increase staff workload. Institutions must either employ additional staff and increase costs, or find ways of containing demands on tutors' time, or even subcontract tutoring to commercial ventures such as Tutor.com (<http://www.tutor.com/>). At the institutional level it is in administration that the greatest cost savings are afforded by a move to a completely online environment. However, in addition to the high cost of technology investment, institutions must also factor in the cost and frequency of maintenance and replacement cycles.

As noted above, one of the features of e-learning is the way in which it potentially shifts many of the costs onto the learner. In order to participate in e-learning a student must have affordable access to computers. While the use of local study centres may alleviate some problems, they have significant start up and running costs and generally cannot provide accommodation for many students at a time. If owning equipment is a necessary condition for participation, many disadvantaged people will be excluded on cost grounds.

Impact of E-learning on Dual Mode Education

One of the weaknesses of earlier generation distance education models was that they provided few opportunities for students to develop a range of graduate skills such as critical thinking and problem solving, communication, working in groups, social responsibility and an international perspective, that are increasingly highly prized by employers. The possibilities for synchronous and asynchronous local and international interaction offered by the on-line learning environment have the potential to break down the isolation of the long-distance learner.

Bates (2000:4) however sounds a note of caution. He observes that web technology has made it possible for Faculty 'lone rangers' in face-to-face institutions to produce what are described as on-line courses, but which may not have been designed as such and consist of lecture notes plus email and a discussion forum. Similarly, the early 'on-line' courses in distance teaching universities were often existing print or audio distance courses placed on the Web with an associated discussion forum on the web-site. He reports that research at UBC found that students judged these courses to be 'value reduced' in that they created more work for the student but offered nothing new on which they would be assessed. In this context it is interesting to note that it is exactly the enthusiasm of individual faculty members for the use of on-line learning to supplement classroom interaction that UWI and USP are hoping to harness in their proposals for flexible learning. Given their previous battles with faculty hostility and indifference towards the distance mode, the following warning may be pertinent:

Another ambiguity has developed: on the one hand the term blended learning is used to represent the new awareness of the need to design learning systems which are able to integrate at best different learning strategies including ICT-supported learning, and on the other to hide a resistance to innovation that expresses itself by introducing small elements of ICT based learning to offer the same teaching as before.

European Open and Distance Learning Liaison Committee (2004:2)

Best Practice Framework

Introducing dual mode operations in an existing institution, as we have seen, is not easy. In the final section of this study therefore we shall seek to extract from our deliberations some principles of good practice in dual mode operations, which may help new providers to avoid some of the major pitfalls that could place their venture at risk. Of course it is unlikely that any single prescriptive best practice framework can be applied to all situations, nor, given the range of institutional models and technological sophistication involved, is it possible here to provide a comprehensive checklist that would cover all aspects of institutional quality. Nevertheless we hope that it can provide a starting point for planning and a check list for the implementation and evaluation of dual mode programmes.

The emphasis placed on different aspects of institutional quality may vary according to the influence of various stakeholders in the learning enterprise. Stakeholders may include the governing body,

funderson, shareholders, students, staff, employers of graduates and the wider society. Their interests intersect at three key points:

- That the programmes provide opportunities for learners to gain relevant and recognized competencies and credits;
- That teaching, learning and assessment are effectively and reliably delivered with appropriate support processes and services;
- That the necessary human and financial resources are optimally planned for and deployed to meet the mission objectives.

(Hope 2005: 229)

The principles listed below reflect the key findings of our study and are organized under four main headings in line with the core objectives listed above:

- Organisational Culture;
- Programme planning and development;
- Teaching, learning and student support;
- Planning and management of resources.

Organisational Culture

Institutional commitment to parity between modes of study is clearly articulated, championed and operationalised.

- The institutional mission statement clearly specifies the goals of the institution and the principles by which it operates;
- Parity of esteem between distance and face to face modes is enshrined in the mission statement;
- Staff in leadership roles demonstrate commitment to continuous quality improvement in dual mode provision;
- Responsibility for the management of change initiatives is vested at the most senior levels of the organisation;
- The institutional committee structure supports and promotes parity of esteem of both face to face and distance modes;
- Management structures reinforce the integration of distance and face to face learners within a single academic community;
- Promotion and reward structures for academic staff reflect parity of esteem between distance and face to face modes;
- Administrative structures support both face to face and distance teaching faculty and are responsive to the special needs of off-campus students;
- Management information systems take into account all aspects of distance and face to face delivery and conform to user requirements for timeliness, reliability and accessibility;
- Certification of qualifications and awards makes no distinction between modes of study.

Programme Planning and Course Development

Programme planning and course design and development are learner-centred, systematic and appropriately resourced.

- Programmes are developed on the basis of learners' needs, established by market research and consultation with stakeholders;
- Programmes reflect institutional mission and objectives;
- Academic workload considerations are taken into account at the programme planning stage to ensure equitable treatment of on- and off-campus learners;
- Access requirements take into account the particular needs of the off-campus student;
- There are clearly documented procedures for programme and course development and review which take into account the need for consistency of infrastructural and systems support across learning modes;
- Programme and course objectives clearly specify the subject matter to be covered, the intellectual skills to be acquired and the learning methods used;
- A professional instructional design component is included in all course development to ensure the effectiveness of teaching and learning in the distance mode;
- Decisions about the choice of delivery technology are driven by consideration of learners' needs, curriculum content and availability of learner support for all learners.

Teaching, Learning and Student Support

Systematic provision of appropriate academic support for all learners is designed in to every course and programme

- Quality of the outcomes of the educational experience is consistent between modes;
- Effective student support in the form of systematic interaction between teacher and learner is a requirement of all courses and is built in to the design of course materials;
- Tutors are accessible to individual and groups of learners through synchronous and asynchronous technologies;
- Feedback on assessment is provided to all learners on a timely basis so as to inform their ongoing learning;
- Distance mode learners have access to the physical facilities (eg libraries, study space) and equipment that are necessary for their successful learning and appropriate training in their use;
- Opportunities are provided for peer interaction at both the course and institutional level to promote a sense of belonging and encourage the development of learning and social communities within and across modes;
- All learners have access to counseling before and during their course or programme;
- Precise, accurate and current information is readily available for each course and programme and well publicized to all students concerning:
 - a) Learning outcomes;
 - b) Programme structure and requirements;
 - c) Total costs;
 - d) Financial support;
 - e) Admission requirements;
 - f) Assessment requirements and processes;
 - g) Rules and regulations;
 - h) Appeals procedures.
- Systematic collection and analysis of student feedback is a core component of academic quality assurance mechanisms.

Planning and Management of Resources

All planning decisions are based upon an analysis of user needs and a clear understanding of the initial and recurrent costs of dual mode operations.

- There are clear lines of accountability within the institution;
- There exist clear and authoritative decision making structures for seeking and receiving funds and for the allocation and control of resources for dual mode delivery;
- Decision making about the flexible delivery component of any programme is based on a sound understanding of the costs involved;
- Decisions about the choice of technology are driven by consideration of learners' needs
- Technology is supported by a technology plan that includes:
 - a) How the technology is to be used for learning;
 - b) How people are to be trained to use the technology;
 - c) How the technology is to be managed and maintained.
- Funding, staff time and skills are available to operate the technology and provide technical support for teachers and learners;
- Staff development opportunities are available for all staff and are specifically designed to enable effective delivery of learning through the use of technology;
- Decisions on funding, human resource provision and development, access to systems and special facilities reflect the institutional commitment to parity of esteem;
- The institution evaluates and continuously improves its learning provision, and regularly benchmarks learning outcomes in both modes to ensure consistency.

Conclusions

As education providers in both face to face and distance modes embrace the use of internet-based technologies to facilitate student learning, the boundaries between distance and face to face education and the institutions that offer them are becoming increasingly blurred. Our study has examined conventional face to face and dedicated distance learning institutions that have 'gone dual-mode' as a survival strategy as well as successful dual mode operators who have introduced flexible learning for all their students. Leicester University in the UK is a traditional institution that has successfully incorporated e-learning in the on-campus curriculum and has harnessed it to trade on its established reputation for quality in the face to face mode and deliver its niche post-graduate programmes by distance learning to students around the world. The Open University of Hong Kong was founded in 1989 on the model of the UK Open University to respond to an unmet demand for higher education opportunities created by an elitist conventional system in a territory with a population of some 7 million people. Since 2001, faced with increasing competition for student numbers from both local and overseas providers of flexible part-time study opportunities, it has diversified significantly from its original mission to provide opportunities by distance learning for Hong Kong residents, by launching full-time, face to face programmes using its distance learning materials as course resources and maximizing the day-time use of its campus facilities. The university markets the quality of its teaching resources and the highly developed local student support model that characterizes its DE programmes as a competitive advantage in both situations.

As we have seen in our study, dual mode learning is not synonymous with on-line learning. In many jurisdictions, the technology involved in the distance mode delivery of programmes may still to a large extent be print-based. Nevertheless it is the flexibility offered by on-line learning technologies that is making technology-based learning an increasingly attractive option for the senior management

of campus-based universities around the world, and its ad-hoc adoption by enthusiastic faculty members is giving a much-needed kick start to dual mode initiatives that in some cases have languished for many years in the face of indifference or even hostility from the faculty towards the off-campus enterprise. The use of technology permits universities to introduce more flexible learning elements for their on-campus students and the flexible fixed and variable costs associated with on-line delivery and the opportunities they provide for just-in-time learning resource production and effective tutor : student and student : student communication have enabled leading edge institutions in Australia and the UK to extend the reach of their programmes internationally. These dual mode providers understand however that planning and control are essential for their success and aim to achieve the “consistency of infrastructural and systems support” Daniel (1999 *ibid*: 297) across modes that is the distinguishing factor of a successful dual mode institution.

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