

Flexible Teaching and Learning: Perspectives and Practices

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Abstract: The rapid growth in flexible delivery of open learning and teaching through the use of interactive communication technologies poses significant questions relating to resource allocations, different learning environments, more demanding time constraints, the role of the teacher and new modes and techniques of communication. It is also evident that there has evolved a number of different terms for this new, rather deregulated approach to education and training, and that there is much talk of a new paradigm. Overseas and Australian examples indicate that two major developments in this regard include the development of consortia of providers and the use of the Internet to deliver programs. This paper will address the issues inherent in these developments, provide examples of ways in which new models are addressing the issues, as well as present what appear to be trends in such delivery.

Pressures

The 20th Century is closing with a build-up of pressures on every organisation whether it be industry or service oriented. These pressures may be listed as: economic (income versus expenditure), equity and social justice, technological, deregulation, improved productivity and quality assurance, and global competitiveness.

All universities face challenges with regard to these pressures and addressing them is crucial for survival in the competitive climate of today. This is particularly the case in the Pacific Rim area, including Asia, as well as the European Community, where countries are taking advantage of each others' learnings at an accelerated pace.

All of these pressures, of course, require universities to address ways in which undergraduate as well as continuing professional education programs are designed and delivered. Therefore, these pressures are as relevant to education and training providers as they are to commercial enterprises of all sizes. For example, due to deregulation of education and training, the growth in numbers of non-government private training providers is increasing exponentially in many countries. The challenge for all providers, whether they be internal to the organisation or external providers tendering for contracts, can be summed up as follows:

- to establish new corporatised operations as public (i.e. government tax-based) funding is withdrawn;
- to provide 'just-in-time' training;
- to deliver into the workplace or the home;
- to design programs which meet new quality standards;
- to customise training for the particular client, both in terms of the organisation and the individual learner;
- to enter into partnerships to ensure accreditation and articulation towards higher qualifications;
- to achieve economies of scale;
- to employ flexible delivery modes using a range of technologies; and
- to compete in the global market place.



Daniel (1996, 47–55) describes the three stages in the history of distance learning:

1. St Paul sent hand written letters to individual churches and asked the local elders to read them to their congregations. The churches were, therefore, like remote classrooms or study centres – asynchronous communication.
2. Two technologies, the printing press and universal postal services, enabled distance learning to move into people's homes and workplaces and these options were employed in correspondence education from the mid 19th century – again asynchronous communication.
3. Telecommunications and the development of a range of 'knowledge media' from the middle of the 20th century have introduced a new set of options for educational delivery both on and off campus – options for both asynchronous and synchronous audio, visual and graphics communication have become possible through single function technologies.

In a similar vein, higher education is entering its 'third generation' according to Moore (1993). The first, which lasted for centuries, was based on bricks and mortar technology, and one received the award from a university based in a specific place – e.g. 'The University of Queensland'. The second generation, has been only partially place-free and has involved various forms of open learning universities and agencies using a range of distance delivery modes and technologies. The third generation, Moore explains as follows:

Such restrictions are no longer necessary. With the development of the communications technologies of the 1990s – the electronic highways to our homes and workplaces – we are rapidly approaching technical readiness for the Virtual University, the third generation of higher distance education. (Moore, 1993, 4)

Characteristics and principles of open learning and flexible delivery

Without becoming too pedantic about the terminology, some indication of the various labels and how they are used should be addressed briefly. Over the years the evolution of the terminology has probably been indicative of the convergence of related concepts. For example:

- Correspondence education;
- External studies;
- Distance education;
- Distance learning;
- Open learning;
- Flexible delivery;
- Flexible learning;
- Flexible teaching and learning; and
- Distributed learning.

The term 'open' in reference to education and training has become widely used and, usually, distance learning and the use of technologies for flexible delivery are considered to be important components of an open learning approach. The description of 'open learning' provided in *Queensland Access to Higher Education: On the Road to Open Learning* (Queensland Board of Advanced Education, 1989) provides a useful introductory description:

Open learning is a philosophy and system whereby all options for post-compulsory education are kept open. This approach is characterised by flexibility in terms of entry, program components, modes of study and points of exit. Learners are encouraged to negotiate learning arrangements to meet their special needs.

The Australian Senate Employment, Education and Training References Committee in its first volume of a report on the inquiry into open learning in Australia (1994) also make a good attempt to clarify the term:

The term 'open learning' means different things to different people and it is not always possible to be sure that those who use the term are talking about the same aspect of education when they employ it. For the Committee, the term 'open' learning implies a freedom and diversity of learning options for the student. Open learning as a concept has been in existence for many years, as the long record of distance education in Queensland attests. But

open learning is not simply distance education under another name. Open learning needs to be flexible, student centred and to offer opportunities and choices that structured and conventional delivery of courses may not presently allow at least in higher education – whether on campus or off campus.

All forms of flexible delivery for education and training should remain valid in an open learning approach. That is, the so-called ‘traditional’ face-to-face option where teachers and learners are in the same location, must continue to be available, particularly when there is a need for some form of special high level interaction or use of rare or expensive resources. However, various forms of face-to-face human interaction can now be effectively replicated through emerging communications and information technologies. Indeed, every possible subject area and all forms of skills have been successfully taught at a distance through interactive technologies. Further, there are increasing examples in the literature of new, creative techniques and strategies for teaching and learning becoming available through these technologies which are not possible through a face-to-face approach.

Open learning, however, also implies flexibility in policies and delivery ‘on-campus’ as well as ‘off-campus’, and therefore the term is seen as a broad approach to increasing access and choice in learning. There is still some debate as to the applicability of an open learning approach in schools, but for university, college and industry training as well as all types of professional development, this approach facilitates flexible delivery to suit the work patterns and professional needs of adult learners.

The Australian Technical and Further Education (TAFE) National Flexible Delivery Working Party (1992, 47–48) has also provided a clear definition and set of principles regarding ‘flexible delivery’. With very few editorial changes to incorporate a range of training and development situations, these can be taken as the basis for any approach to open learning and flexible delivery:

Definition

Flexible delivery is an approach to vocational education and training which allows for the adoption of a range of learning strategies in a variety of learning environments to cater for differences in learning styles, learning interests and needs, and variations in learning opportunities.

Flexible delivery is characterised by:

- flexibility in terms of entry, program components, modes of learning and points of exit;
- learner control and choice regarding the content, sequence, time, place and method of learning;
- appropriate learner support systems;
- the application of learning technologies where appropriate;
- access to information on courses and services;
- access to appropriate learning resources; and
- flexible assessment processes.

Flexible delivery finds expression in many ways including:

- the delivery of learning at a variety of locations including the workplace, the community or neighbourhood and the home;
- resource-based learning with tutorial support;
- the application of technology to enhance delivery or improve access opportunities; and
- the extension of educational opportunities through access programs, literacy programs, second and third chance opportunities for obtaining qualifications and bridging courses.

The main issue, however, is that ‘flexible delivery’ implies a one-way direction from provider to learner. The interactive technologies, on the other hand, empower professionals to send as well as receive, and thereby initiate professional development networking that goes beyond the unidimensional implication of ‘delivery’. It is, therefore, necessary to re-look at the terminology and perhaps place the emphasis on ‘flexible teaching and learning’.

There are four major dimensions to flexible teaching and learning. Firstly, there is the flexibility that can be provided through a range of teaching and learning strategies, including various resource-

based options, such as: lectures with tutorials; independent study; discussion/seminar groups; debates; computer based education; and many more. Secondly, flexibility may also be provided in the curriculum by permitting alternative pathways through modularisation of the content, allowing learners to choose the sequence and negotiate assessment. Thirdly, there can be flexibility in organisational arrangements such as summer schools, block programs, emersion programs, part time evening programs, distance learning (off-campus) and mixed mode. Finally, the most difficult of all, is the provision of flexibility through the institution's administrative policies and procedures, such as open entry and exit.

However, these ignore the major power shift being experienced in post-compulsory education and training. That is, the shift in power from the institution to the learner. Whereas previously universities used to be able to dictate entry requirements, entry times, sequencing of curriculum components, content of curriculum components, timing and mode of delivery and assessment requirements, this is no longer possible in the deregulated educational marketplace. Learners can now choose from a range of providers and negotiate these elements of their learning. Such new demands from the 'clients' means that there needs to be increased flexibility in administrative procedures as well as curriculum content and delivery.

The result is that we are truly confronting a major paradigm shift for teaching and learning, and that many of the components of the new mainstream paradigm come from the distance/open learning tradition. This new paradigm is based on a new 'philosophy' of higher education which is inexorably linked to the applications of communication and information technologies.

Resistance from traditional/conservative universities and staff is severe in some instances, because of their elitist philosophy of higher education. This is based on a Middle Ages view of education being not only elitist but also part of a secret society. So in those days there was the masses without the privilege of education and the cloistered academics practising their literacy. The story goes that this led to magical practices among the masses when, for example, they developed chants and words like 'abracadabra' which was an imitation of the monks reciting the alphabet.

In summary, flexible teaching and learning is an idealised state where there is a mixture of educational philosophy, pedagogical strategies, delivery modalities and administrative structures which allows for maximum choice for differences in student learning needs, styles and circumstances. It is characterised by:

- a shift in the emphasis of responsibility for learning from the teacher to the learner;
- the use of a range of teaching and learning strategies;
- the ability of the learner to negotiate various aspects of the learning program;
- flexibility within the curriculum to provide learners with alternative pathways through the content to suit learner needs;
- a range of delivery systems, including the use of communication and information technologies;
- flexible administrative procedures; and
- increased learner support systems, including guidance services, pre-packaged learning resources, library and information services and access to computer facilities, in the recognition that there are several sources of information and knowledge, especially on-line electronic sources.

There is no single model of flexible teaching and learning which can be superimposed on a particular university setting. Rather, a university may adopt as a principle a commitment to increasing flexibility for its clientele, and exhibit and develop a variety of manifestations of flexibility in practice.

The extent to which these forms of flexibility will apply in a given situation will depend on the needs of the learners, the nature of the subject and its objectives, the approach of the teacher and the

feasibility of the various options. These four elements are considered further as a decision-making model later in the paper.

National and international contexts

There are at least three major developments in higher education which require flexible approaches to teaching and learning:

- increased flexibility for students in terms of access to and progression through courses to move closer to meeting their needs, including delivery of courses to where they work and live;
- use of a range of technologies, but increasingly the Internet on-line, for delivery; and
- globalisation of markets and delivery.

Often referred to as the constructivist paradigm, the move by institutions to more flexible teaching and learning is being recognised as part of the shift to ensure learners' needs are met more adequately than they have been previously. These needs are often linked to **equity of access**, but the same shift has with it the potential to extend markets nationally and internationally. Coupled with shrinking funding and increased competition, the movement, in Westernised countries particularly, is accelerating. There now exists the possibility for people in Australia to enrol in university courses from overseas, for credit, which are delivered by satellite television or through the Internet. It is possible, for example, to undertake a Masters in Business Administration from Duke University in the USA through the Internet in 20 months for \$US19,500. There are as yet no regulatory controls in Australia to cope with this type of 'educational invasion'.

Universities in Australia, however, have not been slow in recognising this potential for their own purposes. Open Learning Australia, for example, is moving into the Asian market-place using the ABC and its learning packages, and several of them already have courses on-line on the Internet. USQ, for example, has a Graduate Certificate in Distance Learning available internationally on the Internet.

The **use of communication and information technologies** in higher education has been a major aspect of change in the past 10 to 20 years. Whereas universities were using various single function technologies (e.g. audioconferencing, satellite television, electronic mail) during the 1980s, they are now moving to multimedia formats, such as CD-ROM, videoconferencing and on-line Internet, which itself is becoming increasingly 'interactive multimedia'.

Globalisation of delivery and markets is evident in the examples above. It will become less feasible, and perhaps less socially and politically desirable, for increasing numbers of overseas students to come to Australia to study on-campus. Universities in the USA, for example, are advancing their delivery directly into overseas countries or they are exporting their expertise to assist overseas universities in developing countries to become self sufficient.

International examples

United States

Western Governors University <http://www.wgu.edu/>

National Technological University – Colorado <http://www.ntu.edu/>

GSAMS – Georgia <http://www2.state.ga.us/departments/doas/gams/v2/master.html>

Europe

Europace 2000 <http://www.europace.be/>

Coimbra Group <http://www.coimbra-group.be/>

University of Exeter – T3 <http://telematics.ex.ac.uk/T3/>

Decision-Making Model

The choice of open learning/flexible delivery options should be based on four decision-making considerations:

1. Assess the needs of the participants/clients and practitioners:

- Personal needs: age, gender, abilities, learning styles, nature of employment and work patterns, home responsibilities, nature of isolation, other special personal needs;
- Professional needs: program relevance, experience and qualifications, present knowledge level;
- Access needs: location, distribution (geographic), disability, number of participants/practitioners; and
- Choice: types of programs/courses/services available, place, pace, time, timing, duration, individual or cohort preference.

2. Clarify the objectives of the program, nature of the processes and the relevance of the content:

- Interaction and participation needs: level and type of interaction required among the participants such as live (i.e. synchronous, immediate/real time) versus delayed (asynchronous) interaction, level and type of supervision required, number of participants/practitioners;
- Teaching/learning strategies most appropriate for the content and objectives; and
- Content demands: need for audio, need for visual component (e.g. still graphics, colour and motion), type of knowledge, skills and attitudes needed to be acquired and/or demonstrated.

3. Consider the choice and skills of the practitioners:

- Confidence and skills in particular mode of delivery;
- Program strategies chosen as most appropriate; and
- Support available.

4. Determine the feasibility of the program:

- Access to equipment and systems for production and delivery, by participants/practitioners;
- Costs and availability of funds;
- Local support for participants (e.g. local site co-ordinator, training in the use of the technology, learning centres, information); and
- Institutional support (e.g. library services, production services, administration services).

Future issues, trends and unanswered questions

Future predictions usually fall short of reality both in terms of actual developments and the pace of change. The major areas that will impact on flexible delivery of professional development are associated with:

- changing role of the provider;
- globalisation;
- deregulated climate for advanced education and telecommunications;
- compulsory continuing professional development;
- increased technological options; and
- virtual learning.

The changing role of the provider involves the way in which educational and training institutions organise themselves. There are evolving consortia at national and international levels, there is a very rapid increase in private providers, and learners are demanding increased flexibility in terms of who they contract with for various programs.

With regard to globalisation, in addition to institutional consortia mentioned above, it is increasingly possible for providers to transmit both synchronous and asynchronous education/training programs anywhere in the world. For example, the National Technological University provides masters degrees to several countries via satellite television and electronic mail interaction; Duke University provides a 20 month Masters in Business Administration on-line for US\$19,500. The globalisation of the virtual university or the international virtual higher education market place has some exciting potential, but there are also several issues to be considered in putting it all together. Questions that may be asked include:

- How will learners determine the quality and authenticity of such programs?
- How will credit be obtained for subjects taken from another country?
- Who will the teaching staff belong to if they are teaching through another institution?
- Who will the students belong to?
- What are the regulatory and cultural implications of the globalisation of education?

At best, this globalisation will provide new opportunities and access where little or none previously existed; at worst it will result in educational invasion.

Due to the move to ‘open learning’ options in advanced education, the rise in private providers who are being encouraged, the corporatisation of government services, deregulation of telecommunications, cuts in government funding for education leading to a user pays system, and a general devolution of authority in education systems, we are entering a deregulated climate in which future developments are very difficult to predict. This type of catch-as-catch-can competitive environment may cause concern if it leads to lower quality of programs and a fragmentation of the curriculum for professions. Attempts to overcome this are evident in terms of the setting of national and international standards for learning outcomes, as well as requiring providers to become registered in the country in which they are operating.

Increased technological options, especially through the convergence of modes of communication onto the Internet, indicate that all of the above areas of development will expand exponentially. This, plus the increased miniaturisation of computer technology, the increased flexibility of computer use, the personalisation of communication contacts and the personalisation of search engines, will make it possible for adults to tap learning just-in-time from sources anywhere in the world to meet life and work needs as they arise. This type of virtual or ‘feral’ learning will not necessarily have any overall sequence or plan and educational institutions will be challenged in terms of learners fronting up for recognition of prior learning. The learner, whether professional adult or young child will be able to say: ‘I am my school’ or ‘I am my university’.

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