A meta-analysis of flexible delivery in selected Australian tertiary institutions: How flexible is flexible delivery?

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**Abstract**

The concept of “flexible delivery” is one that has taken hold in many tertiary institutions and is having a major impact on the current directions of these institutions. Universities and other tertiary organisations are rushing to develop “flexible delivery” environments as a way of meeting the fast growing demands for education brought about by a rapidly globalising world. In many cases tertiary institutions also view flexible delivery as being cheaper than traditional teaching/learning approaches and thus a viable option in dealing with both decreasing funding levels and the increasing demand for educational services.

This paper presents the results of a meta-analysis of web-sourced information from selected Australian universities interpretations of the terms flexible, flexible delivery and flexible learning and university policy in this area.

A number of trends and commonalities emerged from this analysis. Generally, the use of the terms flexibility, flexible delivery and flexible learning were not well defined and accordingly these terms have been defined based on a synthesis of definitions of these terms used by universities. Furthermore, purpose built flexible learning campuses, retail campuses, online learning, the adoption of particular technological approaches and fast track courses have emerged as models for “flexible delivery”. Universities have tended to follow more or two models at most.

**Introduction**

The use of “flexible delivery” for delivering education has taken hold in higher education institutions throughout Australia and is having a major impact on current directions. For example, major investments are being made by a number of institutions (eg. Griffith University, The University of Queensland and Swinbourne University) have established purpose built “flexible learning” campuses, and numerous universities are making major investments in developing interactive multi-media materials and on-line courses. However, in the rush to “flexibalise” many universities appear to have introduced the use of “flexible delivery and learning” environments in the absence of developing a common understanding amongst the stakeholders within institutions of the philosophy and practice of flexible delivery and flexible learning (eg. Holz, 1999; Salomon & Almog, 1998)

A lure, and often justified as a reason, for the use of flexible delivery strategies that incorporate the new learning technologies, by institutions for course access and presentation purposes, is that it can help make the concept of a learning community a reality in future
years (eg. Flexible Learning and Higher Education Resources, 2000). However, the adoption of flexible delivery only too often has its genesis in the belief that it can be used primarily as a tool for greater cost efficiency when compared to traditional learning environments (Inglis, Ling and Joosten, 1999). In this context the use of flexible delivery can address institutional concerns of ever decreasing funding support from Government and the increasing public demand for education and training opportunities.

This paper concerns the meta-analysis of web-sourced information from selected Australian universities regarding the interpretation of the terms flexible, flexible delivery and flexible learning. Also explored is the extent to which new teaching and learning practices that have been introduced have encouraged true flexibility through flexible delivery.

**Methodology**

The research for the study drew upon information accessed from Australian university websites, as well as literature referred to on these websites. The current literature on flexible delivery and flexible learning was also examined. The analysis of the foregoing information served to determine the following:

- The interpretation and development of definitions for the terms flexible, flexible delivery and flexible learning adopted by universities
- Commonalities and differences between universities in the use of flexible delivery and learning
- Trends in the use of flexible delivery and learning and
- Level of institutional support for flexible learning initiatives

**Observations**

It was anticipated that it would be a relatively straightforward process to obtain documentation from university websites. However, specific information about the use of flexible delivery /learning at each university was generally not transparent. Whilst each of the websites of the 37 universities in Australia was accessed, ultimately, information from only 24 universities was utilized. It was found that a number of the university web sites contained either no explicit reference to flexible delivery and/or flexible learning or that no useful information concerning this paper could be isolated from the web site. This is not to imply that there are universities in Australia that do not use flexible delivery/ learning for course presentation. Nevertheless, it is noteworthy that even though flexible delivery/ learning could be considered a major strategic plank for course presentations in the majority of universities, it was often not specifically stated in an up front way. For instance, whilst several universities have specifically established units for flexible delivery/learning, access to those sites often proved to be a complex and cumbersome process, particularly for outsiders. Major findings from the examination of information from university web sites are as follows:

- The majority of universities do not appear to have a stated policy on flexible delivery/learning available on their web sites.
- Some universities were still in the process of articulating definitions of flexible delivery/ learning (Bowie et al).
- For the majority of universities are engaged in flexible delivery/learning, these terms are generally not explicitly defined.
- Distinctions between the terms flexible delivery and flexible learning, when used by universities, are often not made and these terms are often used interchangeably.
• Documented details of management, organisational or implementation practices for flexible delivery/learning where it is stated that flexible delivery/learning is available tended not to be available from universities.

• For a majority of universities the introduction of flexible delivery/learning tended to be an outcome of the deliberations of a special committee or working party established by the university to consider alternative approaches to existing teaching and learning practices. Motives for the adoption of flexible delivery/learning included: achieving excellence and best practice in teaching and learning; a way of introducing information and communications technologies for on-campus courses; achieving greater efficiency in course delivery; and internationalization of courses in pursuit of new student markets.

• A number of universities have established purpose built campuses for the planning, development, staff support and evaluation of flexible delivery/learning initiatives, eg. the Logan Campus of Griffith University and The Ipswich Campus of the University of Queensland, Monash University, Lillydale campus of Swinburne University

• Approximately half of the universities have established special units to oversee and coordinate the development, implementation, staff support and evaluation of flexible deliver/learning, eg. Flexible Learning Centre (USA), CEDIR (U of WA)

Definitions

In a paper presented at the 1996 HERSDA Annual Conference, Nunan (1996) explored the then interpretations of the terms flexible delivery and flexible learning. He stated “flexible delivery is often taken to mean the same thing as the process of increasing flexibility in learning” (p. 2). Based on the data gathered from each of the universities Nunan’s foregoing summation is still most valid at the present time but it is possible now to make clearer distinctions between the two terms. This section provides definitions of the terms flexibility, flexible delivery and flexible learning distilled from university websites and literature referred to in these web sites. Also the current literature in this area has also been drawn upon. The definitions that have been developed reflect a combination of the qualities or characteristics of the terms flexibility, flexible delivery and flexible learning as applied in the context of university teaching and learning environments.

Flexibility

Whilst the terms flexible delivery and learning were not well defined by universities, there was a considerable level of consensus concerning the use of the term flexibility. When used in the context of teaching and learning the notion of flexibility was found to be referred to for on-campus and distance education modes of course presentations, through open learning, online and resource based learning etc. General the use of this term was seen as a means by universities to address the following aspects:

• Improve teaching and learning environments for staff and students, eg. providing more relevant and stimulating learning experiences.

• Enhance the quality of teaching and learning resources and interaction between the teacher and student and between students using communication technology.

• Provide a more student centered learning environment (usually through the use of multimedia) for learners.

• Bridge the gap between on and off campus studies by providing all students with essentially the same teaching experience and learning materials.

• Give students more choice of how and when to study.
Based on the information identified in the previous section the following definition of flexibility was generated.

*Flexibility*, when used as a term in the context of teaching and learning generally refers to providing students a greater choice and/or control over their learning

**Flexible delivery**

The definitions and descriptions of “flexible delivery” used by universities were very diverse and differed widely. A common theme concerned a desire by universities to provide flexible teaching/learning alternatives and to improve student access to courses (particularly through the use of technology).

The flexible delivery options matrix presented in the table below provides possible teaching/learning combinations using different teaching/learning methods and media. It can be seen that the use of online delivery enables greatest flexibility in that it can be used for synchronous delivery, eg. a live interactive tutorial or for asynchronous delivery, eg. a chat group.

**Flexible Delivery Options Matrix**

<table>
<thead>
<tr>
<th>Teaching/Learning Method</th>
<th>Type of Media</th>
<th>Synchronous</th>
<th>Synchronous/Asynchronous</th>
<th>Asynchronous</th>
</tr>
</thead>
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<tr>
<td></td>
<td>Online¹</td>
<td>Tape</td>
<td>Email</td>
<td>Print</td>
</tr>
<tr>
<td>Face to Face</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Video Conf.</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Online</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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1 Online is defined as electronically mediated communication that can either be synchronous or asynchronous. However, online learning usually equates to Internet or email use.

The above table serves to highlight the very significant use that can be made nowadays of Interactive communications technologies (ICTs) for teaching and learning. It needs to be noted that while, less than a decade ago, most teaching and learning was made available through face-to-face contact and the use of print, there is now a myriad of options for teaching and student learning using media such as videoconferencing, audioconferencing, the Internet, email and CD-Rom etc. The extensive use that can be made of ICTs is reflected in QUT’s definition of flexible delivery, as “the use of a range of strategies and technologies to meet the diverse needs of students regarding the location and time of study”. At this time however, the greatest level of use online delivery is in the asynchronous mode (eg Flexible Learning & Higher Education Resources, 2000)

However, in spite of the often stated institutional intention and from reports on the use of flexible delivery it appears that many flexible delivery approaches indeed did not in fact offer more learning choices for the student. For instance, some students at the University of Queensland Ipswich campus were disappointed that they had no choice about lecture times and were required to attend on-campus sessions. (Andrews & Ferman 2000). This situation also occurred at large distance education providers eg. Monash University, Charles Sturt University, CQU. Whilst on-campus students often have access to the distance education materials, these students have a degree of choice when studying a course. On the other hand,
distance education students usually did not have choices in terms of alternative forms of course presentation. From these instances and others the element of “choice” relates more to institutional needs than student needs.

Based on the web-based University information sources the following definition of flexible delivery has been generated.

**Flexible delivery** relates to providing approaches to education and training through a combination of different teaching/learning methods – lecture, tutorial, lab, group work, with different media, eg. Web, print based material, audio-conference, etc.

**Flexible learning**

The term flexible learning as opposed to flexible delivery, is frequently viewed as being synonymous with the term open learning (eg Fraser & Deane, 1997; Taylor, Lopez & Quadrelli, 1996). Both of these terms are concerned with enhancing student access and choice and control over their learning environment. A further critical dimension associated with flexible learning (as perhaps distinct but not exclusive to flexible delivery) concern student opportunities and choices for interaction with other students, institutional staff and resources used for learning. George and Luke (1995), for instance, see flexible learning in terms of increasing ‘the choices available to staff and students in teaching and learning’ (1995, p. 2). Nikolova and Collis (1998) also consider that providing a range of learning approaches expands learner choice, particularly in the ways in which they access learning materials.

In relation to the use of flexible learning, it is evident from the information obtained from university websites that its use, in part, has emerged as a consequence of universities exploring alternative approaches to teaching and student learning. Characteristics or aspects of flexible learning as identified from the university website literature includes: learner independence and responsibility; autonomous learning (learner control over the learning experience); learner empowerment during the learning experience (time, place, level of interaction and pace); time management, and relevance of learning. Furthermore, flexible learning was viewed by a number of universities as a way of meeting learner’s needs and requirements within the framework of the notion of life long learning eg Griffith University. Indeed for a number of universities the use/introduction of flexible learning has been part of the transformation of universities as places of lifelong learning. Thus flexible learning is being considered as an approach to learning and as an educational philosophy, and in an ideal setting, flexible learning would enable the student to draw upon a range of learning experiences identified in the above flexible delivery choices matrix.

The literature revealed that the theoretical underpinnings of flexible learning are in the philosophy of constructivism (Hannafin and Land, 1997). This is a shift from behaviourism or objectivism that is associated with the more traditional forms of on-campus teaching and learning (Hannafin and Land, 1997). From constructivism come such concepts as student centred learning, active student participation, deeper rather than surface forms of learning and changed roles for both the teacher and learner (Biggs, 1997; Kember and Murphy, 1995). The use of flexible learning can form a hybrid form of distance education through its use to break down the isolation from the teacher and other students with limited impact on the basic tenet of distance education of time and place independence. It is nevertheless important to point out that students may not be initially very accepting of constructivist/ learner focused approaches. Also, no necessary correspondence exists between student centred learning
approaches, constructivism etc and teacher focused approaches used generally for on campus courses as explored by Taylor (1998).

From another perspective it is appropriate to refer to the definition of flexible learning, provided from the business sector through the Ex-Director, Business Council of Australia, which has a focus on learning outcomes, “flexible learning as a demand driven, customer focussed approach to all areas of education and training that provides choices with respect to how the desired education and training can be undertaken, and ultimately, how successful outcomes can be achieved”. This is an orientation of flexible learning that all universities may ultimately need to adopt in earnest.

Based on the web based university sources and the foregoing considerations following definition of flexible learning has been generated.

**Flexible learning** is a student oriented approach to learning, which caters for the individual needs and requirements of the learner including choice of time and place of study, and suitability to an individuals’ learning style.

**Issues and considerations in the use of flexible delivery and flexible learning**

The adoption and use of flexible delivery and flexible learning as identified through web-based university documents raises number issues and considerations. Issues and considerations associated with both flexible delivery and flexible learning that have been identified in this study are as follows:

- Flexible delivery options should seek to improve student learning opportunities and complement/supplement existing delivery methods. The focus needs to be on student centered learning Teaching/learning strategies associated with each type of flexible delivery should have as one of its objectives, increased lecturer-student and student-student interactions. Typically, in descriptions and statements concerning the use of flexible modes of course presentation the thrust is an emphasis on flexible modes of delivery, eg. the way the course is made available to students eg. online, print lectures or a combination of delivery modes rather than on the learning process.

- The benefits and value of using flexible learning options needs to be outlined (quantified if possible) for all stakeholders involved - academics, students, and institutions. From this study the Authors have found that the implementation in universities is often occurring in an adhoc way and without a framework, let alone sound educational practice.

- Students may not be prepared for using alternative delivery methods, eg. computer skills may be lacking, independent study skills may not be well developed.

- The transition/use of flexible learning can be threatening to some lecturers, as the teaching methods tend to be student centered. Lecturers may need to reexamine previously unquestioned teaching practices and develop new skills. This process needs to be supported within the institution through thoughtful and timely staff development activities.

- The use of ICTs provides scope for the implementation of a range of delivery options, but this requires careful consideration of issues such as student access, adaptability for staff, reliability of the universities, on-line student access to courses is interpreted as flexible delivery. In many instances the content of courses is little changed from original presentation – in many cases a form of de facto distance education.

- The introduction of new delivery options should be developed using a team approach including educational expertise and requires systematic planning and design of the
There appear many instances if the introduction of flexible delivery where this is not occurring to any extent.

- The introduction of flexible delivery can result in a shifting of costs of resources for learning to the students, e.g. students may need to acquire their own a computer and own-loading teaching and learning materials.
- Student access and equity issues are a key consideration in the adoption of a particular type of flexible delivery and more attention needs to be paid to this, rather than assuming that all students will be able to participate.
- Use of flexible delivery/flexible learning may increase delivery costs and teaching loads.
- There is a lack of articulated learning models for flexible learning that incorporate the use of various delivery mechanisms and media.
- Only a limited number of research and evaluation studies have demonstrated the robustness and effectiveness of flexible delivery/learning practices (ASET/HERDSA, 2000).

The foregoing tends to suggest that the broad scale adoption of “true” flexible delivery in the tertiary sector is still some way off. Furthermore, research in the use of flexible delivery suggests that for it to succeed requires a high level of interactivity to be built into the course (Watson, Blakeley and Abbott, 1998). However high levels of interactivity generally require high costs irrespective of whether face-to-face strategies or ITC’s are used (Inglis et al, 1999).

**Approaches to the use of flexible delivery/learning by Universities**

Four interrelated factors can be identified from the web-based university information as driving forces in the approaches adopted by universities in the use of flexible delivery/learning. These are as follows:

- *Economic rationalism in university decision making.* Reduced Government funding for Universities has spurred this on. Discussion concerning course offering are increasingly being cost-driven.
- *The advent of a global university education.* This has resulted in vigorous marketing and exporting of Australian courses overseas and the recruitment of overseas students to Australian campuses. Competition for students has increased in a competitive higher education market for students as universities seek to increase their student enrolments. These activities have become ever important as the need for generating income for universities also increases
- *Increased use of information and computing technologies.* Forces driving the increased use of information and communication technologies include: the increases capacity, flexibility and suitability of information and communication technologies for education and training programs that can better meet student needs and demands; the provision of more cost effective education can serve as means of providing courses to students that extend beyond traditional catchment areas for potential students.
- *The emergence of alternative ways to view the teaching and learning process.* Nowadays, the student (client) seeks to have increased access to learning programs that specifically cater to their needs. Thus there, is greater recognition within universities of the need to cater for a greater diversity of abilities, aspirations and motivations in the student population. The philosophical shift in thinking to more constructivist approaches to teaching and learning with the expectation of more effective learning outcomes is also impacting on the ways in which students are learning
The extent that these factors and others have been taken into account by universities in adopting flexible delivery/learning explains, in part, the diversity of approaches and level of use of flexible delivery/learning in Australian universities. Based on the university website literature a number of approaches can be identified that demonstrate the diversity of teaching and learning contexts that have evolved through the use of flexible delivery and learning approaches for course presentation.

- **Conversion of traditional course provision to one that uses flexible delivery/learning practices**
  The adoption of new teaching and learning approaches occurring in all universities throughout Australia tends to be either driven by specific “teaching and learning units” set up in universities, eg. CEDIR (University of Western Australia), CHED (Monash University), IHE (Griffith University), or coordinated through a specific committee, eg. a teaching and learning committee to oversee the implementation of an adopted university plan for enhancing teaching and learning that adopt approaches to flexible delivery and learning.

Further, a number of the former Distance Education Centres eg. University of Southern Queensland, Monash University, University of South Australia, Charles Sturt University, have been particularly active in the development of on-line courses using traditional distance education and courses as a platform.

- **Distributed and extended campus use of flexible delivery and learning practices**
  A number of Australian universities have established new campuses either within Australia or overseas. This has occurred in response to opportunities to offer specific courses based on identified need in a region. These new campuses tend to be relatively self contained and in the presentation of courses have tended to adopt a range of ICTs, eg. use of videoconferencing, online etc. However, without exception students at these campuses have been provided with opportunities for face-to-face contact from academic staff through the use of tutorials and seminars. Examples are University of Southern Queensland, Monash Overseas Campuses and the Central Queensland Universities campuses in Bundaberg, Mackay, Gladstone and Emerald.

As well, a number of universities, eg. The University of Queensland, Griffith University and Victorian University of Technology, have established new campuses specifically designed for the use of alternative approaches to the traditional on-campus delivery of courses. In each of these instances, and elsewhere where this has occurred, course presentation has included the use of multimedia materials, online learning, and small group work. Where these initiatives have occurred a special support unit has been established to assist academic staff in the development of student resources etc, eg. The University of Queensland Ipswich campus has a Learning Resource Development Unit. It is envisaged that as the use of the flexible delivery system becomes fully developed at these institutions in terms of its effectiveness and efficiency for teaching and learning that these approaches will be used at other campuses.

**Retail University Campuses**
A number of universities have transformed existing courses available on-campus for specific use, either overseas or elsewhere in Australia, as a way to market their courses. These campuses are not the traditional university campuses that caters for social interaction and place where academic research etc is undertaken. For example, Central Queensland University, through its company Campus Management Services has
established campuses in Brisbane, Sydney, Melbourne and overseas (Hong Kong, Singapore and Fiji) using media such as videoconferencing, the Internet to deliver lectures and the use of a locally based tutor support system are provided. These locations are also used for offering short courses, summer schools, professional development and training activities.

Other hybrids of the above approaches have recently evolved within the university sector. In this respect, the present establishment of university consortia that include media partners, eg. Universitas 22, for content delivery on a global basis using ICTs, will result in further developments of new approaches to enable people to access university education and training opportunities.

Discussion and Conclusions
A number of trends and commonalities emerged from examination of the university website information and related documentation. Firstly, purpose-built flexible delivery campuses, retail campuses, the use of online learning and the adoption of particular technologies and the use of fast track courses are all examples of the use of flexible delivery and are a reflection of the commitment Australia universities are making to this notion. However, the majority of institutions have tended to adopt approaches to flexible delivery that have been more attuned to accommodating approaches to flexible teaching rather than accommodating flexible learning approaches that meets the needs and requirements of learners. For example, institutions that are building flexible delivery campuses tended to use face-to-face delivery as an integral part of the “flexible delivery” model and in the majority of cases students were required to attend the campuses (an approach which is very limited in flexibility). Secondly, true flexible learning opportunities for students, that is, in terms of the definition that has been generated above, is only occurring to a very limited extent. Thirdly, there is clear evidence of a lack of teaching and learning models, particularly those that incorporate the use of ICTs that make flexible learning a reality.

It has been noted in the foregoing that flexible learning requires the provider to cater for student’s individual differences, eg. the choice of teaching and learning strategies, and media. Thus, in the provision of flexible learning the role of the academic is multi-faceted. In reality high-level use of flexible teaching/learning approaches is an ideal that will be difficult to actualize due to the constraints of mass-education, administrative organization and operationalization, economic rationalism and a lack of resources. The challenge for universities will be to explore how extensively flexible teaching/learning can be implemented in a university environments. In this respect the Authors consider that a critical issue that needs to be addressed is the development and implementation of appropriate teaching and learning models that take into account use of various teaching/learning methods and media and the dimensions of flexibility (Brown, 1999).

As a final remark it is noted that during the nineties there was considerable hype in the tertiary sector regarding the notion of open learning. This issue was driven to a large extent by a political social agenda – access and education and training opportunities with particular reference to disadvantaged groups. As briefly discussed in this paper, flexible delivery/learning has derived much of its momentum from the competitive environment now very evident in the higher education sector and ICT’s are being used to achieve ends. What appears to be lost or forgotten in the present haste to use flexible delivery/learning approaches is that effective teaching has as one of its major qualities being flexible.
It is envisaged, as was the case with open learning, use of the term flexible delivery and flexible learning will revert to direct references to teaching and learning practices (or methods) as the integration of ICT’s become common practice in the course presentation.

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