

# ENCOUNTERS WITH DIFFERENCE: IN SEARCH OF NEW LEARNING SPACES THROUGH INTERNATIONALISATION

Walsh, L.

Monash Centre for Research in International Education  
Monash University

Email:lucas.walsh@education.monash.edu.au

## *Abstract*

*Our understanding of internationalisation has shifted from being concerned with international exchanges of staff and students to a 'catch-all' expression encompassing economic, political, organisational, cultural and pedagogical dimensions. At the nexus of these dimensions is a potentially revolutionary aspect of current internationalisation, that of information and communications technology.*

*Electronically mediated internationalisation impacts upon formal learning environments and interfaces of distance education in complex, profoundly challenging and occasionally beguiling ways. This paper outlines a means of conceptualising internationalisation as a starting point to mapping the new learning spaces of the twenty first century.*

**Conference stream:** Student demographics—cultural inclusiveness, student learning with technology.

## **Introduction**

This is a very dramatic moment in our relation with the world and for our vision of the world.

(Paul Virilio 1995)

Our understanding of internationalisation as it applies to education has broadened considerably over the last two decades. Its definition has shifted from being concerned with international exchanges of staff and students, to a 'catch-all' expression encompassing economic, political, organisational, cultural and pedagogical dimensions. At the nexus of these dimensions we find the potentially revolutionary aspect of current internationalisation, that of information and communications technology (ICT).

Now explicitly acknowledged in the plans of all Australian universities, internationalisation impacts upon managerial cultures, curriculum development and pedagogic practice. Challenges arising from encounters with cultural difference are intensified by the use of flexible delivery using information and communication technology. Learning spaces are being redefined as new ICT is introduced to a range of teaching and learning methods and contexts, from classroom learning to distance education, to open and independent learning, teleteaching, on-line, computer assisted and multimedia learning. Electronically mediated internationalisation impacts upon conventional learning environments and interfaces of distance education in complex,

profoundly challenging and occasionally beguiling ways. Despite the 'lip service' paid by government and university administration to the virtues of internationalisation, the formal task of collaboratively developing and implementing flexible online delivery at an international level has only just begun.

This paper explores the role of ICT in internationalising higher education. Pervasive tensions and convergences arising from this technological shift are illustrated in the experiences of educators and service providers in Europe, Australia, Singapore, Malaysia and Vietnam. A means of conceptualising internationalisation is proposed as a starting point to mapping the new learning spaces of the twenty first century.

## **Researching new frontiers, new technologies & new pedagogies**

For over a year now, I have been researching the cultural and pedagogical implications of electronically mediated teaching and learning of international education. Flexible modes of distance learning are welcomed by many to bypass certain problems of cost and access by offering alternative paths to educational delivery. While many advocates of this mode of teaching and learning espouse a somewhat utopian vision of online learning, a profound shift has nevertheless begun in earnest with the formation of virtual universities in the United States (e.g. Western Governors' University) and United Kingdom (e.g. British Aerospace). (Gilbert 1996)

Under the auspices of **The Monash Centre for Research in International Education** (MCRIE) and in collaboration with the telecommunications provider, **Telstra Australia**, the project began in earnest with an invited workshop of issues arising from international online learning.<sup>1</sup> The central objective of the workshop was to foster critical thinking about the social, cultural and economic impact of new technologies on higher education throughout this region. Held in November of 1998, the workshop brought together educators, industry service providers, researchers and educational multimedia producers, who share a practical, ethical and pedagogical understanding of teaching and learning across cultural and national boundaries using ICT. With participants hailing from areas such as instructional design, corporate management, the Department of Education, commercial multimedia development, medical informatics and postcolonial theory, the diverse range of perspectives made for fruitful discourse. Five areas of concern arose during the convocation, including:

1. Limitations to access and equity;
2. Curriculum relevance and appropriateness of online material;
3. The level of adaptation in certain learning styles and pedagogy required by new media to align education outcomes with the kinds of new literacies and vocational competencies demanded by global markets;
4. The capacity of new learning environments, such as virtual universities, to ensure student engagement and interaction with subject matter, teaching staff and fellow students in the abstract communities of cyberspace; and
5. A need to identify important intercultural possibilities of online learning alongside in light of the broader implications of such developments.

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<sup>1</sup> This includes educational resources made available for international use on the Web or CD-Rom within a conventional print-based distance mode.

Subsequent interviews with distance providers across South East Asia gave credence to these areas of concern, suggesting a need for further critical examination.<sup>2</sup> Now embedded in the discourse of higher education reform, the lexicon of flexible learning has influenced and been influenced by processes of internationalisation. Like internationalisation, the concept is ill-defined and unevenly practiced. Basically, flexible learning places student learning and choices at the centre of educational decision-making with the aim of providing students with increased access to generic lifelong skills and greater choice within the learning environment. (CHED 1997) Flexibility in the context of current education reform is, in principle, about autonomy and expanding the opportunity for access in a changing educational environment. However, as part of a process of internationalisation, this notion of learning becomes questionable in the face of cultural difference.

### *Access through flexibility?*

The territorial borders of Australia, Singapore, Malaysia and Vietnam fall within a 2000 kilometre radius of each other, yet despite their geographical proximity, the application of new technology to higher education in each country bears significant if not dramatic differences.

Broadly speaking, the push towards flexible learning and delivery in Australia has been a function of devolution and deregulation in what has been described as a “shift in the locus of control” over educational administration from state regulation to institutional self-governance. (Hughes 1995: 1-2) The Vietnamese education system, on the other hand, continues to be highly centralised, as is access to ICT networks. In the last three years, development of ICT hardware capability has been motivated by governmental and state banking sectors.

Singapore has invested billions in infrastructure development, bearing a willingness to use international online learning as a means of skilling its population (with Australia as a major provider)—though not without a strong governmental presence. Despite being a major trading partner, Malaysia is intensely competitive with Singapore and its recent policy in the area of ICT-based teaching and learning appears to be very mindful of Singapore’s technological progress. Australia’s interest in these nation-states as potentially lucrative education markets heightens certain problems of internationalisation in regards to access to technology.

Distance education has always played an important role in addressing problems of geographical isolation and resource scarcity; but recently, the capacity to achieve this on an international level using multimedia has increased manifold. A striking example of this is the emergence of the “mega-university.” It is estimated that eleven of these distance providers enroll as many as 3 million students amongst them—and at lower costs per student compared to equivalent on-campus courses in North America. More than half of these juggernauts are based in Asia. (Daniel 1996; Vught 1997) Despite the capacity of ICT to diversify the mode(s) of delivery, economic and cultural barriers to access are likely to become further entrenched if the technical/infrastructural development of these media continues to be a function of the corporatisation of higher education. Aggregate costs of infrastructure, software and technical maintenance of online courses continue to be expensive enough to limit access to advanced industrial countries, and to certain (affluent, educated) groups

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<sup>2</sup> Interviews were conducted in Singapore, Malaysia and Vietnam during June and July of 1999. The findings of this research will be available in December 1999 at URL: <http://www.education.monash.edu.au/centres/mcrie/ftp/ftp.htm>.

within those societies. In Vietnam, where ISP costs are exorbitant compared to the costs of travel and accommodation incurred by international mobility, interest in geographical mobility continues to be high because the traditional view of international education in Vietnam appears to ascribe greater cultural and vocational importance to face to face instruction. Online learning is viewed with caution because of its novelty, cultural-linguistic bias and cost. The relatively affluent populace of Singapore, on the other hand, has been more willing to embrace online learning because of its strong link to international commerce and predominantly English speaking population. The willingness of many students based in Singapore to pursue international study (and for educators to develop electronic delivery) is accentuated by the availability of advanced technology, such as *Singapore II*. Throughout the South East Asian region, attitudes toward new media in education are replete with these kinds of differences. Malaysia's Wawasan 2020 program, for example, seeks to harness new media in education as a means to *internal* cohesion and national autonomy, while in Australia; popular conceptions of ICT-based learning appear to be more *outward-looking* and cosmopolitan.

### *Internationalisation of curricula*

The capacity of ICT to internationalise education is not confined to its ability to extend the practical means of flexible delivery. Internationalisation can take place through the dissemination of curriculum, language learning and the substitution of *geographical* mobility (e.g. via exchange programs) with *virtual* mobility (e.g. via MUDs and MOOs). (Alexander 1996) Internationalisation may also be indirect; for example, convergence within media, communications and information sectors, as well as with other fields that utilise ICT, is leading to an increasingly *global* and culturally homogenous influence by mass entertainment media, as it introduces popular Western culture (mainly North American) to wider audiences of international students (alongside many non-studying people, for that matter).<sup>3</sup>

Bates and Santos argue that the application of ICT to further international education requires the development of curriculum which transcends local cultural and language barriers to relevant to learners wherever they happen to reside. The technical realisation of this requires well-developed infrastructures and "high quality learner support services wherever the learner happens to be." (Bates 1997: 49) In a globally competitive environment, internationalisation typically encourages delivery of courses furthering the most internationally adaptable areas<sup>4</sup>, which includes skills and concepts that are readily translatable and transferable across countries and cultures. Curriculum relevance to local cultures will diminish as global media internationalise course delivery. This propensity to formally and informally foster homogenous cultural representations is perhaps the most disturbing aspect of current development. The kinds of generic, "one-size fits all" models of flexible delivery currently in use presume that the Western content and pedagogy being disseminated is "universally relevant and universally welcome" across cultural settings.<sup>5</sup> (Patrick 1997: 2) It is ironic that as internationalisation compels greater awareness and recognition of the

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<sup>3</sup> See (Cunningham 1998: 33)

<sup>4</sup> See (Flew 1998: 23)

<sup>5</sup> The major literature on internationalisation is itself dominated by North American scholarship. (Wende, cited in Mestenhauser 1997)

idea that knowledge is culture-bound, economic pressure to disseminate commercially viable courses narrows the range and depth of study available online.

The incorporation of international dimensions into curricula is further delimited by the predominantly “thin” and *ad hoc* ways in which ICT has been integrated into the curriculum strategies of many institutions. In Europe, the *Nuffic Model*<sup>6</sup> of internationalisation has been criticised in this way for placing too much emphasis on newly emergent and vocationally attractive courses (e.g. computing), which are lucrative revenue-raisers for service providers. (Mestenhauser 1997) In neglecting the internationalisation of courses in other established disciplines, this approach excludes students of these areas from the benefits and professional competencies associated with internationalised curricula. As mentioned above, some attempts to integrate ICT into the international activities of certain universities have fallen short of expectations due to poor planning and impulsive policy-making. (HEIS 1995) This trend is echoed in recent criticism that Australian universities have not adapted well to emergent demands of internationalisation, commercialisation and technological innovation. (OECD 1997)

### *Adapting learning styles for new learning environments*

“In the post-Fordist world, technology is multi-purpose and flexible in application. Institutional administration is networked rather than centralised. By 1997 there were about 1,000 institutions around the world offering programs in the distance mode and the 33,000 programs recorded in 1997 numbered approximately 3,000 just six years earlier.” (*Latchem 1997: 31-33*)

Where conventional approaches to curriculum tend to concentrate on the specialisation of a given area of knowledge, internationalised curricula require *interdisciplinary* strategies aiming to develop multiple skills alongside new cultural and technological literacies. With greater flexibility and expanded information networks, learning is fast becoming the new focus of work in the information society. As the conventional factory-model of classroom learning becomes obsolete, skills in both self-motivation and group collaboration are seen as critical to lifelong learning and the vocational requirements of knowledge-intensive industries. As the scope of internationalisation strategies adopted by universities and vocational colleges becomes more comprehensive, the usage of educational technology requires more sophisticated understandings of the cultural implications, learning outcomes and overall effectiveness of technological mediation *beyond* just matters of material concern for delivering instruction.<sup>7</sup>

In general parlance, the term “technology” connotes any artificial medium employed to a specified end. For example, a pocket calculator is a portable instrument designed primarily as a time and memory saving device used to expedite speedy mathematic calculations. This example should be illustrative of the widely accepted notion of technology. And yet, the use of the term exclusively in this way betrays its broader meaning and application in everyday social and cultural practice. By tending to objectify technology as an artifact serving a given purpose, we overlook or undervalue its pervasive impact on our lives. Scarcely any human activity is now undertaken

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<sup>6</sup> So-called because of the approach and ethos of its namesake, the Netherlands Organisation for International Cooperation in Higher Education (Nuffic).

<sup>7</sup> For example, technical issues of infrastructure, hardware and software compatibility, maintenance, etc). (Bangemann 1994; Bourke 1995)

without using some form of technology, be it shoes for walking or consulting a watch to ascertain time. A modem, for example, is defined as an electronic communications device used to connect computers by telephone line. But in its practical application, this device is a major component of global computer networks that are altering our perception of the world. The *technology* of the modem arises from its use with other devices (such as a telephone, a PC from which data transmitted and at least one other communications device that receives this data). But more than this, the use of these devices collectively changes human behaviour, alters perception and influences the nature of the task to which it is put to purpose. The etymology of the 'technology' is derived from a Greek word meaning *the systematic application of a body of knowledge*. Technology is more than just an instrument of human innovation; it also refers to the application of a way of thinking that differs across different cultures through different periods of time.<sup>8</sup>

Virtually all technology impacts upon our *knowing* of the world in some way. Embedded in the practical use of technology is culture of some sort. The iconography of the Windows operating system informs everyday communication, storage and representation of information for millions of people. The word processor has forever changed literacy and expression, just as synchronous online communication has altered the way people interact across vast distances. At the nexus of commercialisation, internationalisation and technology is a reconfiguration of knowledge within and between traditional fields of scholarship. With the gradual integration of ICT into virtually all domains of educational activity, traditional frameworks and institutions of learning are losing relevance in light of extending and multiplying flows of information between regions, financial markets, consumers and governments. Personal and collective identities are profoundly affected by the expansion of global networks. Communication today is quite different from others in history, because of the capacity of real-time technologies to radically relocate our material and symbolic existence. Human, cultural and informational flows are intensified by advanced ICT, resulting in both a concentration of some processes of decision-making and cultural reproduction, and a dispersal of others. The speed and intensity of informational flows are transforming the human sense of perspective, both temporally and spatially, because they inform people's sense of place and identity, financial markets and political structures. Logics of culture and institution are being absorbed in these networks, and it is increasingly difficult to exist outside of these flows of information, transactions and people.

For theorists of technology like Paul Virilio and Manuel Castells, the information society is prefigured by a dominant new form of social time. In the face of instantaneous communication and transaction, it may well be that human development is increasingly going to occur within a universal, globalised one-time-system. (Virilio 1995) Global media are transforming our perception of space and distance, inaugurating a global time characterised by new diasporic cultural forms, social networks and virtual mobility. The invention of instantaneous communication is affecting the way people relate to each other and their environment. This especially applies to people living and working in distant geographic locations, who today have the capacity to form relationships online as easily as those living in the same locality. Like Appadurai, Castells evokes an image of the information age characterised by

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<sup>8</sup> To this extent, Donna Haraway's seminal work on the socially transformative effects of electronic communications and biotechnology is worth revisiting as both a means of conceptualising the broad impact of these technologies and the political implications of this process. (Haraway 1991)

heightened flows, networks and webs people, commodities and ideas. (Castells 1989; 1996) He suggests that movements of technology are eclectic and ad hoc, directed by a "diffusion of networking logic [which] substantially modifies the operation and outcome of processes of production, experience, power and culture." Clusters of interconnected nodes form new networks characterised by new types of spatial practices and modes of power. These processes of experience, power and culture form a shifting fabric of contemporary life, in which "the power of flows takes precedence over the flows of power." (Castells 1996: 469-471) People may still live in geographic spaces, Castells argues, but power rules through flows.

To understand technology thus requires a recognition and critical appreciation of the cultural practices concomitant with its application. In the case of online learning, we need to understand more of the virtual communities forming in cyberspace and impact of physical isolation necessitated by this medium. Human interaction online may be profoundly alienating for some, but liberating for others who cast aside normal social inhibitions when surfing the Net. One student may find the functionality of a given computer interface to be frustrating, while another may see it as an expedient means of studying part-time between work or family commitments.

Perhaps the greatest danger at present is that ICT-based flexible delivery will be seen as little more than a panacea to current financial problems of university management. Such concern has been raised in Germany that institutions of higher education may become dependent on *virtual* mobility as a cost-cutting substitute for *geographical* mobility. (HEIS 1995) Similarly, it has been argued that in Australian higher education, "it is important that technology is not 'bolted on' to the curriculum which remains otherwise unchanged, but rather that the pedagogical dimensions of new avenues for information transmission and retrieval are understood and their implications for teaching and course design addressed." (Reid 1997)

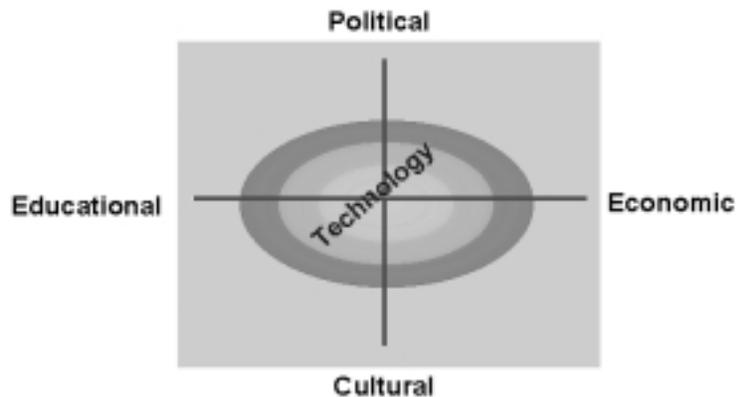
Internationalisation is still largely implemented in sundry ways that are heterogeneous to existing educational practice, rather than enhancing its overall quality. The use of flexible delivery to internationalise curricula in Australian higher education is a good example of this pragmatic "add-on" approach; by 1995, just under one fifth of universities had internationalised curricula by incorporating flexible modes—but only to superficially broaden respective subject areas using crude comparative approaches. (Baker 1996)

The emergence of global media—of an *information industry*—involves intense flows of information and cultural representations that defy traditional boundaries. (Appadurai 1996) Growing corporate involvement in both the infrastructural and curriculum development of online study is shaping the borderless learning spaces of contemporary higher education. Marketisation is compelling higher education institutions to exercise greater managerial efficiency, strategic marketing of education "product" and integrated use of convergent of media (namely computers, telecommunications, entertainment and publishing). (Davis 1994) Traditional concepts, practices and environments of education are being transformed by this nexus of technological, economic and cultural factors. Of concern is the way standards of quality, credibility and responsibility for education outcomes are distorted and reconfigured within this nexus of factors and conditions.

## *Towards a convergence model of internationalisation*

Communication today is quite different from others in history because of the capacity of synchronous, real-time technologies to radically relocate and redefine our material and symbolic existence. Human, cultural and informational flows are intensified by advanced ICT, resulting in both a concentration and dispersal of cultural reproduction and decision-making processes. The speed and intensity of informational flows is transforming our sense of temporal and spatial perspective, influencing our sense of place and identity, our relationship to others, our financial markets and political terrain. Logics of conventional institutional practice are being absorbed by these networks. Consequently, it is increasingly difficult to exist outside of these flows of information, transactions and people. How then, can we conceptualise internationalisation in light of the impact of ICT?

The underlying challenge of contemporary internationalisation arises at a nexus of cultural transformation and technological development, at which it becomes possible to envisage the possible forms and functions of new learning spaces. Building upon a framework provided by Julia Race (1998), it is possible to construct a comparative representation of the complex inter-relationship of internationalisation and technology:



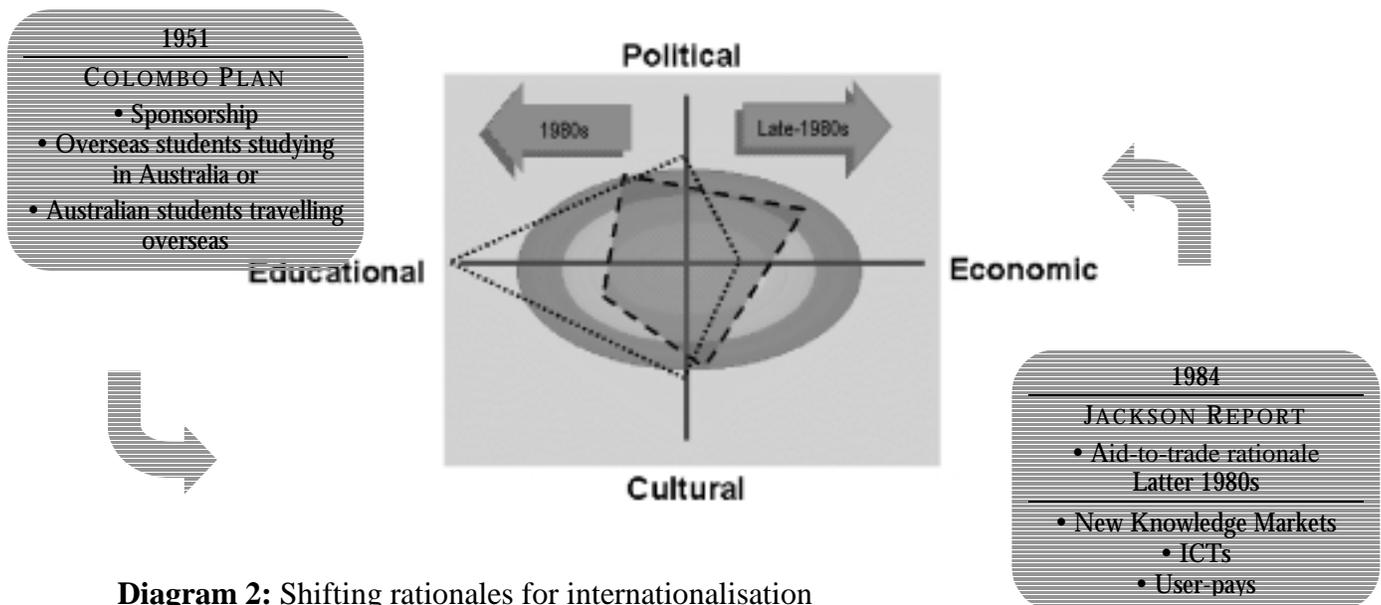
**Diagram 1:** Rationales for Internationalisation Framework adapted from Race (1998)

My adaptation of Race's model seeks to provide a conceptual map of internationalisation within a given institution or education system. It seeks to provide a basic framework for illustrating historical shifts in the motivation for a given program of internationalisation and enable comparisons between such programs. Four sets of rationales are labelled on each axis: economic motivators, political rationales, cultural influences and educational agendas. Rather than portray a political/cultural or an educational/economic continuum, the lines are joined for ease of comparison between areas. These descriptors do not attempt to describe all motivations, incentives and justifications for internationalisation; but seek to provide a useful framework for understanding the complicated context in which internationalisation takes place. Referring to **Diagram 1** above, the further outward a given policy or agenda is located, the more developed and consolidated is the rationale(s) for internationalisation. The motivation or rationale for internationalisation may derive from three levels of educational activity: (1) the micro level of teaching or administrative staff; (2) the meso level of faculty or institution; or (3) the macro level

of national system or sector. Current understandings of internationalisation suggest that a given strategy will rarely fall on a single axis; rather, it is likely that at any given point, a strategy for internationalisation will invariably be based upon a combination of rationales. (Knight 1995)

My significant modification made to Race’s model is the inclusion of technology as a critical aspect of internationalisation. ICT is particularly significant in shaping the content of curriculum and mode of delivery (e.g. flexible, learner centred, online, synchronous and asynchronous interaction, etc). Note that technology is positioned on **Diagram 1** in such a way that it intersects cultural, political, economic and educational motivations to internationalise. (The circle located at the intersection of these lines highlights the weakest area of internationalisation for all four rationales.)

Having established these five basic parameters, it is possible to add another dimension—that of the historical context in which contemporary internationalisation has taken place. **Diagram 2** below depicts a snapshot of the broad historical shift in the focus of internationalisation following the Colombo Plan in 1951—when the Australian government greatly expanded opportunities for sponsorship of overseas students to study in Australia—to the market-based approach to overseas students following the *Jackson Report* in 1984. (Back 1996; Smart 1993) Tempered by intensifying flows of people, educational commodities and information, we have seen an entrenchment of this policy orientation towards international education as an export industry since the late ‘80s, as illustrated below:

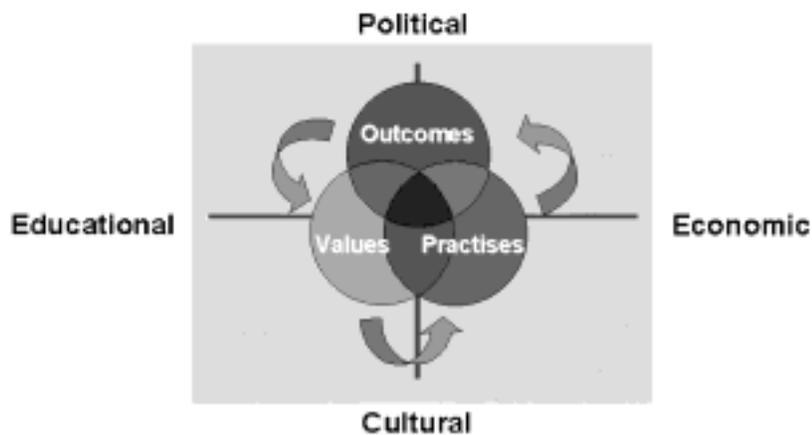


**Diagram 2:** Shifting rationales for internationalisation

At first glance, internationalisation of higher education appears to be driven mainly by commercial imperatives; however, the broader canvass of the tertiary education sector portrayed in this model depicts a complex array of cultural, educational, political and economic factors. In **Diagram 2**, the polygonal shape pointing to the left with the dotted border (•••) depicts this orientation towards internationalisation from narrow educational definition adopted during the post-war period, to a wider range of

rationales and definitions touching upon political issues (international relations), to a greater awareness of cultural concerns and economic possibilities. Overlapping this area is a darker polygon with a dashed border (---). This represents the shift in rationales for internationalisation accompanying the shift in policy “from aid to trade.” The period leading up to the mid-1980s (around the centre of the axis) marked a significant move in international education towards full-feeing courses for overseas students and a sharp growth in higher education. (Beazley 1992)

A summation of strategies for internationalisation may be superimposed onto the model developed above. Dynamic and often complex, these strategies have three overlapping dimensions: (1) Values, principals and goals of internationalisation; (2) Specific action taken to internationalise a given environment or activity using ICT (e.g. curriculum); and (3) Outcomes of internationalisation on the learning environment. Internationalisation thus involves more than a process of change; it encompasses a program of goals, activities and outcomes for pedagogical, intellectual, institutional and cultural development. The following diagram presents this dynamic conceptualisation of internationalisation:



**Diagram 3:** Towards a convergence model of internationalisation

With this in mind, it is becoming clear that the learning environments of next century will be constituted by convergences in culture, pedagogy, institutional collaborations, flexible modes of delivery, new curricula, individual and collaborative modes of learning and perhaps most importantly, *by convergences in technology*.

Technological innovation is having a profound cultural and socio-economic affect on the development of higher education systems throughout the world. As a central feature of internationalisation in the latter twentieth century, it must be understood as more than a *process* of change. As **Diagrams 1-3** above implies, it also affects the pedagogical, intellectual, institutional and cultural development of a given program or course of study within an institution or system. As a form of current internationalisation, ICT-based flexible learning embodies a set of values, goals and principals underlining educational practice. Official justifications for flexible learning as a dimension of internationalisation are locked into broader rationales for the internationalisation of education systems in general. These rationales include:

- Financial imperatives (e.g. to save money/ increase revenue);

- Political influences (e.g. to enable Australian institutions entry into education markets in Singapore and Malaysia, flexible learning is a way of providing courses to students in these regions within the parameters set by their respective governments);
- Cultural imperatives (e.g. flexible learning in theory allows for different learning styles across different cultural contexts); and
- Educational (e.g. in principal, flexibility enables courses to adjust to the learning style and individuals of each individual).

### *Conclusion*

The use of ICT in the planning, administration, curriculum and pedagogy of study opens new possibilities for integrating international/intercultural dimensions into higher education and lifelong learning. If deliberate planned, these new media can enable more flexible and open teaching methods providing variety of curriculum at local, national and international levels. An organic approach to internationalisation, like the one illustrated above, could form the basis for a flexible but consistent strategy that is openly recognised and executed across interpersonal, institutional and geographical locales of teaching and learning. This would encourage a culture of learning that is relevant and appropriate to the type of global information society currently in formation.

The Australian experience of internationalisation echoes that of Europe, where theoretical work and general inquiry into this phenomena has largely been confined to special research projects, cost-benefit analyses, conventional student exchanges and anecdotal evidence. (Mestenhauser 1997) Urgently needed is the development of new literacies that are relevant to the growing challenges of internationalisation and globalisation. It is even suggested that international education be conceptualised as an “inter-discipline,” which grows with cultural awareness. Such interdisciplinary approaches would need to be based on collaboration and *sharing* ideas in flexible and inclusive ways. The success of international online learning relies on educators being able to create virtual learning communities that facilitate meaningful interaction in culturally diverse discourses. Formality online must be balanced with informality, as must discipline with sociality, if online study is to foster active interaction and effective communication. As Gladieux and Swail argue, the internationalisation of higher education using ICT should be directed at narrowing the “digital divide” between those with advantage and access, with those who do not. (Gladieux 1999: 5) Incorporating technology into curriculum in ways that respond to cultural diversity and difference will be necessary if internationalisation is to avoid perpetuating divisions “between the productive and information-rich and the dependent and information poor.” (Hughes 1995: 15)

As universities adapt to competitive corporate environments, in which cost-effectiveness is an integral aspect of on-going development, careful re-examination of the goals of technological development is required if higher education is to prepare students, teachers and citizens for the networked environments of the information society. As the locus of control over educational administration shifts away from nation-states, effective internationalisation will need to be predicated on more robust ethical frameworks that are sensitive to cultural differences and the changing demands of international education in a digital world.

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