Beyond Control: will blended learning subvert national curricula?

Dr Peter Williams
Institute for Learning, University of Hull, United Kingdom

Abstract

Blended Learning seems to entail a relatively innocuous set of techniques, but closer examination reveals some of these carry implicit assumptions – of constructivist philosophy, peer collaboration and situative learning – which may make their export to other countries and national cultures problematic. They also provide a route to the Internet: a storehouse of Westernised, unauthorised and anarchic content. So will Blended Learning subvert national curricula? This paper contributes to the debate by examining the milieu of national educational policy, relating it to forms of knowledge. Web 2.0 applications and Open Educational Resources are discussed in relation to the growing gap between traditional curricula and the digitally-enabled communities of mass collectivism and direct action. Blended Learning is shown to pose cultural threats, but also open opportunities, and whether these threats can be turned to advantage depends crucially upon how national policies are formulated and implemented. The conclusion poses key questions for policy-makers and practitioners.

Keywords: Educational Policy; National Curriculum; Web-Based Learning; Web-Based Teaching; Electronic Learning (E-Learning); Open Educational Resources; Web 2.0

Introduction

A significant expression of the national identity of a country is the way in which it orients its educational system. *National curricula* – used here to include those statutory declarations of the aims and content of schooling and higher education of a country, as well as the nationally distinctive features of its educational institutions – embody particular, and in some cases unique, views of the world, reflecting that country's shared national values and history as well as its social, economic and technological priorities.

> Generally speaking, national curricula and the educational institutions which transmit their values, are relatively static and have not kept pace with the changing practices and needs of an emerging 21st Century knowledge economy. By some analyses it is in procedural know-how rather than formal propositional knowledge that economic competitiveness increasingly lies. There is perhaps a greater mismatch between these two facets of knowledge in Developing Countries, where new technologies and knowledge-intensive occupations are less established; but in most countries strong associations exist between new technologies, aspirations of modernity, and perceived wealth. It is for these reasons that students may be tempted to look beyond the confines of national curricula for more relevant vocational preparation.
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> *Open Educational Resources* is a term given to educational content and materials which are made available at little or no cost, generally for use in not-for-profit education. Where in the past there were physical and financial constraints on the distribution of educational resources in printed form, the arrival of the World Wide Web has removed almost all

barriers to dissemination. The quantity and variety – and latterly quality – of Open Educational Resources has grown rapidly; however, it is currently dominated by English-language materials from the USA and UK, and so reflects the national and socio-cultural orientations of these countries.

The World Wide Web has developed substantially over the last two decades, but in the early days adopted a 'broadcast' metaphor whereby information was typically presented by an organisation or authority for access by the individual. The last few years have seen explosive growth in a far more interactive and symmetric use of this technology, in what has come to be known as *Web 2.0*. Principally used for social networking, Web 2.0 also enables informal and peer-to-peer interaction and learning unconstrained by the limitations of time and space. It is similarly not culture-neutral but embodies ideas of individualistic expression, democratic and active learner engagement, pluralism and the acceptance of multiple representations of 'truth', which are identified with Western countries.

To this digital divide can be added a generational component; for the young people who have grown up with digital technologies, there is impatience with print-bound media and the ethos and approach of traditional educational institutions. What these students regard as a reluctant adoption of new technologies by their teachers may reinforce a desire to reject their national system in favour of what they see as more relevant digital materials and practices. These views are further advanced when there is an identification of the latter with progress, prosperity and vocational opportunity.

It can be seen that the greater employment of Blended Learning – incorporating elements of traditional methods alongside eLearning – within national educational systems across the world will inevitably promote online access to Web-based educational resources. The danger for national curricula is that learners, perhaps impelled by vocational ambitions or simply a desire for social engagement, will go beyond state-prescribed requirements to explore Open Educational Resources and Web 2.0 applications. This access to unsanctioned content is likely to present challenges to the authority and relevance of all national educational systems, but in non-Western countries may present challenges also to their social and cultural values.

The debate around Blended Learning has so far focused on the immediate practicalities of educational technology and pedagogical practice; but the important dimension of socio-cultural and policy issues must also be confronted. There appear to be two distinct sets of issues: pertaining firstly to Open Educational Resources and secondly to Web 2.0. The first concerns relatively minor questions of whether the importation of 'foreign' resources is always a bad thing, and to what extent the dangers of Western bias might be offset by the utility of high quality and vocationally relevant materials. The second set of issues is more worrying however, as a change of learner focus, from meeting statutory and institutional requirements to the pursuit of individual and social educational goals, could signal a rejection of some of the values underpinning national curricula. Thus, radical, transformative and unexpected outcomes could result through adoption of what seems the relatively innocuous practice of Blended Learning.

This chapter aims to contribute to the Blended Learning debate by examining key issues of educational policy, and the creation and implementation of policy at national levels. It will begin by discussing the context within which national curricula operate, and related to this it will contrast forms of knowledge and their educational implications. The nature and

significance of Web 2.0 applications and Open Educational Resources will be discussed with reference to examples and in relation to the growing gap between traditional educational systems and the digital cultures of mass collectivism and direct action. Following an analysis of the nature of Blended Learning, its cultural concomitants will be shown to pose significant threats to national curricula – while at the same time presenting many opportunities. Whether the threats of these powerful pedagogic, socio-cultural and economic forces can be turned to advantage within national systems depends crucially upon what educational policies are formulated and how they are implemented at all levels. In conclusion, four key questions will be posed for policy-makers and educational practitioners.

Educating for the future

The most important pragmatic concern of a national education system is to enable that country to promote its economic competitiveness. In the industrial age wealth was derived from the exploitation of natural resources, so the education of the majority of its citizens – destined for low-skilled occupations in fields and factories – need not advance beyond an elementary level. In the post-industrial age, Western countries and many of those in the Developing World see economic competition in the new knowledge-based occupations as key (Reich, 1991), and education as the way to achieve this (Castells, 1997; Scott, 2002). In the place of low-skilled standardisation and conformity, the qualities of originality, creativity and problem solving must be nurtured (Gibbons et al., 1994), and national curricula must become more flexible and responsive to change. Rapid growth in the use of information and communications technologies (ICT) has enabled a move towards globalisation which some commentators would argue holds more implications than merely economic (Micklethwait & Wooldridge, 2000; Castells, 2001). For example, for the European Union, ICT offers the vision of an Information Society supporting inclusion, better public services and quality of life (Magalhães & Stoer, 2003; EC, 2008).

There is a mismatch between the anticipation of a knowledge-based future and the adaptability of national curricula and educational institutions. Some countries in the Developing World are still coping with the legacy of imposed colonial systems unsympathetic to their religious and cultural traditions – in Bangladesh, for example (Barua, 2007), and in Mexico (Norget, 2007). In a major international study, Coulby & Zambeta (2005) found some national systems structured in such a way as to be in effect antagonistic to change. On the other hand, curricula may be conceived as agents of change in different ways, and Marshall & Arnot (2008) contrast three potential purposes: ‘curriculum as opportunity’, ‘curriculum as reform’ and ‘curriculum as a democratic tool’. In this latter regard Mukhamedyarova & Cotter (2005) describe the adoption of interactive methods of teaching in Kazakhstan as a way to foster ideas of citizenship and democratic engagement.

Many national curricula are infrequently revised, and there may be a lack of coherence and agreement between the various bodies and authorities in charge of subject content, assessment and quality monitoring. In England the last revisions to the national secondary school curriculum were made in 2000 and 2007, with in each case almost two years from announcement to rollout. The national school curriculum in South Korea has a comparable revision cycle of between 5-10 years, and regional subject curricula in Germany can take up to five years to update (INCA, 2008). At higher education level the pattern is even more heterogeneous, with varying degrees of state influence over what can in some cases be

largely autonomous universities focused on competing imperatives and missions (Scott, 1998). The complexity and number of stakeholders involved in curriculum revision inevitably hinders the responsiveness of national systems to changing needs.

While some elements of curriculum content may be generic across different countries, others are not. For example, Finland and South Korea are the two most successful school systems, as rated by the International Student Assessment Index (PISA: OECD, 2006), yet they are very different in nature. Finland's schools are egalitarian and comprehensive, whereas private academies and competitive selection characterise the Korean system (Opetusministeriö, 2008; MEST, 2008). Interestingly, these two countries are in the top five for average time spent by World Wide Web users, almost doubling that of the USA.

Many commentators see the nation state as being in long-term decline against burgeoning multinational corporations and international trade alliances (Ohmae, 1995; Strange, 1996; Annan, 2002). Even in the rich West this is a challenge, and the European Higher Education Area being developed through the Bologna Process requires member countries to make their national systems compliant in an overarching qualifications framework (EU, 2008). In the Developing World the problem is much more acute, and, as discussed earlier, some countries beset by more immediate problems have yet to address the issues of taking their curricula beyond post-colonial legacies. In a UNESCO study, Benavot (2006) reports that although secondary school enrolment continues to grow worldwide, many school systems are still in the early stages of effecting transition from an academic focus and elite, selective provision towards a more vocational orientation with inclusive access.

Forms of knowledge

One characteristic feature of the knowledge economy is the timely application of *procedural knowledge* in the solution of work-based problems. In the past the professional status of workers was due in part to their mastery of a specialist body of knowledge, in a form that Schön (1983) called *propositional*. This knowledge is codified and relatively static, taught on a *just-in-case* basis (Moe et al., 1999) in an intensive period of learning at the start of a professional career. This is contrasted with Schön's (1983) procedural knowledge – or 'know-how', as distinct from 'know-what' – acquired rather than taught, and frequently *just-in-time* (Moe et al., 1999) at many points throughout a career. Nguyen (2004) argues that in order to meet the needs of the new economy, *knowledge workers* (Reich, 1991) must adopt appropriate systems and procedures on a just-in-time basis to access the procedural knowledge which constitutes the organisation's collective memory and which contributes to its market position. Another feature of knowledge working is the greater frequency and extent of communication and team collaboration. Problem resolution by project teams enabled by ICT is a critical success factor, and effective collaboration requires both the cognitive abilities fostered by formal education and a range of general and interpersonal abilities (Ducatel, 1998).

The application of procedural knowledge and collaborative working in novel situations results in knowledge generation and contributes to an organisation's knowledge base. Unlike the relatively one-way delivery of just-in-case learning, this is more of a two-way process of sharing and interaction, and one which is mirrored in the way the World Wide Web is increasingly being used. Scott (2002, p.66) speculates

> Maybe we are moving beyond the idea of reliable knowledge, derived from objective empirical

> scientific research, to a more diffuse (but also powerful) idea of socially robust knowledge, knowledge which is embedded in specific contexts rather than simply being subsequently applied within these contexts.

The other side of this coin is the future of traditional propositional knowledge as the definitive articulation of truth. A key trend in higher education identified in the Horizon Report is that "academic review and faculty rewards are increasingly out of sync with new forms of scholarship" (NMC/EDUCAUSE, 2007, p. 4) and it is observed that the growth of digitally-published interdisciplinary and collaborative activities "continue to move away from the standards of traditional peer-reviewed paper publication" (ibid.). However, the position taken in this paper is not that propositional knowledge is no longer relevant, as an inadequate understanding of formal knowledge can hinder the acquisition of procedural know-how (e.g. Broers, 2002). Instead, it is that propositional knowledge can no longer be the sole source of 'valid knowledge' (Williams, 2007) in national education systems.

The issue of what formal knowledge, procedural know-how and skills should be regarded as essential in a curriculum raises the question of what should be assessed, and by what methods. Williams (2008a) argues that the considerable problems posed by *authentic assessment* – the assessment of learning in realistic contexts for its use – must be confronted, as continued reliance upon timed, handwritten examinations seems an increasingly inappropriate way to gauge students' preparedness for employment in the new occupations of the knowledge-based economy. It is possible that the affordances of Blended Learning may provide opportunities for the greater adoption of Context Based Learning (ibid.), and the potential use of *learning objects* for this purpose is discussed below.

Web 2.0 and open educational content

Web 2.0 is an umbrella term coined in 2004 (O'Reilly, 2005) for a range of Web-based services including social networking, wikis, social bookmarking and collaborative tools. Where the 'Web 1.0' metaphor was the *Encyclopedia Britannica Online* – a subscription service – Web 2.0's flagship is *Wikipedia*, a free content encyclopedia project developed collaboratively by volunteers from around the world (Wikipedia, 2008). Web 2.0 is symmetric and interactive, as distinct from the one-way information source of television. As even basic computers – including the Simputer (PicoPeta, 2008) designed for Developing countries – now possess multimedia capabilities, this greater two-way exchange has become widely realisable. The effect is to shift from a television/broadcast model to peer-to-peer interaction. Anderson (2007) identifies six "big ideas" of Web 2.0. The first of these is the explosive growth of *user-generated content*, evidenced by social networking sites such as You Tube (2008) which according to Digital Ethnography (2008) hosts over 80 million amateur videos and in three years has become one of the largest websites on the Internet. The second idea is that of the *wisdom of crowds* in collaborative problem solving and decision making over the Internet, and Anderson describes *folksonomies* as shared taxonomies (e.g. del.icio.us, 2008) for the communal tagging of information. The third idea is *data on an epic scale*, whereby the immense database systems of corporations such as Google have been designed to aggregate, manage and supply information in response to billions of selections made by their individual users. Related to this is the fourth big idea, described as an *architecture of participation*. Web 2.0 services are designed to be adaptive to the requests of their users, so that they become more efficient and targeted the more they are used. This links in turn to the fifth big idea, concerning the *network effects* of mass usage. Hence, social networking sites such as Facebook (2008) become more useful as they attract more users, and there is a mathematical power law to model

this relationship. Like all exponential functions, it has a *long tail* of slowly declining popularity, but the sheer scale of use means that even this area of usage is substantial, enabling Web-based vendors such as Amazon.com (2008) to maintain turnover and profitability even for low-demand products. The long tail also has social and educational significance, as it is the region in which minority and emerging ideas can find expression. In smaller-scale environments such as communities and nations such esoteric views might be shared by only very small numbers, but the aggregation potential of the Web supports extended communities of discourse and what Anderson (p. 24) calls "the sociology of new content creation", and abundant examples can be found in the proliferation of blogs and single-issue campaign websites. The Horizon Report calls this "collective intelligence and mass amateurization" (NMC/EDUCAUSE, 2007), and Scott (2002) uses the phrase a "democratisation of expertise". This viewpoint is shared by Benkler, who examines far-reaching social, economic and political implications, contending that the most significant effect will lie in a changing power balance between the citizen and the state.

> This new freedom holds great practical promise: as a dimension of individual freedom; as a platform for better democratic participation; as a medium to foster a more critical and self-reflective culture; and, in an increasingly information-dependent global economy, as a mechanism to achieve improvements in human development everywhere.
> (Benkler, 2006, p. 2)

From a Postmodernist perspective, such developments reflect wider changes in relationships between the individual and authority in Western societies, which have been the focus of writers such as Baudrillard (1983) and Lyotard (1984). The last big idea outlined by Anderson is that of *openness* and the growth of the open source movement, and these matters are now discussed in relation to Education.

The last few years have seen the emergence of Open Educational Resources alongside the free service of *Wikipedia*. The provision of free resources drawn from existing proprietary content was pioneered by the Massachusetts Institute of Technology (OCW, 2008) and has been followed by other leading universities and supported by not-for-profit trusts (e.g. Creative Commons, 2008; OER Commons, 2008), making available free resources for primary (elementary) and secondary schools through to higher education. The OpenLearn initiative by the UK Open University (UKOU, 2008) develops this idea into a wiki by inviting users to download, adapt and upload back revised resources. The attraction of online Western materials for developing countries is amply evidenced by SCHOLAR (2008), the world's largest distance education programme. Run by Heriot-Watt University in Edinburgh, this (for-profit) service provides curriculum materials to enable thousands of students in India and other countries annually to gain Scottish school qualifications. The quantity and variety – and latterly quality – of Open Educational Resources has grown rapidly; however, as observed earlier, the predominance of English-language materials introduces bias. For example, Crystal (2003, ch. 1) identifies some possible effects of English becoming the *lingua franca* of the Internet: as a decline in minority languages, a reluctance to learn other languages, and a status gap between native English speakers and others. Dunbar (1991) asserts that the problem runs deeper: in a culture-specificity of the physical design, attributes and usability of computer hardware and software. While such effects could be reduced through careful redesign of learning resources, the difficulties of achieving this are considerable. McAndrew (2005, p. 18) suggests,

> … we need to capture the essence of good designs in a way that allows as much as possible of the learning experience to be transferred to the students' control while at the same time limiting

> dependence on particular aspects of culture. One possible way to achieve this involves separation of the resources (as learning objects), the design structure (as learning design), and the design rationale (as a pattern) within a framework that recognises the need for people support and the value of global collaboration. Such an approach will not be a solution for all cases but rather for those where part of the intention is to share views and allow diversity.

The flexible deployment of reusable learning objects, otherwise known as *shareable content objects* (SCOs) as the units of content within Blended Learning courses holds considerable potential for the future, not least in the provision of more authentic assessment of learning in context. In order to enable interoperability with other learning objects, SCOs must be designed to a common set of specifications known as the Shareable Content Object Reference Model (CETIS, 2005). Complex descriptors of each SCO are contained within a Learning Object Metadata (LOM) model. Educational criteria in the LOM include language, interactivity type and level, end user role and age range, difficulty level and semantic density. Given a sufficiently detailed LOM profile of each of the SCOs in a global 'learning object economy', it is theoretically possible that learning objects with low culture-specificity could be selected to match the needs of learners in a wide variety of national milieu. As discussed earlier, the assessment activities which are an integral part of many SCOs provide immediate feedback to learners, but can also be used to track their progress. However, overcoming human as well as technical obstacles has delayed the appearance of SCOs at the scale predicted, and the idea has its critics. Malcolm (2005) questions whether a learning object economy will be able to meet the quality as well as efficiency needs of higher education, and Metrios (2005) comments on the practical problems which have resulted in the much slower than anticipated widespread availability and adoption of learning objects in education and training.

GENERATION gaps

How British secondary school students employ Web 2.0 applications is the focus of the Demos report *Their Space* (Green & Hannon, 2007). As the report's title suggests, social networking is heavily colonised by the young, but the main finding of the project is articulated in the prefacing observation "Young people are spending their time in a space which adults find difficult to supervise or understand". The project collected data from academics, commentators, school leaders, secondary school students and their parents. The intensive home use of ICT was found to be commonplace, with four types of student users identified:

> - Digital pioneers were blogging before the phrase had been coined
> - Creative producers are building websites, posting movies, photos and music to share with friends, family and beyond
> - Everyday communicators are making their lives easier through texting and MSN
> - Information gatherers are Google and Wikipedia addicts, 'cutting and pasting' as a way of life.
>
> (Green & Hannon, 2007, p. 11)

Overall, the report concluded that students were completely confident with the Web, using it recreationally and productively to create, maintain friendship networks, and to assist with their school studies. However, it does comment upon a gulf which is growing between this emerging digital youth culture and the institutional culture of schools.

> The idea of a generational culture gap between young ICT users and their elders is well documented. Tulgan & Martin (2001) describe the globalised lifestyles of a digitally-enabled *Generation Y*, born in the late 1970s and early 80s. Prensky (2001) dubs them

digital natives, arguing that their neurological development, shaped by their early experiences, leads them to think in different ways to their *digital immigrant* parents. Oblinger & Oblinger (2005) in their book *Educating the Net Generation* report a similar facility with ICT among 'Net Gen' university students in the USA, and identify a gap between students' learning orientation and that of their teachers. A large-scale study by Roberts et al. (2005) concluded that young people are comfortable with the simultaneous use of multiple media inputs to an extent which their parents would find intolerable. Digital immigrant parents grew up in a print-dominated world of one-thing-at-a-time linear narratives, so by this account are less ready to cope with situations involving multiple and fast-moving sensory inputs. They are, however more oriented to didactic teaching methods which their children would find unappealing. In the view of Charron et al. (2006), it is the ease of communication and 'perpetual contact' (Katz & Aakhus, 2002) made possible by handheld technology that has fostered a reorientation of trust in digitally-enabled communities, from traditional authority to the peer group:

> Easy connections brought about by cheap devices, modular content, and shared computing resources are having a profound impact on our global economy and social structure. Individuals increasingly take cues from one another rather than from institutional sources like corporations, media outlets, religions, and political bodies.
> (Charron et al., 2006 [unpaginated])

A further gap between what might be called digital youth groups and the education establishment is an organisational one. The establishment, including curriculum experts, educational institutions and teachers, is hierarchically structured in what Brafman & Beckstrom (2006) call a *spider organisation*. Contrasting this is the *starfish organisation*: decentralised and essentially leaderless. As examples, the authors describe the rapid capitulation of the hierarchical Aztec empire to the Spanish *conquistadores* in the 16th Century CE, and compare this to the successful defence of their territory made by the Native American Apache tribe. For over two centuries the Apaches proved easily able to defeat Spanish invading troops by their use of guerrilla tactics. As a starfish organisation and unlike the Aztecs, they had no 'head' to be captured and no command structure to be disrupted. Apache society was by tradition decentralised; in the place of formal chiefs with statutory powers were *Nant'ans* – spiritual and community leaders who led by example rather than by coercion. Social networks, in the context described earlier, are similarly leaderless organisations; the relationships are peer-to-peer and membership is entirely voluntary, mirroring the decentralised, multiply-redundant, interconnected web structure of the Internet. In Green & Hannon's *Their Space* account the Nant'ans are the digital pioneers; talented and driven by curiosity, they lead by example in exploring new applications and interconnections.

Leadbeater (2008) provides many examples of how mass – but decentralised – decision-making via Internet collaboration has proved highly effective (resulting in Scott's 'democratisation of expertise' discussed earlier), citing the Samaritans charity, Linux 'open source' computer software and the Human Genome Project as examples of collective voluntary effort outwith the control of governments and corporations. The Internet, especially in its Web 2.0 manifestation, seems a powerful enabler of starfish organisation, making this way of achieving social goals a viable alternative to hierarchical command-and-control in the conventional capitalist market model of what Ritzer (2000) tellingly describes as *McDonaldization*.

So far, this chapter has identified important factors contextualising the employment of national curricula within current institutional systems. The following two sections examine firstly, how Blended Learning will prove a threat to traditional practice and secondly, how Blended Learning might provide opportunities for creative engagement between policymakers, teachers and students in the development of more flexible and adaptive curricula to meet emerging needs.

Blended Learning: THE UK EXPERIENCE

Blended Learning is described by many commentators as having the potential to transform educational delivery and content. In the view of Littlejohn & Pegler (2007) it fosters flexibility in time, enabling asynchronous working, and in space, allowing students to learn outside campus and classroom. The wider range of media employed make it possible for students to create and share their own resource collections, and the authors observe that "this brings into question some of the traditional values of education, such as who owns, creates and controls resources and knowledge" (ibid., p. 3). Garrison & Kanuka (2004, p. 97) describe Blended Learning as representing "a fundamental reconceptualization and reorganization of the teaching and learning dynamic" and identify that "what makes blended learning particularly effective is its ability to facilitate a community of inquiry." Recognising that such radical departures are uncharacteristic of conventional university teaching yet increasingly relevant to the 'information age', they argue:

> … it is becoming clear that it is essential we do better at facilitating critical, creative, and complex thinking skills. Blended learning offers possibilities to create transformative environments that can effectively facilitate these skills.
> (ibid., p. 99)

These views are echoed elsewhere by Otte & Benke (2006) in the USA, and by Sharpe et al. (2006) in the UK. This latter review of the undergraduate experience of 'blended e-learning' followed an examination of over 300 research studies with visits to seven universities to evaluate practice. The review found three ways in which Blended Learning was being used:

> Currently the most common type of blended learning is the provision of supplementary resources for courses that are conducted predominantly along traditional lines through an institutionally supported virtual learning environment. Second, we found some, but far fewer, impressive examples of transformative course level practices underpinned by radical course designs. These often make use of technology to facilitate interaction and communication and replace other modes of teaching and learning. Third, we are aware of students taking a holistic view of the interaction of technology and their learning, including the use of their own technologies...
> (ibid., p. 2)

The first of these ways seems to pose no threat to the status quo, but the others do. In the second way, staff felt empowered to radically transform courses, replacing traditional didactic methods with technology-enhanced techniques and negotiated curricula to engage students in active participation and dialogue. In some cases, existing course content was replaced with enquiry-based learning approaches which situated problems in realistic contexts. In these situations there seems to have been a rejection of traditional content and methods as the initiative has been seized by practitioners. The third way can also be seen as empowerment, where students, drawn into a more active role and enabled by ICT, have become less the passive recipients of just-in-case content and more the shapers of their own learning. Indeed, this may be one reason why the response of students to their Blended

Learning experiences was reported to be "overwhelmingly positive". The review draws upon the work of Mayes and de Freitas (2004), in their categorisation of learning theories that have impacted on e-learning, into three broad groupings: *associative*, *constructivist* and *situative*, and examples are identified of Blended Learning practice falling into these groups. The constructivist orientation, shared by Garrison & Kanuka (2004), underpins their emphasis on the active engagement of students and teachers in knowledge communities which seek to encourage and respect a diversity of opinions and viewpoints. The situative orientation underpins the moves discussed earlier, away from a sole concern with the delivery of propositional knowledge and its abstract conceptualisation, towards procedural understandings of knowledge in realistic contexts and in application.

In the UK university environment within which the review had been conducted, these findings are encouraging rather than threatening, and exemplify existing notions of the transformative potential of eLearning (Garrison & Anderson, 2003). There is a general acceptance of constructivist approaches and an active encouragement of students to form individual opinions at variance with accepted orthodoxy. The (relative) academic freedom enjoyed by academic staff to adapt content and practice is also regarded as normative rather than subversive. It is, however, when attempts are made to 'export' the approaches of Blended Learning developed in the West to the educational systems of other countries that dissonances might result.

BLENDED LEARNING: CULTURAL COMPLICATIONS

The cultural complications of transplanting one country's educational practices to another have been discussed earlier in the context of the post-colonial legacies which continue to hamper the establishment of more appropriate structures and systems within Developing countries. In this respect the widespread adoption of Blended Learning can be seen as a second wave of this phenomenon, as the expectations and relative freedom of action of Western educators and their students is part of the values baggage accompanying the arrival of what appears to be culturally neutral. In place of the relaxed acceptance of change in the UK reported in the previous section, other national cultures have traditionally maintained greater distance between teachers and taught. Al-Hunaiyyan et al. (2008, p. 23) comment:

> Originating from the respect for authority and harmony, Asian people generally prefer formality and indirectness in requesting and criticizing, especially when the authority [is] in presence. The pattern can be found in some small things such as, addressing people by family name with title, to general communication patterns.

As Mason (1998) observes, economic globalisation has proceeded at a far faster pace than educational globalisation, and the national curricula of many countries have been slow to reflect changing economic circumstances. As has been discussed earlier, their content is likely to be embodied in formal, propositional knowledge constructed on the just-in-case assumption that it may be needed in the (relatively predictable) future. There may be less in the way of developing process skills through direct experience in authentic contexts, and more in the way of teaching a defined corpus of knowledge for (perhaps) later application. Didactic methods in the one-size-fits-all environment of the traditional classroom are likely to predominate, and students may be discouraged from collaborating in the pursuit of new understandings. Similarly, teachers may be expected to 'deliver' the curriculum in a standardised fashion, rather than to innovate and – by implication – challenge the wisdom of authority.

Although the bulk of research studies are testament to the effectiveness of Blended Learning, it may be naïve to think of the process as a culture-neutral solution for indiscriminate extension to fit all educational situations. Mason (1998) identifies a whole complex of factors involved: including relations between teachers, schools and curriculum authority; between the status of students, their teachers and the expectations of parents; and between an emphasis on the maintenance of national cultures and cherished traditions, and the preparedness to embrace new ideas and practices. Even the design of computer interfaces carries cultural connotations. In a fascinating study, Marcus & Gould (2000) applied the ideas of cultural anthropologist Geert Hofstede in rating a collection of websites according to five cultural dimensions, including power-distance, collectivism vs. individualism, and femininity vs. masculinity. Their comparison of the homepages of a Malaysian and a Dutch university revealed considerable implicit differences in attitudes to authority and in the role of the individual.

But it is not just in the Western interfaces and (potentially transformative) educational practices of Blended Learning that threats are posed to traditional cultures. Blended Learning inevitably provides some degree of access to Web content. On the one hand, is the availability of Open Educational Resources, and the point has already been made that these materials, largely created in the English-speaking West, may carry unconscious messages. For example, Coulby & Zambeta (2005) discuss effects of the 'narrative of civilization' based on classical Greece, imbuing Western perspectives, which ignores the achievements of other cultures. To non-Western students the content and presentation of Open Educational Resources materials may prove particularly attractive, redolent with perceptions of technological progress and prosperity, but reinforcing a negative view of their own country. For example, Pyvis & Chapman's study (2007) found two types of motivation behind Malaysian students' selection of an Australian offshore campus in preference to a Malaysian university: these were a perception of the Australian degree as a better qualification for employment, and a desire for personal transformation (Westernisation?) through exposure to international ideas and expectations. A similar phenomenon, reported by Van Deven (2008), was the widespread protest in Hong Kong after the 1997 Handover, following a decision by the new government to make Chinese the language of instruction in the majority of its schools. Parents, teachers and businesses objected, seeing English as the language of advancement for their children. On the other hand, there lies a potentially greater threat, through access to Web 2.0 applications, their subversive transnational ideas and communities, and the brash individualism underpinning user-generated content. This trend towards what Lanier (2006) dubs *Digital Maoism* can result in the rapid formation of groups taking direct action against authority. Rheingold (2002) calls these *smart mobs* and describes many examples of how email and SMS text messaging have been used to dynamically orchestrate protest by digitally-enabled members of what Brafman & Beckstrom would call starfish organisations. Such exposure to Western individualism, informality and egalitarianism may contrast sharply with the practices of traditional societies, and may lead to antipathy and rejection.

A development of this view is to regard the complex of educational assumptions and pedagogical practices of Blended Learning as a set of *memes*: described by Dawkins (1976) as powerful ideas with the dynamic of virus-like propagation through societies. This paper identifies six powerful ideas as memes and the conceptual model of their interrelationships is presented in Figure 1.

Figure 1: Conceptual model of memes associated with Blended Learning

The *Internet medium* set is seen here as a 'transport layer' enabling open knowledge access and communications. The *Globalisation* set is a complex of socio-cultural, economic and educational practices. In the intersection of these sets lies Blended Learning. The six memes which have been located within these sets are as follows.

① A complex of pedagogical practices characteristic of transformative Blended Learning, emphasising constructivist student engagement and empowerment and employing negotiated and situative curricula.

② 'Westernism': the economic dividend of globalisation, encompassing knowledge economy practices, highly-paid employment, and the perception of prosperity and consumerism.

③ 'Unofficial' use of the Internet medium in the form of Web 2.0 applications for social networking, effectively empowering its young users irrespective of national origin.

④ The mass, decentralised decision-making which is the product of Internet collaboration, leading sometimes into Digital Maoism and the direct action of smart mobs.

⑤ The growth of the open source movement to bypass proprietary for-profit products and conventional capitalism, and to provide free Open Educational Resources and services.

⑥ The growing status of procedural know-how against formal, codified propositional knowledge, leading to concerns about the flexibility and relevance of national curricula.

This view of Blended Learning as a set of practices associated with powerful memes makes its adoption much more significant than merely the introduction of new pedagogical techniques. Commentators on memes, such as Kelly (1994), see their power as deriving from the dynamic interplay of economic and socio-cultural forces, and observe that successful memes replicate themselves irrespective of the fortunes – and sometimes to the detriment – of their often unwilling hosts.

Blended Learning and national curricula: opportunities

Optimistic tacticians know that there are no problems, there are only opportunities; and if the threats discussed above can be recognised and addressed then solutions may be found which can be, in Mason's phrase "globalising without colonising" (1998, p.156). Although many countries have attempted to control the Internet access of their citizens, all have failed to some degree, as the interconnectedness of the Web provides so many alternative routes (Deibert et al., 2008). The attractions of Blended Learning as an effective educational approach are also too great to be ignored. What is needed is an engagement with new techniques and wider perspectives. It must be accepted that the 'genie is out of the bottle' and can never be replaced, and that the tide of powerful memes is unstoppable.

If a proactive stance is taken, the opportunities for knowledge content and pedagogy are significant, and four are considered here. Firstly, there are the scalable cost benefits offered by the online component of Blended Learning once the fixed costs of ICT infrastructure have been met, and the opportunity costs of this need to be laid against the recurrent costs of conventional institution-based educational delivery. Secondly, the adoption of Blended Learning can be a liberating influence upon both the curriculum content and the pedagogical

practices of national systems, bringing fresh ideas and approaches into the rather static, introspective and restrictive knowledge bases of some curricula. Coulby & Zambeta (2005) argue that globalisation and nationalism are not necessarily opposing forces, and cite a number of countries which are experiencing a resurgence of national identity, in part as a reaction to greater global awareness. This process seems similar to the notion of *glocalization* popularised by Robertson (1995), in which there can exist contemporaneously a global/virtual as well as a local/community-focus. Thirdly, the employment of ICT opens opportunities for productive collaboration between national systems. Blight et al. (1999) contend that educational partnerships forged at various levels across national borders can result in distinctiveness and variety rather than the inevitability of global homogenisation.

> In contrast with globalisation, internationalisation of higher education recognises nations and describes a process of interchange of higher education between nations. It involves partnerships, between nations, between national systems, between accreditation systems, between institutions. (ibid., p. 28)

Fourthly, Blended Learning might help to address the various gaps discussed earlier, so that the educational establishment is seen to be adopting some of the methods and technologies of the knowledge economy, and beginning a process of dialogue and engagement with the leaderless, starfish-structured organisations of mass collectivism.

Questions for national policy and practice

This chapter has examined various types of evidence pointing to the conclusion that Blended Learning and its associated memes will make significant impacts upon the national curricula of many, if not all, countries around the world. Whether these impacts will be beneficial or destabilising to a country will depend crucially upon the policy stances adopted by its educational establishment and how these are implemented at all levels. The chapter concludes with four key questions for educational policy-makers and practitioners in national systems.

1) *To what extent have the wider implications of Open Educational Resources and informal, collaborative learning through Web 2.0 been recognised: at national and institutional levels?*

   This first and most important question concerns what level of awareness politicians and education professionals have of the socio-cultural and pedagogical fall-out of Blended Learning.

   The last thirty years have seen the rise of managerialism in Western countries, and in the USA and UK in particular a corresponding decline in the power of education professionals (Clarke & Newman, 1997; Bottery, 2000; Williams, 2005). Here, increasingly prescriptive policy frameworks have been established by governments motivated by factors other than purely educational (Shuayb & O'Donnell, 2008). It is therefore vital for educators in all countries to debate these issues and to raise them in the public consciousness.

2) *What strategies might be employed at national level to address the implications of Blended Learning which have been discussed in this chapter?*

   This second question for national systems, especially in non-Western countries, concerns the choice of an appropriate and proactive policy response. Some potential benefits of Blended Learning as well as threats have been identified, so the aim should be to craft educational policies which maximise the former while simultaneously offsetting the latter.

3) *How might curricula be made more flexible and adaptive, while retaining their national distinctiveness?*

The third question is related to the previous, but concerns pedagogical rather than wider issues. Again, the opportunities presented by Blended Learning are considerable, but careful and sensitive introduction strategies are necessary in order to manage the pedagogic transition in a way that preserves characteristic national values.

4) *How might schools and universities embrace these unfamiliar practices in socially and culturally as well as educationally blended learning?*

This final question is not so much for policy-makers as for educational practitioners. The central contention of this chapter has been that for non-Western countries the adoption of Blended Learning entails more than changes in pedagogic practice. This implies a broader interpretation of Blended Learning: as a social and cultural as well as pedagogic blend, sensitive to wider national considerations as well as recognising and negotiating the different perceptions and organisational dynamics of 'digital native' students. As Williams (2008b) argues, to achieve this goal will require considerable preparedness on the part of educational practitioners to extend their personal ICT skills, to develop their professional practice in the employment of educationally effective blending, and to share and delegate some of their traditional authority in forging new, more interactive and democratic patterns of engagement with students and their communities.

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