

Changing the Blend

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Abstract: For many, e-learning and blended learning are seen as a technical solution to improve teaching. It is commonly viewed as neutral - just another tool in the lecturer's kit bag. This we believe is a naïve view and hides the extent and complexity of change required at universities (Jones, 2004; Jones and O'Shea, 2004). Technology is not just another way of delivering course content. Blended learning is challenging our education practices and underlying epistemologies and theories. The design of blended learning needs to be grounded in sound education theory. We need to ensure that we blend technological and pedagogical advancements. If we design programmes on-line and ignore education theory then we are in danger of leaving learning to chance. The aim of this paper is to explore the impact of blended learning on higher education, using a case study of the experiences of the University of Glamorgan (UOG) in Wales. The paper will locate UOG's experiences of blended learning in the context of both wider developments and appropriate research. It is clear that the practice of blended learning has outpaced the research and this is due in part to the rapid increase in technology. As a result there is a paucity of research on blended learning from higher education. This paper contributes to closing this gap by providing evidence from one case study university.

Keywords: Blended learning, change, higher education

Introduction

Behaviourism had dominated the design of computer assisted learning (CAL) with the main emphasis on the use of observable, measurable and controllable objectives, and the systematic adjustments of stimulus-response reinforcements. It could be argued that this approach is suitable for drill and practice learning, rote learning, task-oriented, instrumental learning. The contrasting view is of using computers to enhance learning with an emphasis on social aspects. This approach is influenced by the social constructivist theories of learning. Let us look at examples of both approaches.

In 2000 I was asked to lead the development of an e-learning project which involved the University of Glamorgan and six further education colleges. At this stage my knowledge of e-learning was limited, and I came to the conclusion that in this new area I needed to try to immerse myself and approach my new job with as few pre-conceptions as possible. When I agreed to manage this project I had assumed I would build on my experiences (documented earlier). I quickly learned that this was not as simple as it had seemed; every aspect of University life needed to be reconsidered and I found I was challenging existing hierarchies and traditions (Jones and O'Shea, 2003, 2004). It became clear at the start of the project that a range of staff, academic, technical, administrative and staff with new composite skills from different departments across the University and across the Welsh further education network needed to work together. Existing administrative structures were problematic and hindered interdisciplinary arrangements. There were very few examples of staff from so many different areas of the University working together in one group; the boundaries between academic departments and support departments were well protected by tradition and culture needed to change.

The development of an e-learning environment led to the creation of multi-disciplinary teams, including staff from Academic Registry, Learning Resources Centre, Human Resources, Marketing, Student Information Systems, Information Systems, Student Services, the partner colleges and the academic schools. It is clear that the success of the project rested upon an integrated team involving all the University's support departments working alongside the Business School from the beginning. This is because in an e-learning environment the support is required at the start and is immediately transparent to the e-learner when they log on-line (Salmon 2000). Nunan et al. (2000) highlight the importance of integration,

"Information technologies are bringing structural change to service areas, causing a convergence of roles and functions between registry, library, corporate services, production and teaching support and student services" (p72).

The blurring of traditional departmental boundaries has been particularly evident in the development of modules on-line and represents an important change within universities. This however is posing challenges, especially to heads of department who may see this blurring as a threat to their power. Sloman (2001:14) emphasises, "Connectivity is especially powerful. Boundaries separating different organisations and activities have become increasingly irrelevant (or blurred)". The new paradigm has also created new relationships between further education partners and between further education and higher education. Further education staff, and colleges, are assuming new roles which will necessitate new agreements, funding models and approaches to quality assurance. E-learning requires much higher levels of quality assurance including issues of copyright; intellectual property rights need to be sorted out at the beginning of the process in the development of on-line courses (Jones et al. 2002). These changes will also threaten the prevailing hierarchies and pre-conceptions about the status of further education vis a vis higher education.

It is clear that the impact of e-learning, and in the future mobile learning, will require universities to re-think fundamentally their strategies, in a range of areas including human resources, estates, pedagogy, quality assurance, funding, management and commercial and educational partnerships. Inglis et al. (2002, p.189) confirm our findings:

"For most organizations, the transition to electronic delivery will represent a significant shift. It will involve major changes to the organization: changes in staffing, procedures, infrastructure, and most of all to the culture of the organization".

Information and communications technologies (ICT) are forcing major changes in the location, development, methods, delivery, support, evaluation and timing of education delivery. Although it provides real opportunities it also poses threats that need to be addressed. Grasping the full potential of ICT will require a substantial shift in human resources policies including recruitment, contracts, training and development and innovative payment systems.

Advances in technology are converging with the requirement for universities to be more flexible. An increasing number of universities in the USA and the UK are starting to embrace the use of ICT to deliver programmes. Education leaders in the USA, for example Drucker (1993) and Oakley (1997) predict that unless universities change radically, they will cease to exist in the twenty first century. As far back as 1967, McLuhan visioned 'the global village' and Hanna (2000 p. 8) prophesies that "McLuhan's concept of the global village is about to come to life for every person on the planet". E-learning and the Internet

are seen as the ideal medium to create a global village (Inglis et al 2002, Laurillard 2002, Evans and Nation 2000) and universities are expected to be at the centre of the move towards the 'global village'. Wilson (2000 p.39) highlights this as follows:

" ..some of the biggest changes for universities will stem from further advances in I.T... a capacity for interactive networking which will connect any university to a global audience".

Communication technologies that are free from time or place constraints provide new challenges to universities on how they should be organised. It is clear that universities need to change to accommodate the impact of technology on learning. Very early in the E-College project it became apparent that e-delivery offered exciting opportunities for delivering to the ever more diverse backgrounds of students which the University recruits in response to the Government's aim of extending participation to 50%. The challenge for the University would therefore be to mainstream the managed learning environment with all of its attendant questions of funding streams and HR issues.

Unless we adopt more flexible forms of delivery we will lose students to more responsive universities including private universities and virtual universities. The economic argument, although compelling at this time, is not sufficient to incorporate ICT into universities. Lea and Nicoll (2002:6) highlight "ICT is commonly promoted through governments and the media as mere 'technical improvements to the learning systems'.... However this view masks the extent and complexity of the changes taking place, of the requirements for substantial institutional change and of reconfigured practices and understandings of pedagogy". The value of e-learning needs to be shown on pedagogical grounds. Laurillard (2002 p.241) argues that the delivery infrastructure should never be in the foreground; rather it should be supporting the dialogue on learning. Thus I will return to the main question for learning and teaching arising from my work.

Although computer assisted learning has retained a behaviourist tradition the development of more interactive technologies has afforded the opportunity for collaborative learning. Computer mediated conferences (CMC) are based on social constructivist theory and a conversational pedagogy where the learning process is reframed through reflective dialogue between students based on both tacit and explicit knowledge. This is a major departure from the normative, teacher-centred lecture delivery. With the development of computer conferencing tools there is a heightened need for this development to be grounded in learning theory. There is a view that conferences on-line may be better served by a collaborative model of instruction; we need to reflect on its pedagogical potential more fully. According to Salmon (2000:494) "Constructivism is the paradigm often adopted by designers of UK courses taught through computer and telecommunications, though most US designers use behaviourists' models". This could be contested as there are now many educators in universities in the USA using Vygotsky's socio-cultural ideas about learning (Bonk 1998, Hanna 2000); Bonk (2004) confirms that the behaviourists' model remains the preferred model for e-learning in business and corporate training. Computer mediated conferences support a constructivist approach; students work through a series of asynchronous conferences in which they discuss ideas in written communications with others. Students can access these discussions any time from a variety of locations. Thus we gain knowledge by interacting with each other in a virtual community of learners. The adoption of a social and cultural approach to learning and teaching highlights the view that learning cannot be reduced to a set of cognitive skills enacted in a context free environment. At the university all staff and students have access to a common Managed Learning Environment (MLE) - BlackBoard. The way the MLE is used varies across the university

and is used in many different contexts from e-enhanced models through those which are e-intensive. Through the MLE students not only have access to conferences but also to the learning resources centre.

E-College Wales projects have enabled the university to gain a deep understanding of the issues centred on e-learning. E-learning has the potential to transform the way we teach and how we learn. The introduction of e-learning has provided us with the impetus to reflect on the wider issues of teaching and learning. University staff, traditionally, are not trained teachers; few staff have studied pedagogy. E-learning has created new roles for lecturers e.g. as e-authors and e-moderators. One could argue there is nothing new here; lecturers prepare content and teach courses but there are many differences and these differences need to be captured in staff development programmes. The situation at present is that lecturers focus on content, are experienced in face to face teaching, have little pedagogical training and no experience of e-moderating. Thus if we accept that on-line conferences are appropriate for collaborative learning we need to provide pedagogical guidance on how to integrate on-line tools for collaboration into our teaching. The university through e-learning has the opportunity to develop staff in a non threatening way by renewing interest in learning and teaching. Bonk (2003:9) warns,

"Unfortunately, while the constructivist revolutionaries have ventured onto the battlefield of epistemological change, most have not provided practising educators with the wherewithal to reconstitute and embed constructivist ideas within their personal philosophies and teaching practices".

What was clear was the need to provide staff development in CMC pedagogy but in 2000 there were very few examples of staff development programmes supporting e-learning initiatives. Gilly Salmon at the Open University had just developed a model for teaching and learning on-line and we enlisted her help in developing our staff. Salmon devised a staff development programme for us based on her five-stage model in order to help inform, what at that time, was a group of naïve and inexperienced e-moderators. BlackBoard was the chosen managed learning environment (MLE) which provided the platform for communication. The course was designed placing great emphasis on asynchronous discussions and the development of learning communities.

Salmon's framework has five distinct sequential stages of development comprising a series of pre-ordained tasks, referred to by Salmon (2000) as e-tivities.

The five stages are illustrated in Figure 2:

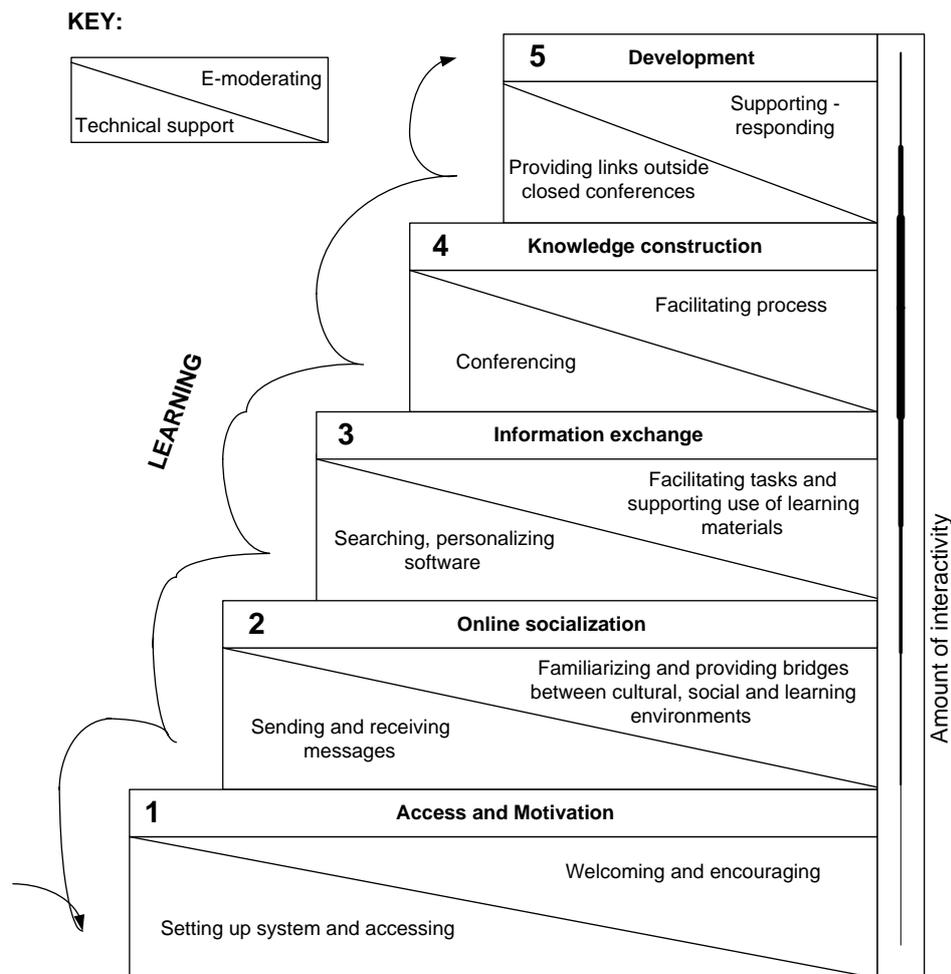


Figure 2: Model of e-moderating

Whilst the content of the current course is pre-ordained, the responses to the tasks often develop into other areas, allowing a more constructivist approach as advocated by Laurillard (2002). The learning theory underpinning the course is not aligned to the behaviourists' traditions but rather to the theories of Vygotsky (1994), and Schon (1987). Social factors as well as intellectual factors are important in e-learning and the concept of participation in a learning community is central to this course. Over the last two years 220 members of staff from the University of Glamorgan and the associated further education colleges have undertaken the course. During this time we have continued to change the course as our learning about e-learning increases (Fitzgibbon and Jones 2004). We felt it important to contest Salmon's 'one size fits all' model, this we did by reflecting on our own discourses of learning and focussing on learners' feedback. Lisewski and Joyce (2003:6) warn, "Frameworks such as the 'five stage e-moderating model' can become too reified within an increasingly commodified higher education environment". Since 2000 there has been much research interest in teaching on-line especially in the UK, USA and Australia. The researchers of on-line teaching include Salmon (UK), Mason (UK), Laurillard (UK), Bonk (USA), Lasenby (USA), Berg (USA), Oliver (Australia), Collins (Netherlands), Paulsen (Netherlands) and Jones, Fitzgibbon and Peachey (Wales).

Constructivism was not the theory of choice for many lecturers involved in ECW. Indeed there were some who did not recognise that they were in fact operating in a constructivist paradigm. It is clear that most lecturers still do not have the support and

direction to use collaborative technology from a learner-centred perspective. This I will illustrate using Activity Theory as a framework for analysis. Activity Theory stressed the importance of contradictions to aid the learning process. I will analyse the introduction of e-learning into one of the ECW programmes. Figure 3 shows the various elements of an activity system and their connections. By understanding the joint activity that leads to a change we are able to understand how an activity functions or fails to function for an individual or group. Activity systems are changing constantly as we learn. We are constantly working through contradictions within and between the elements. Engeström (1990:11) refers to these contradictions in an activity system as "a virtual disturbance- and innovation - producing machine"

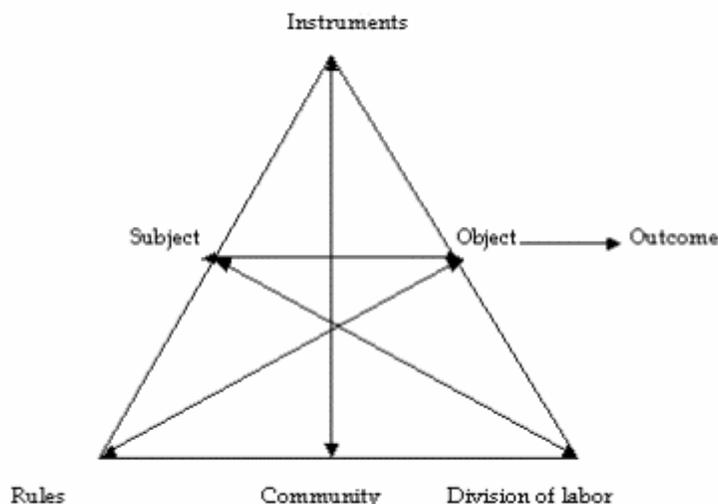


Figure 3: *Activity Theory*

The instruments are the mediation tools for example books and computers. The subjects in this example are students/teachers and the object is a business course. The rules are both formal and tacit, the community refers not only to the community of learners but also to the many other communities to which we belong for example family, work and social communities. The division of labour is the roles we play out in becoming teachers and students.

Contradictions arose initially when module authors were required to work with instructional designers, editors, multi-media designers and rights clearance administrators. The lecturers were familiar with their content but e-learning required a new division of labour, new roles. The power and control of the lecturers was seen as being diluted. The motive of the lecturers was to improve the students' learning, whereas the technical team focussed on the software and its efficient functioning. In order to be successful we needed to work together in a team to resolve contradictions; this I believe has been achieved.

Two further contradictions occurred after the students had undertaken their induction. The first contradiction was that the lecturers had expected (the rules) the students to use the asynchronous discussion conference facilities available in BlackBoard. The students however, soon discovered that the lecturers did not assess the on-line discussions. Although they had been motivated and interested in using the on-line discussion opportunities during induction, as other pressures impinged on their time it was easy for them to give up this

shared aspect of the course. Thus without any obligatory rules to use the CMC, students soon reverted to traditional ways of communicating and learning. There was no common motivational factor, nor did they see the value of collaboration when the assessment was based on individual effort. The majority of the students saw the discussion groups as unnecessary and time consuming. It should be noted, however, that some students left the course at this stage, as they had specifically wanted to be part of a lively on-line community.

The second contradiction emerged between the subjects and rules. Although students were expected to share information/ideas on-line it became clear that some had decided to print their material and not go on-line and others decided that they would meet face to face. This not only caused contradictions between rules and subjects but also caused a contradiction within the community of learners as sub-communities were formed. It was clear that these students had not used the BlackBoard tools to create a zone of proximal development that took advantage of collaborative learning. The use of CMC to share knowledge, was viewed by many students and some staff, as unnecessary and so this function remained largely unused. I believe this was a missed opportunity for students to experience different ways of learning. It is clear however that there is a lot of conflict and contradictions both pedagogical and political that we need to understand as we change to e-learning.

Conclusions

It is very important that the technology is not incorporated into programmes uncritically. Many students especially those aged between 18-25 will probably not want entirely e-learning courses or to study at a virtual university. The key features of university life for many young people are the social and recreational activities. In addition for any age group sustaining motivation in a virtual environment is problematic. As I have indicated earlier there are a variety of e-learning models and including in this is blended learning which offers one solution so that on-line learning enhances the best of face to face provision.

Nonetheless the advantages of ICT are clear; we now have immediate access to information sources from around the world, we can more easily collaborate with others globally and we can keep in touch with our friends and family. ICT has changed so many aspects of our lives and as the networks continue to grow so will our dependence on them grow. Already we have seen how ICT allows us to create simulations and allows for powerful visualisation. In addition software offers new forms of interactivity through computer mediated conference facilities.

According to Pittinsky (2003), chairman of BlackBoard, the majority of top universities in the USA are offering e-learning programmes and 50% of Higher Education spending in the USA will be directed towards the best pedagogical and content management tools. The e-Europe 2005 action plans, which have been adopted by the council of ministers and the European Parliament, identify e-learning as their top priority. Yet many universities believe that they are immune to the technological revolution; this view may be sustainable now but the consequences for universities ignoring these changes in the next few years may be catastrophic.

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