E-learning or e-Lemmings? Who pipes the tune?

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Abstract: This paper urges a rather more critical view of e-learning than that taken to date. It is argued that strong forces are converging to redefine education as a commercial rather than public activity, of which e-learning is one element. Inherently different perceptions of the teaching and learning process, based upon a commercial rather than a public model, combined with a certain amount of naïve technological progressivism are challenging the role of higher education. Poor implementations based upon flawed assumptions are also likely to lead to an e-learning bust in much the same way as the dot com phenomenon has collapsed under the weight of its own hype. The case is argued for diverse and informed models of education (including e-learning approaches) that nurture local cultures and values, and produce socialized, adaptable and capable citizens rather than captive globalised consumers, colonized by monoculture online.

1. Introduction

A powerful and persuasive set of forces are converging to reinforce the spread of e-learning across the globe. These imperatives do however beg the question, is the distinct role and contribution of Universities and academic education programmes being lost? Are E-training and E-education being confounded in the e-learning space? Who is driving the agenda and to what end?

2. The Case of IT education

If we take as one example the issues facing computing and Information Technology (IT) education, they may serve to illustrate the point.

A global shortage of IT professionals means that companies in many parts of the world cannot fill positions. Hughes (2000) observed this *inability to meet demand* and the *growth of consumerism* in education as two key challenges for IT education. Others have noted that increasing diversity in the

computing student body brings with it "changing modes of study: more re-education, more mature students, more non majors, more hybrid degrees and study programmes" (Daniels et al., 1998).

Adapting to these needs has generated strategies such as greater immigration, more specific skills based commercial courses, wholly work based learning, increased private commercial training provision, combined academic and certification programmes being offered in academic environments e.g. The UTS Master's in Internetworking as a by product of which graduates gain CISCO certification, (Hughes, 2000).

E-learning is an obvious method addressing the need for flexible modes of delivery. E-learning is being promoted as a strategy for IT training by companies such as Smartforce (2001), and "Information technology companies such as Microsoft, Oracle Cisco, IBM and Hewlett Packard do most of their training online" (Baer, 2000), while an increasing range of web based course delivery approaches are also being adopted in academic environments. It has been suggested that for many commercial organizations "moving from online training to higher education is a natural extension" (Baer, 2000).

3. Combining Information Technology and Pedagogy

Before further exploring the question of e-education, the relationship between information technology and sound educational practice will be reviewed.

Leidner and Jarvenpaa (1995) in the MIS literature have discussed educational uses of IT and proposed a theoretical framework within which to position certain technologies and pedagogical strategies for IT use. This framework identifies some key assumptions about knowledge, theories of learning, reality of context and the learning environment, within which educational practice and technology can be positioned. An overview of the framework is depicted below as Figure 1. These approaches to learning are quite varied both in style and outcome.

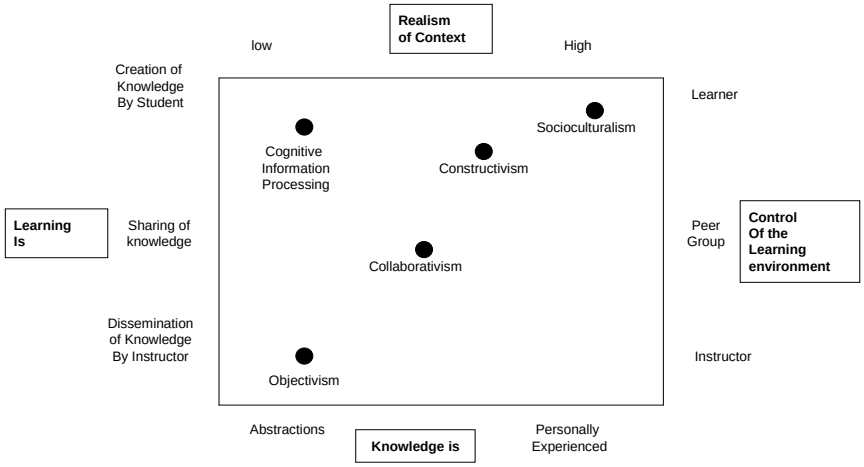

Figure 1. The Dimensions of the Learning Theories (Leidner & Jarvenpaa, 1995)

The traditional instructor-led learning style (Dale Spender's (1996) *sage on the stage),* resides in the dimension of O*bjectivism* and underpins many largely teleological theories of instructional and curriculum design (Bruner, 1966, Gagne et al., 1988), namely the pre-packaging and doling out of parcels of measurable and assessable knowledge by the expert to the learner. This model might be termed "*education as knowledge transfer*".

Much work in interactive and multimedia design has been concentrated upon the dimension of *Constructivism* (Reeves, 1992), to design and create virtual worlds with which the learner can interact in order to create their own forms of knowledge in ways that are meaningful to them. This model might be termed "*education as knowledge construction*".

In my own work involving international collaborative learning (Clear 2000, 2001), I have experimented with the dimension of *Collaborativism,* using web-based groupware as a compatible combination of IT and pedagogy to support this form of learning. This model might be termed "*education as knowledge sharing or co-creation*".

I will now suggest that much of what is called e-learning, especially that based upon the commercial pre-packaged learning management systems such as *Blackboard Course info* and *Web-CT* tends to be objectivist in pedagogical style, that is it is based largely upon the model of "education as knowledge transfer". Thus content management is given undue emphasis, and the educational focus is restricted, being based upon a limited view of teaching and learning. This form of e-learning might be better termed e-training.

I would suggest that moving from e-training to true e-education and e-learning presents a far harder challenge, and one with which those who possess different world views and perceptions about the teaching and learning process will struggle. While we have made some progress in our understanding of what might work online, combining truly transformative models of education with the transformative capability afforded by information technology, is the challenge that e-learning

has still to address.

4. The Discourse of Enterprise versus the Discourse of Community

4.1 The Nature of Information Technology

In wrestling with the educational and social issues arising from my own work with international collaborative learning (Clear, 2000), it occurred to me that one needs to look far wider than the technology itself to comprehend some of the conflicting forces that contend in the e-learning space. I was given cause to reflect through a critical incident, in which an email was sent to me, prior to an international collaborative trial, from a student in the class. The relevant comment is excerpted below:

> *Do not forget that students are the customer, [AUT] is just lucky that we are more locked in to the degree by the time that we get to the professional studies that to not come back would mean that the time you have spent at [University] was a waste.*

This increasingly common student view certainly does not reflect my own, nor that of the University. For instance Horsburgh (1996) has stated clearly, "Education is a participative process, students are not products, consumers or customers. They are participants".

So, is the simple act of introducing technology into the teaching and learning process one with neutral impact? To what extent do technology, individuals, organizations, and society interact? An interactive perspective on information technology (Orlikowski, 1992), recognises that technology is not separate and distinct from society and culture. We often fail to appreciate that the systems we create with software are merely subsystems within a wider nexus of overarching social systems. Software based systems merely represent a set of cultural patterns frozen for now into a reproducible and constraining form. Likewise from a systems view of education, we see again a set of educational subsystems operating within the overarching set of social systems of the culture in which the education is taking place. So the education of Christians, Jews, Hindus, Muslims is very different, representing their different cultures and religious heritages. The education of those within traditional indigenous cultures is different again, with the primacy of oral as opposed to written communication being asserted, and the emphasis placed upon collective rather than individual achievement, community and kinship ties and one's place within the tribe.

4.2 The Concept of a Discourse

One way of relating these contesting values to higher education and e-learning is through the concept of a "discourse". A discourse operates as a mechanism in society to define social interaction, prescribe certain rules for that interaction, specify the boundaries of what can be said in a given context and "prescribe which actors within that discourse may legitimately speak or act" (Davies & Mitchell, 1994). In society we could be said to inhabit "discourse webs" in which different cultural perceptions and agendas are advanced. It is like a contest between different

stories, either jousting to be told, or to define the rules dictating which stories are permitted to be told.

In the E-Learning environment several discourses contest for space. One key dichotomy for higher education is that between the "discourse of enterprise" and the "discourse of community".

4.3 The Discourse of Enterprise

The discourse of enterprise comes from a neo-liberal interpretation of society, in which the economically rational or self-interested human being is primary.

In the discourse of enterprise humans are defined in a wholly economic frame, with individual lives as an enterprise of the self, like individual businesses engaged in developing their own human capital. The language of the market takes over, and civic culture becomes consumer culture. The citizen is reconceptualized as the sovereign consumer/customer. This discourse, for some time popular with western governments, has now permeated into the areas of social service provision. Patients, parents, passengers and pupils are re-imaged as customers. The power of this discourse is that it links the political, the technological and the ethical by aligning "the politico-ethical objectives of neo-liberal government…, the economic objectives of contemporary business and the self actualizing, self regulating capacities of human subjects" (Du Gay and Salaman, 1992).

Globalisation is part of this same discourse with the enterprise vision of capturing bigger markets, and the use of technology as a vehicle to deliver services on a global scale. E-Learning aligns well with this discourse and the globalisation agenda. We even see arrangements such as the World Trade Agreement prescribing rules for free trade in educational services, (Bridgeman et al., 1999), so that global barriers to education delivery can be broken down. E-learning if viewed in this context can be seen as one strand in the rise of a new religion, that of *globalisation*, based upon a belief in the value of "free markets" and their ability to deliver global prosperity. The difference here is that the culture being asserted is global western culture, not local and unique forms.

4.3 The Discourse of Community

By contrast the discourse of community asserts the right of citizens to function collectively to maintain and build their communities. As opposed to the single utility model of economic rationalism, we see a concept such as Etzioni's (cited in DeSanctis, 1993), of dual utility both to ourselves and to one another. This discourse has a moral dimension which requires us to make our choices constrained by values such as fairness and justness. The duties we owe one another are emphasised, such as to care for our elderly and educate our young not as isolated individuals but for the wider social good. E-Learning based upon this discourse would not be about grasping bigger markets, but about supporting community building initiatives, and enabling diverse initiatives tailored equitably to the needs of learning communities.

5. Differing Perceptions and the Role of Higher Education

In the "*sovereign consumer"* model the teacher becomes subservient to the students' whims. But a sound higher education teaching and learning model is not one of tailored individual instruction, or the commercially efficient version of *mass customisation* (cf. Mathieson, 1998), where the teacher is ruled by several tyrannies of one. While each individual is unique and must be acknowledged as such, the needs and interests of the group must also be balanced, teaching and learning are social processes, and the role of the teacher is to guard carefully the trust of diverse stakeholders. Against this essentially moral role of the teaching professional, is the dilemma that Hinchcliff (1997) poses: which stakeholders do we serve, are we "educators of students or trainers for industry?" Universities have multiple stakeholders – parents, students, employers and the wider society. "The demands of serving the needs of an industry may conflict with our need to serve educational ideals" (Hinchcliff, 1997.).

Mass customisation in E-Learning while superficially promising to better meet the needs of all learners, does not meet the requirements of a community discourse. This model of education delivery is based upon the discourse of enterprise, on the “education as knowledge transfer” model, and a teleological pedagogy of staged goal-driven units for individuals to complete. The advantage of this model of education is that the learning units can be tidily packaged and the courses “sold” commercially as products, while leveraging economies of scale. However, mass delivery of custom product with self-paced learning options is an individualised instruction model, which devalues group and community learning modes and brings the danger of homogenisation of culture.

There is scope for complementary diversity in the E-Learning space, but if we ignore the community discourse we run the risk of having our culture and communities usurped by the juggernaut corporate models eating inexorably into community space. And let’s be honest, in a marketing sense they see an opportunity – in the US the higher education “market” is said (Baer, 2000) to be worth about $230 billion, mostly delivered by community institutions. The training market by contrast is said to be worth $75 billion, and mostly delivered by the for-profit sector (Baer, 2000).

Higher learning cannot afford to ignore this discourse. Dennis Tsichritzis (1999) in as significant an academic journal as Communications of the ACM has asserted vigorously, "today's university is at a turning point, and turn it must. The time has come to recognize that education is a business and students are the customers". Regarding the role of the University teacher he further asserts that "professors are personnel who produce and evolve content". Harris (2000) in contrast to this view refers to “the threat to the traditions of scholarly enquiry within the academy”.

A model of education in which education is a transformative process for the student is hugely at odds with Tsichritz’s construction of the student's or the professor's role. Sound pedagogy informing teaching and learning is not about students as passive customers, but as active participants in a process of personal and social change and enquiry. The educator’s role is not to simply provide content but to structure the learning opportunities for students, and as far as possible to engage them in that process.

The several roles of the University must also be acknowledged, among which may be numbered: to generate critical thinkers, to contribute to the creation of new knowledge, to offer equitable access to those able to take advantage of higher learning, to develop capable and adaptable citizens ready

for the demands of an uncertain future world, to develop the potential of learners, to serve as a critic and conscience of society.
These goals will not be readily met by a commercial model, and will often be quite at odds with commercial goals. Generating docile labour units to participate in today's jobs, while happily paying for the privilege, will do little to address the broader needs of society.

6. E-Lemmings?

However there are some signs in early E-Learning venture failures that the core competencies that are required in the higher education sector are very different from those in the commercial training sector. Poorly implemented educational solutions, with weak business models have led several providers to collapse, or revise their strategies (Parkinson, 2000). Courses designed with restricted and wooden objectivist pedagogies, based upon mass delivery of packaged content are unlikely to enthuse many students. Low completion rates and the challenges of motivating distance learners are well known factors in traditional distance learning, why should they differ in online environments?

However "the naïve technological progressivism" (Harris, 2000) which has led many University administrators to join in virtual University consortia, purchase learning management systems, grandly pronounce e-learning strategies, appears to offer little more hope from the University sector.

7. Conclusion

While many may be rushing headlong to disaster, the Open University (OU) in the UK is one example of a successful Mega University, where the scale of activity has enabled significant reductions in the cost of servicing each student. Costs have been quoted as "less than $400 per student compared to over $10,000 in the UK and USA" (Harris, 2000). Nevertheless the OU still serves the greater social purpose of a University being research-led in its teaching and learning activity, and enabling significant access to higher education from groups formerly excluded. While the OU as a networked bureaucracy (Harris, 2000), has the expertise in both education and distance learning to adjust to a move towards greater online provision, this will prove a far greater challenge for other institutions, who lack the economies of scale, the reputational strengths or the expertise to succeed with such an educational model.

My own view is that most institutions can most productively experiment with hybrid delivery models – partly online, partly web-supported, using what Harris (2000) terms an "interstitial model" involving "investment in new learning technologies combined with conventional methods". There remain nonetheless real concerns about the "moves towards cartelization and learning consortia, many of whom operate on a multinational basis. Homogenization of learning content is a risk in these developments" (Harris, 2000).

Baer (2000) proposes several ways in which the academic and for profit sectors may productively collaborate, and these approaches may help preserve the best of public education while meeting

some of the commercial pressures towards profitability and growth in market share. The broader role of the public institutions must be acknowledged and preserved, while we search for appropriate pedagogical combinations and effective ways to use the new technologies to meet the increasingly diverse needs of learners.

In the end maybe we can find effective accommodations where communities can provide customised, unique and local forms of education to meet their own needs, augmented by links to other online learning communities and resources in ways which enhance diversity and build local communities rather than create bored captives to globally delivered cheap product creating monoculture online.

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