Questions for the Adult Educator on a Virtual Odyssey: An Analysis of Internet and Web-based Learning

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Abstract: *This paper examines the argument that lifelong learning should become increasingly dependent on education technology because this will alleviate many of the barriers to learning adults face. Lifelong learning is diverse, and so caution is needed when generalising from case specific research. The premise that new learning technologies promote social inclusion is still relatively untested.*

Introduction: The Growth of New Learning Technologies

Information technology skills have become a new form of literacy for the 21st century, and yet the impact that these will have on adult education has been woefully under-explored (Boshier, 1999). Recently, Boshier (1999) and others initiated the examination of Internet and Web learning from an "adult education" perspective. This paper is a further contribution to these debates drawing particularly on an analysis of adult educational policy within the UK, and an examination of the fragmented but increasingly extensive empirical data world-wide about on-line learning.

New communication and information technologies have become ubiquitous within higher education and the skills associated with their use have been identified as essential key outcomes for graduates in the UK (DfEE, 1997). These media have challenged notions of locality and proximity. For example, time and distance have new meanings when one uses asynchronous communications such as email or gains access to libraries and other information resources through the Internet. One consequence has been that a third generation of distance learning based on these communication technologies has been developing which is being portrayed as a solution to many of the structural barriers that adult learners experience (Halal & Liebowitz, 1994; Laurillard, 1993; McConnell, 1998). These include: a restricted time for study; the lack of courses at times that fit around employment or caring responsibilities; geographical distance from centres of learning; lack of transport or financial constraints; and a desire to study at local centres. Not surprisingly, the policy discourse has assimilated these notions, and flexible learning has become the "condensation symbol" (Edelman, 1977) or shorthand descriptor for Internet and Web-based learning and a central feature of the strategy to widen participation and ensure lifelong learning.

This paper will review a range of discourses that are constructing understandings of Internet and Web-based learning and seek to show how these have been used by the policy discourse to present a rational account of how to initiate change in educational practice. For example, Boshier and Chia (1999) identified four discourses: techno-utopianism, techno-cynicism, techno-zealotry, and techno-structuralism. These ideas may be regarded as polarising discourses in which the debates have become simplified into oppositional positions between the optimists who regard the Internet as a liberatory and empowering technology and the pessimists who warn of the exclusionary nature of the media and point to difficulties in ensuring mass access to the technologies (Webb, 1999). Empirical evidence can be found to support both positions, yet I would argue that if adult educators are to engage fully with these debates, the question about how this evidence is used to justify such diverse arguments needs to be examined. To answer this, the paper will examine differences in the situations in which the Web has been used because as others have argued, differences in the contexts and in the institutional purposes and players involved are critical to understanding how technologically based learning

impacts on the participation of adult learners (Gorard & Selwyn, 1999; Webb, 1999).

Constructions of Lifelong Learning and Web-based Learning in Recent UK Policy

Many governments, suggests Longworth, (1999), are basing their strategies for more effective learning on the use of education technology, including open and distance learning and delivery through networks. In the UK, key projects that exemplify this are the University for Industry (UfI, now called Learning Direct), aimed at adult learners, and the National Grid for Learning, a schools based project to help teachers and students obtain access to a wide range of learning materials on-line. The rationale for these developments is best summed up by a statement in the UK Government's Green Paper, "The Learning Age," which argued that: "As the University for Industry will demonstrate, one of the best ways to overcome some of the barriers to learning will be to use the new broadcasting and other technologies." (DfEE, 1998, p.1.2). Another aspect of the rationale is that the UfI is expected to provide a structure of "support for businesses to secure the skills that they need to compete in the world" by being a broker to stimulate employer-led training, and learning in the further and higher education sectors to address the UK's "skills requirements and to improve UK competitiveness" (DfEE, 1998, p.7.2).

What is interesting about these statements is that they infer two apparently different approaches to lifelong learning. On the one hand, the language positions the UfI firmly within an inclusive discourse of lifelong learning that regards learning as essential for everyone to realise their individual human potential (Longworth, 1999). It proposes that this may be achieved by "help[ing] all adults realise their potential by opening up access to learning through local opportunities, using technology, and broadcasting to create an open network" (DfEE, 1998, p.1.2). In these ways, the language within the "Learning Age" articulates many of the key elements found within public narratives about social inclusion and widening participation, as the following claims about the use of new technologies illustrate: "The UfI will help people find the time to learn...make learning more accessible and affordable...provide a clear route to learning opportunities [and] take the fear out of learning" (DfEE, 1998, p. 9)

On the other hand, the policy document highlights a narrower conception of lifelong learning in which the UfI is seen to be an instrumental mechanism to help solve the economic needs of the state and industry, and of individuals' needs for education and training to help their employment. A Skills Task Force is a central part of this strategy along with the setting of national education and training targets for everyone over 16 years of age (DfEE, 1998). Yet, as Robertson, (1998) reminds us this is a supply-sided initiative, rather than demand led. There is little evidence that those who have not traditionally participated in education and training will suddenly find this attractive simply because it has been technologically "repackaged" (Gorard and Selwyn, 1999).

Underpinning these two approaches to lifelong learning is an optimistic account of the role of new learning technologies that invokes the discourses of techno-utopians and techno-zealots (Boshier and Chia, 1999) and their presence may explain why these two constructions of lifelong learning are not presented as a contradiction within these UK policies. Such optimism may also stem from a view that the Internet and the World Wide Web appear to make knowledge available to those with access to the hardware at the touch of a key and the cost of a phone call. These appear to be just another product that may be purchased, or a leisure pursuit. In other words, they have become commodified as information (Lyotard, 1984), and informal learning has become a lifestyle product that can be purchased through videos, computer games and CD-ROMs, as info-cation or edu-tainment (Edwards, 1998). The boundaries between education, leisure and entertainment and other sectors have become blurred, what Edwards (1998) has termed a process of de-differentiation. Therefore, by highlighting the positive role of the Internet and the Web in this dual construction of lifelong learning, policy-makers have blurred the boundaries between learning for personal development, and learning to get a better job. In a chameleon-like way lifelong learning seems able to encompass on the one hand, the language of widening participation and social inclusion, and on the other, appears to be addressing the economic needs of the state and industry.

The Role of Web-based Learning in Reaching the Learners who are Hard to Reach

There is a large and growing body of literature about the use of the Web in learning, about which a number of distinctions need to be drawn. These include firstly, recognising the use of technology for managing the teaching and learning process, where it may be used for marketing courses and institutions, providing information and guidance, registration, tracking, and assessment. Secondly, the use of computer mediated communications (CMC) such as email, asynchronous conferencing, or synchronous conferencing. Thirdly, the use of the technology such as multi-user object orientated (MOOs) or multi user dimensions (MUDs) to simulate virtual environments. Inglis et al (1999) argue that each of these may draw on a range of pedagogic strategies. For example, they might include on the one hand, those that stress knowledge transfer, and emphasise the recall of set packages of knowledge; those that carefully sequence knowledge and encourage information transfer through structured teacher led activities; and those that encourage "learning by doing" in order to achieve competency. On the other hand, there are others that see interaction between the student and student, and the student and tutor, as critical to the students' learning, and these tend to draw on personal construction models, social construction models or conceptual shift models. It is the facility for these more interactive strategies that has given rise to a number of optimistic accounts of how Web learning may enhance adult learning, along with its apparent neutrality and public accessibility as a channel of information irrespective of time, place and institutional personnel. However, these arguments are contested.

For example, Paulsen (1994) drew distinctions between four pedagogical paradigms in CMC. These included: firstly, learning alone, where the focus is on information retrieval by consulting existing databases or on-line sites; secondly, learning one to one, where teaching and learning is developed using electronic mail; thirdly, learning one to many where information is available through bulletin boards; and fourthly, learning many to many, where virtual simulations occur through computer conferencing, debate, role play, and so on. Paulsen has argued that it is in the area of the "many to many" techniques, more so than others, that Internet learning shows major advantages over face to face learning,. However, Paulsen's samples involved only well qualified learners and professional practitioners, and he offered little discussion of other factors which might have contributed to the success of the CMC. Similarly, Kaye (1992) recognised the relationships between the pedagogic style of the on-line tutor, and the potential of Web-based media to facilitate collaborative learning in his study of continuing professional development, but unlike Paulsen, he acknowledged the influence of the wider social factors operating in workplaces and educational organisations. Not surprisingly, these cases have contributed to the development of optimistic discourses about the use of Web-based learning but little attention has been given to the impact of different settings, different educational purposes and differences among students.

Part of the reason for this lack of attention to the problem of meaning when constructing generalisations for policy and practice from diverse case studies may be because frequently evaluations have been practitioner-led (Inglis et al, 1999). Also, practitioners have not often been the key players in the development of policies around new learning technologies. Policy-makers and practitioners leading developments have used the research literature to support their strategies and practices but have left many premises untested. For example, Inglis et al (1999) suggest that the technology itself encourages innovation to keep ahead of the competition, and so rather than wait for the results of longitudinal studies, policy is developed on the basis of the best understandings of known best practice. They claim that even costings models tend to underestimate the full costs of development and delivery, and they suggest that technology cannot solve the access problems created by situational and institutional barriers (Cross, 1981). In addition, they argue that digital learning involving interaction between the tutor and the learner is probably no cheaper than face to face teaching. The main financial gains are likely to be felt by institutions that defray their high development costs through global marketing and recruitment of many small specialist groups of learners. In turn these learners who are seeking specialist professional provision gain access to learning that

would otherwise be beyond their reach. Further cost benefits are most likely to accrue to those institutions where distance learning has used the remote classroom model rather than interactive learning, and these are more prevalent in the USA, than in Australia and the UK. If these findings are accepted, they suggest that the recent UK strategies for lifelong learning centred on the Internet and the Web are based on some dubious assumptions about the costs and benefits to institutions and to disadvantaged individuals.

Even when practitioners do attempt to theorise the relationship between contexts, learning goals, learner characteristics and the learning media, in order to explore Internet learning and its value for adult learners, as in the case of Lyman's, (1999) model of situated learning, the data drawn upon posits the discourses of techno-utopia and techno-zealot described earlier. This is not surprising since much of the literature on CMC has identified a tendency towards democratic interaction (Boyd, 1987; Harasim, 1987) and promoted a democratic theory about its use (Yates, 1997). It has suggested that the media lacks social cues and this promotes social equality (Kiesler, 1987; Sproull & Kiesler, 1993). Further support has come from more recent studies of gender mixed on-line discussion groups (Hardy et al, 1994; McConnell, 1997; Selfe & Meyer, 1991). Sproull and Kiesler (1993). They have suggested that the communications technology, with its plain text format and the perceived ephemeralness of its messages, has led people to forget or ignore their audiences. They have argued that the medium contributes to deindividuation which means that the users of CMC become less sensitive to each other, and the resulting reduced social awareness leads to messages which ignore social boundaries, involve greater levels of social revelation than in face to face encounters, and they are more likely to "speak" bluntly and write "flaming" messages. Yet this analysis whilst providing some evidence for the role of CMC in promoting social equity, also helps to explain why a number of other writers have suggested that CMC does little to equalise differences in gendered communications, and may exacerbate some differences, even though some women's voices are increasingly being heard (Ferris, 1996; Herring, 1994; Pohl and Michaelson, 1998; We, 1993).

In a similar way, others have shown that the Web carries social markers (Yates, 1997) and that as a different, but still social space our understandings of how learning operates in different contexts and with different groups is as relevant to Internet and Web-based learning as it is to the conventional classroom. The issue which underpins these concerns is the extent to which there are similarities and differences between CMC and face to face conversations. Studies which have explored this have argued that all communications' media are social constructs and that interaction is socially negotiated. Perrolle (1991) used Habermas' theory of linguistic competence to examine these matters and argued that because some of the social norms of communications such as how we build trust and develop linguistic competence are removed or obscured in CMC, there is the potential for communications via computers to be distorted. However, she also acknowledged that some social indicators of power and status differences which can negatively affect people's participation in face to face conversations can be hidden in CMC, and so there is a greater potential for more equal participation by each gender, class, race and ability group. In the end, Perrolle has been cautious in assuming that the technology will always be deployed in such emancipatory ways and has suggested that because the design and use of hardware and software is socially negotiated it may still reflect, and even reify, unequal relations of power and authority.

Equally problematic, for understanding how Web learning can be used to support lifelong learning and increase the participation of the socially excluded, is that much of the literature has been derived from studies of learners who have had considerable experience of formal education. Much of this literature originates from analyses of continuing professional development, and undergraduate and postgraduate teaching, and little seems to be changing (see for example Banks et al, 1998). Gorard and Selwyn's (1999) analysis of the virtual college movement in the UK concluded that educationalists and researchers should avoid viewing ICT as a "technical fix" for post compulsory education and training. They suggest that one of the "problems" of com-

puters is that as Postman (1992) argues they encourage a focus on technical solutions but this view obscures many of the social and cultural contexts of these new lifelong learning policies.

Conclusion

An alternative view of Internet and Web learning to that found in this policy discourse would be to regard the Internet as a medium that extends pre-existing identities and institutions rather than radically transforming them (Poster, 1997). This is neither an optimistic nor a pessimistic view of the technology but rather one that seeks to understand technology within a socially constructed context and to evaluate its use in diverse contexts, and in relation to learners and their goals. The argument of this paper has been that the majority of studies of on-line learning that have been associated with the optimistic discourses of the techno-utopianists and the techno-zealots have derived their findings from case studies within the field of continuing professional development, continuing vocational education or from work with traditional undergraduate and post-graduate university students. Few studies of on-line learning have focused on the non traditional learner or learners who have not participated beyond initial compulsory education.

In addition, many of the extrapolations from empirical research that have been used to make claims about the Web, have blurred different conceptualisations of lifelong learning, such as learning for personal development and promoting social inclusion, and learning to improve a country's competitiveness and enabling the individual to get a better job. The extent to which the Internet and Web-based learning may be able to deliver these different objectives is likely to be variable and to some extent unknown. What is needed is a more extended analytical review of how different groups of adult learners interact on-line and perceive their learning. Analysis of a wider range of cases is likely to strengthen the argument that the context in which the Web is deployed has to be understood before one can assert that it will be the panacea for adult learning of the future and be a key strategy for educational activists and policy makers with a lifelong learning and widening participation agenda.

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