



Must Try Harder! Problems Facing Technological Solutions to Non-participation in Adult Learning

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ABSTRACT *The current Government has placed lifelong learning high on its agenda, both for reasons of economic benefit and to increase social inclusion. At 'half-term', what are the prospects for a 'pass' in this course? Using data from a new National Institute of Adult Continuing Education survey of adult participation in learning, and early results from participant observation of the setting up of a 'virtual college', as well as published findings from pilot studies for the University for Industry, this article considers the challenges facing the Government in widening participation through the use of digital technology. The 'problem', of widening access to learning opportunities for all, is not a new one, and it is unlikely to be one with a simple technical fix. The conclusion drawn here is that the emerging use of digital technology is likely to replicate existing inequalities in access to learning. Despite the fine efforts of those involved, and some ingenious technical and distributional suggestions, the recommendation must therefore be that we all try harder.*

Introduction

The Government of the UK is committed to a policy of 'education, education, education', and more specifically to establishing a 'learning society' (Department for Education and Employment [DfEE], 1998). One of the central tenets of the drive towards widening participation in adult learning lies in the facilitation of easy access to learning resources and opportunities away from the traditional confines of educational institutions. The use of information and communications technology (ICT) is widely regarded as the chief means by which this goal will be accomplished. For example, 'The University for Industry is at the heart of the UK Government's vision for lifelong learning' (Ufi, 1999). Therefore, alongside the potential economic benefits of upskilling the workforce, technology-based learning is also being enthusiastically promoted as a

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new way of combating social exclusion (Selwyn & Gorard, 1999). In this spirit, moves are currently being made to provide technology-based learning to all sectors of society, via the National Grid for Learning, the People's Network of libraries and museums, and various virtual college initiatives. Moreover, the Government has recently announced ambitious plans to establish up to 1000 'ICT Learning Centres' for 'disadvantaged communities' by 2001 (DfEE, 2000). It is intended that the key post-compulsory components of this drive will come under the umbrella of the University for Industry (now referred to as the Ufi), and be marketed via the telephone-based guidance and registration system of 'learnirect'. The purpose of this article is to present a 'half-term' report on this strategy, and as with all such reports, it is intended to be both summative and formative.

The promise of 'anytime, anywhere' learning via ICT has long been highly attractive to those involved in adult education, many of whom have proved keen to speculate on the effects that technology may have on learning (e.g. Tiffin & Rajasingham, 1995; Field, 1997). Typical of such enthusiasm is Gell & Cochrane's vision of the imminent 'meltdown' of traditional education:

ICTs remove the constraints of distance, time and location, which will undermine traditional educational monopolies and force a restructuring and revitalisation as a new 'training, learning and creativity' sector ... Lifetime learning has become a necessity and will replace the old pattern in which education occurred in school and university before a person started a career. Meltdown in education is also likely to encompass all ages and bring remote capabilities into the home. (Gell & Cochrane, 1996, p. 252)

In a similar vein, commentators such as Bentley (1998) argue that ICT offers a 'new landscape of learning' unfettered by the enclosed spaces of traditional institutions. Educational technology is seen as leading to the 'de-localisation of learning', with individuals free to learn whenever and wherever they choose. Thus, for some more radical commentators, there is little doubt how the learning of the near future will be conducted. As Naylor (1998) incredulously asks, why would any learner choose differently?

If information is freely available, to anyone, anywhere, at any time, then why would anyone go to the trouble of travelling in order to access it? Why would they go to school, college or university at all, when simply by switching on their own computer near to them, the information and expertise once held at that school, college or university can come straight to them? (Naylor, 1998, p. xxiii)

Nevertheless, beyond such rhetoric, the actual role of technology in effectively widening participation in lifelong learning remains largely untested. Many in government and even in education, distracted perhaps by the allure of the technology concerned, may have tended to treat these new media as relatively unproblematic in their impact. In this article, we take a more detached view and ask whether technology is really capable of widening participation in adult learning. In particular, we do this by examining the efforts being made in Wales to establish the Digital College of Wales (*Coleg Digidol Cymru*) to act as a technology-based broker and provider of learning opportunities to the adult population. Originally referred to as the Welsh arm of the Ufi, the Coleg Digidol is now described as the only Welsh body to achieve Ufi Qualified Supplier status. The two groups are holding a series of meetings to draw up a bilateral agreement on their actual relationship. It should be stressed here, and recalled throughout this article, that

the Coleg Digidol is used here as a detailed case study of the phenomenon of virtual colleges, which is especially interesting in light of the concurrent and ongoing devolution of educational policy-making to Wales. There is no intention to single the Coleg Digidol out in any other way, and the secondary data that are already available from UfI pilots, and Adapt projects in England, suggest that the issues faced by the Coleg Digidol here are not unique. Those working for the Coleg Digidol (including one of the authors) are doing so in all sincerity, but the problem of re-engaging that 30% of the population who do not currently participate in any post-compulsory education or training (Gorard *et al.*, 1998a) is an intractable one, and one that has defied easy solution so far by previous administrations and a host of other well-intentioned groups (e.g. National Institute of Adult Continuing Education [NIACE], Royal Society of Arts [RSA] Campaign for Learning, University of the Valleys).

The Coleg Digidol

Originating from an initiative by two of the three dominant television broadcasters in Wales (BBC Wales and S4C—the Welsh language Channel 4), the concept of an ICT-based adult learning programme in the principality first emerged via a feasibility study carried out in 1994. By 1997, these early moves were consolidated with the announcement that a Coleg Digidol would be established as a technologically-based broker for adult learning in Wales; both directing potential learners to existing provision and extending learning opportunities through digital television broadcasts and the Internet (Digital College, 1998). Reflecting its broadcasting origins, this model had a distinct emphasis on the use of telecommunications technology in its delivery of learning materials. Although other media such as the telephone, fax and paper-based materials were intended as integral parts of the programme, the dual use of digital television (DTV) and the Internet were seen as fundamental to the successful implementation of the Coleg Digidol:

Anyone interested in learning new skills—vocational or non-vocational—would be able to benefit and exciting and effective access procedures would be put in place to attract and support traditionally non-participating groups such as the young unemployed and adult returners. Television is a powerful medium and can prove an effective access point. It was foreseen that the service would be particularly useful for job-seekers, those seeking new directions and challenges early or late in life and those seeking open learning opportunities. (Digital College, 1998, p. 15)

As this highlights, the creation of a ‘digital college’ in Wales has been portrayed as a ready means of widening access to learning opportunities for those currently excluded from participation in lifelong education and training. While embracing the economic imperative for lifelong learning, the Coleg Digidol Cymru has therefore pinned its success or failure on the ability to overcome traditional barriers to accessing adult learning opportunities. Professor Bob Fryer (now Director of the UfI) exhorted at the business launch of the Coleg Digidol that in attracting adult learners the initiative *cannot* be seen to merely recruit the ‘usual suspects ... this would not only be a failure but deeply hypocritical’ (Fryer, 1999).

Although the Coleg Digidol is still in early stages of implementation, it is already possible (at half-term) to begin to examine these claims in the light of existing knowledge about the characteristics of non-participants in adult learning and the barriers

that they face. Thus, in particular, the article now seeks to answer the following questions.

- What technological basis is there for the proposed Coleg Digidol?
- What learner demand is there for a Coleg Digidol?
- What strategies are the virtual education providers using to attract learners?
- How effective will these strategies be in attracting potential users?
- What is the evidence that such opportunities will widen access to include those previously disenfranchised from lifetime learning?

The Technological Basis—Access to ICT in Wales

The success of the Coleg Digidol is inherently tied to individuals accessing learning through technology. In this way it hopes to provide a technical solution to the many temporal and spatial barriers faced by adult learning in its traditional institution-based forms. Indeed, the emergence of the Ufi, Coleg Digidol and associated initiatives has been set against a relatively successful heritage of technology-based learning programmes run by organisations such as the Open University and the BBC. However, for the first time, the precedents established by such programmes have been taken up by central government in an attempt to fundamentally alter the nature and reach of adult learning. Thus, as the recent Education and Training Action Group (ETAG) report to the National Assembly reasoned, despite the challenges posed to existing forms of provision, technology can be seen as a powerful vehicle for expanding participation in adult learning:

Modern information and communications systems, including digital developments, present both opportunities and threats in adult education. ICT can minimise the constraints of time and space: people can learn or gain information about what is available, whenever and wherever they wish—*providing they have access to modern technology and the confidence to use it*. (ETAG, 1998, p. 30, author's emphasis)

Unfortunately, one of the most obvious present barriers to participation in learning is its cost, and it is not immediately clear that ICT-based provision will eliminate rather than simply alter this. The current non-participation of many in learning can be explained, at least in part, by the relatively higher costs for poorer groups, whether defined by unemployment, low wages, occupational class, gender or area of residence (Maguire, *et al.* 1993; Hand *et al.*, 1994; NIACE, 1994; Sergeant, 1996; Shackleton & Walsh, 1997). The cost of equipment, communication and insurance to participate in learning digitally is unlikely to attract many such newcomers. Moreover, where facilities are provided institutionally, free at the point of delivery (via the Coleg Digidol's proposed 'distributed learning centres' in libraries, colleges and other community sites), the problems of transport and other institutional barriers remain. So, technology may alter but not necessarily overcome many of the situational and institutional barriers to learning (Harrison, 1993). In the short term at least, the role of technology in widening participation may therefore be far less than uncritical advocates of virtual education suggest (Gorard & Selwyn, 1999).

New evidence in support of this tentative prediction is provided by a recent NIACE survey of adult participation in learning (see Tuckett & Sergeant, 1999), which produced a boosted sample of 483 respondents in Wales analysed and presented here for the first time. As Table I shows, ownership of personal computers (PCs), while larger than access

TABLE I. Access to ICT in Wales

Technology	At home	At work
Telephone	91	41
Computer	33	26
Internet	13	19
None of these	7	53

(Data are percentage of respondents, $n = 483$).

to computers at work, amounts to only one-third of the households of Wales (and this includes computers of all kinds, including those used solely for games-playing). Since it is already clear that a considerable proportion of the computers in homes do not have the capacity to access information via the Internet, it is not surprising to discover how few people actually had access to the Internet in 1999. With one in ten individuals lacking access to even basic telephony (and access here includes use of shared public payphones), any assumptions of complete access to the Internet in the near future would appear groundless. Although the survey did not include a question about access to digital television, it must be assumed that such access is generally very limited across the UK at present (which is the main reason why the question was not asked). Even when digital access becomes more common, it is already clear that technical problems will remain for those resident in sparsely populated areas, or in awkward terrain such as the mining valleys of South Wales. Of course, the proportions will change over time, but two conclusions appear obvious so far. First, initiatives such as the Coleg Digidol face a major communications obstacle in trying to register those currently excluded from adult learning. Second, even when access patterns change, so will the technology required for access, so it is likely that many of those already excluded may still be playing 'catch-up' for the foreseeable future.

The characteristics of current non-participants in adult learning are by now well known. There is reasonable agreement across different research and interest groups as to the nature of current non-participants in post-compulsory education and training (Tight, 1998). Recent government-sponsored reports, subsequent Green Papers, and academic studies list the unemployed and others on low incomes, the unskilled and unqualified, ex-offenders, part-time or temporary workers, those with learning difficulties or low levels of basic skills, and some ethnic groups as being the least likely to participate (Fryer, 1997; Kennedy, 1997; DfEE, 1998). Increases in extended initial education and training since 1945 may have reduced the appearance of a 'two-track' system of education in Britain (Gorard *et al.*, 1998b), but these changes most definitely do not apply to discontinuous adult learning. If extended initial education (apprenticeship, further education, higher education etc.) is ignored, then women and older people are much less likely to be adult participants in learning (Gorard *et al.*, 1999a). It is therefore these groups within society that the virtual college movement will need to include if it is to be successful in its own terms.

The culture of ICT, on the other hand is generally young, white, middle class and male; the very attributes of the traditional adult learning base the Government (and many others) wish to move beyond. Many of the technologies used to deliver learning (e.g. the Internet) are not necessarily dominant or familiar technology with the working-class, older, female, or ethnic minority learner (NIACE, 1997). Access to computers in Wales, both at home and at work, is significantly more common among men, occupational

TABLE II. Differential access to computers in Wales (advantaged)

Access	All	Male	Age 17–19	Class AB	FTCE 21 +	Degree holder	Current learner
At home	33	38	49	60	61	58	57
At work	26	31	44	51	51	54	54

(Data are percentage of respondents, $n = 483$).

classes A and B [1], those who left full-time continuous education (FTCE) later, and with higher qualifications (Table II). Most significantly, access to ICT is most common among those who are currently already participating in an episode of adult learning. Access is less likely for those aged 55 or more, the retired, or unemployed and those otherwise not working, and those who left FTCE as soon as possible, and have no qualifications (Table III). These characteristics have already been identified as more likely to be those of lifelong learners and non-participants respectively. In confirmation of this, according to the recent NIACE figures, access to ICT is highest among those currently participating in a learning episode, and lowest among those who have never participated since leaving school.

Learner Demand for Coleg Digidol

Technological issues aside, there is some doubt about the actual role of tangible barriers such as space/distance in preventing access to adult learning opportunities for all present non-participants. Despite conclusions drawn from the more common forms of evidence derived from participants in education and training (cheaply and conveniently clustered in institutions for the researcher), evidence exists that non-participants in formal educational episodes may not be particularly deterred by traditional barriers such as time, cost, travel and lack of initial qualification. This evidence comes partly from the role of long-term socio-economic background characteristics, especially the influence of family, in creating a relatively stable learner identity for some individuals, which does not view current opportunities as appropriate, interesting or useful (Gorard *et al.*, 1999b). Evidence also comes from a model of two separate sets of determinants for extended initial and later learning respectively (Gorard *et al.*, 1998c), and from the accounts of widespread informal learning for which barriers are, by their very nature, less relevant (Gorard *et al.*, 1999c).

These suggestions have been confirmed to some extent by the results of the new survey reported here. When asked why they did not take part, or plan to take part, in learning, the non-participants replied as summarised in Table IV. Despite differences in detail, the consistency of the total for the overall NIACE survey and that for Wales is remarkable. Nearly two-thirds of these respondents reported no actual barrier to their participation, suggesting therefore that their patterns of behaviour would remain unaffected by any initiatives to ease their entry back into formal episodes. Of course, it is always possible to doubt the realism/accuracy of these responses, and to suggest that virtual colleges or community programmes could whet their appetites again. Indeed, a recent comparative DfEE (1999) survey, although identifying a ‘hardcore’ 20% of the population who had not taken part in learning over a 4-year period, did suggest that an additional 28% of original ‘non-learners’ in 1994 had since participated in learning activities by 1998. Nevertheless, the vast majority of these ‘returners’ had been prompted

TABLE III. Differential access to computers in Wales (disadvantage d)

Access	All	Age 55–64	Age 65–74	Class E	FTCE at 16	No qualifications	Non-learner
At home	33	28	7	12	24	13	17
At work	26	14	1	12	15	7	7

(Data are percentage of respondents, $n = 483$).

TABLE IV. Barriers to participation in adult education

Region	No barrier	No interest	Too old	Other	Total
UK	17	27	15	4	63%
Wales	9	22	15	17	63%

(NB: 'other' includes 'don't know', 'I already know all I need', and 'haven't got round to it').

to do so by work-based training rather than non-vocational, or even individually chosen, pathways *per se*. Thus, despite not wholly concurring with our earlier data, DfEE (1999) also identified a 'learning divide' between those who were actually learning and those persistent non-learners 'who might be more likely to need some learning and training'. In summary, both this survey and the recent NIACE data would seem to lend some support to the prediction of Titmus (1994) that there is a substantial subset of the population who are 'beyond all attempts to reach them' (see also Harrison, 1993; McGivney, 1993).

To some extent, this rather depressing conclusion can be tempered by consideration of the nature of the opportunities on offer in Wales, and the current policy of National Targets for Education and Training (which are unaffected by informal learning, however substantive in nature). Much lifelong learning policy is prescriptive (Tight, 1998). Non-participants are often blamed for their situation, and threatened with exclusion, since the alternative of admitting the existence of socio-economic determinants for non-participation might require a totally different, and rather more expensive, government programme. The prevailing view is that therefore people ought to participate since it is good for them, and the current emphasis is on formal vocational education and training, and on learning as a positional good (Keep, 1997). This ignores the emancipatory, individual and radical nature of some of the original proposals for lifelong learning, on whose rhetoric current policy is at least partly justified. A compulsion to train and retrain for a flexible 'careership', or to prevent the damage caused by social exclusion, may benefit those in power and meet the requirements of the productive system (Furter, 1977; Johnson, 1993), but if nearly a third of the population do not wish to take part after formal schooling, it is just possible that the problem lies in the provision and not in the non-participants.

As well as leading to economic competitiveness (perhaps) and social mobility (probably), education is nearly always a genuinely transformative experience for an individual (Lewis, 1993), and one that impacts on the local community. Learning should not therefore be viewed as an escape route from anything, but a normal part of an accomplished life in a democratic society (Rees, 1997). Viewed in this way, it is not clear that the experiences offered by the virtual college movement, which is of necessity based on a model of information transmission, can be genuinely educational for many, or that they can lead to better reasoning skills, creativity and the ability to value divergent cultures claimed by Roll (1995). Given these potential limitations, it may therefore be seen as completely rational for an individual to decline to participate. Unfortunately, at least partly because progress is measured in terms of the qualification targets used to attract inward investors, such a conclusion is not favoured by policy-makers in Wales (or indeed elsewhere in the UK; see Gorard *et al.*, 1999d).

Strategies to Recruit Learners

Given the foregoing, it is clear that the Coleg Digidol is being introduced within an existing context of lifelong learning in Wales which may not prove automatically receptive to technology-based adult learning. The way in which the College presents itself to the population is, therefore, of vital importance to its successful implementation. With this in mind, what then are the 'exciting and effective access procedures' (Digital College, 1998) which are being put in place to overcome the previously discussed problems?

At present, publicity for the Coleg Digidol is low. Despite its commitment to 'driving demand' (Digital College, 1998), there has not been a high-profile launch or marketing campaign akin to the campaign surrounding the launch of the UFI pilot in the north-east of England (Milner *et al.*, 1999). Indeed, contrary to the rhetoric of 'driving demand', current recruitment strategies appear to be of a rather passive nature. At present, the two principal ways in which a potential user may engage with the Coleg Digidol is via their website on the Internet or by means of a telephone call (either directly or via *learndirect*). Neither of these may be particularly effective means of recruiting disaffected learners as new users. For example, several informants revealed that initial telephone enquiries about how to register did not produce very encouraging results. The receptionist was unable to answer even the most basic questions about the purpose and functions of the Coleg Digidol, such as what courses it 'offered' and how to enrol in them. In fact, it transpires that the Coleg Digidol is currently catering for Welsh language learners alone. Rather than emphasising the role of new technology as an aid to learning, one caller was directed to a current series of programmes for Welsh language learners on terrestrial television (and offered the purchase of videotapes).

This strong Welsh language emphasis is also apparent on the website, where the only resources currently available are for Welsh language learners. Indeed, although the website is intended to be bilingual, at the time of writing it was only directly accessible via its Welsh form (www.coleg.digidol). The significance of these points is that, as the telecommunications industry is all too aware, the success of domestic ICT is firmly 'content driven'. Thus, the Coleg Digidol's initial emphasis on Welsh language learning could be seen as an attempt to provide content for which a ready audience (and therefore ready initial demand for the service) is known to exist. Bearing in mind the currently skewed socio-economic nature of the population of Internet and presumably of digital television users, the ongoing development of the Coleg Digidol as a primarily Welsh

language concern could be seen as an astute commercial decision given the specific social composition of the Welsh-speaking population. Welsh speakers, and many aspiring to learn to speak the language, are in general more highly educated and better paid than average (Giggs & Pattie, 1994), and have been seen as forming a specifically self-privileging status group (Fevre *et al.*, 1997). Of course, this emphasis on Welsh language learning is directly at odds with reaching the largest target of non-participants in adult learning, i.e. the majority of English-speaking, working-class adults in the South Welsh region. In industrial South Wales, where perhaps 70% of the population lives, Welsh speakers are in a minority, with perhaps as few as 1% of households speaking Welsh as a family (Gorard, 1998). Adult Welsh language learners and speakers are therefore not, in general, the individuals revealed by previous research as isolated from lifelong learning. Nevertheless, in attracting learners with both ready access to the technology and a higher motivation to learn, Welsh language learning would appear to be a more commercially sound product for the Coleg Digidol than the worthy but less attractive areas of basic skills such as numeracy or literacy (and in this way equivalent perhaps to the emphasis on low-level work-based, ICT skills in the Ufi pilot [Morrison *et al.*, 1999]).

To monitor whether initiatives such as the Coleg Digidol are effective in widening participation in lifelong learning, it is imperative that the characteristics of registrants are recorded. It should be noted that such procedures are not operational at the time of writing. For example, users of the Coleg Digidol Cymru website need only register for a password (and thereby give any usable information about their socio-economic characteristics) if they wish to access official documents concerning the formation and day-to-day running of the college. The password anyway takes several days to organise and is only available to those with a fixed address. Access to the (limited) learning resources, on the other hand, does not require the user to register. Neither are the details of telephone callers recorded, apart from attempts to distinguish between callers who are individual learners and callers who represent businesses and potential sponsors.

Accordingly, we have no evidence as yet of the number and characteristics of registrants for the Coleg Digidol, which has anyway only recently started in earnest. However, there are no indications that the Coleg Digidol Cymru will be any more successful in widening participation in lifelong learning than similar initiatives elsewhere in Britain. Early indications from the slightly more advanced Ufi projects in England have produced doubts about their efficacy ('Ufi pilot does not meet need', *Times Educational Supplement*, 26 February, 1999, p. 29). An evaluation of the 'pilot' schemes showed systematic differences between those who registered interest and those who did not, and little awareness of the scheme among local firms and residents. It concluded that the 'rhetoric of intentions' was more significant than the 'reality of outcomes' (Morrison *et al.*, 1999, p. 7). Reports of large numbers of learners joining the scheme have been exaggerated by the inclusion on the relevant databases of those willing to receive promotional material through the post as 'registrants', whether they follow this mailing through or not. In addition, many of those who were registered as expressing an interest did not know that their names were being used, or why. The researchers suggested inaccuracies in the database they were using. Little information was recorded about each enquiry other than the address, but even on this indicator there were clear imbalances (for example, between urban and rural areas). Where learners were provided with virtual courses, a clear majority of those in England have so far been ICT-related.

Where enquiries come through learndirect, as they will do increasingly, it was recently reported that fewer than half of callers get through first time, that half of these give up at that point, and a third did not get the information they wanted even once connected (Johnston, 1999). In a survey of 6000 callers who did get through, a large proportion were young (35% aged 26–35) and graduates (36% compared to only 8% with ‘few or no qualifications’). More of these were female than male, but even so, there is no evidence yet that ICT is doing anything other than appealing to those who are already very likely to be participants in adult learning (Bysshe & Parsons, 1999). Indeed, even when learndirect has been found to attract ‘non-traditional’ learners, this has been achieved by distinctly ‘low-tech’ means. For example, a mailshot to 1.2 million unemployed people included with their giro-payments as part of Adult Learners’ Week resulted in 42% of enquiries to learndirect coming from unemployed callers (NIACE, 1999), if only for the duration of the marketing campaign.

Early evidence derived from participation observation by one of the researchers in the Access group for the Coleg Digidol suggests that the initiative is being driven by three types of motivation.

- (a) There are representatives of those organisations which stand to gain from the project. For example, Thimbelby (1999) estimates that there is £50 billion to be made simply from selling each adult a computer, and the profit to be made by course, material and software providers will be much greater.
- (b) There are those who are fascinated by the technical challenges, for example in transmitting digital signals to remote areas of Wales.
- (c) There are those who see the College as an extension of policies to encourage Welsh-speaking.

All together, these factors might explain why some group members blithely assured us of the cheapness of adding a second telephone line in a region where so many of the households do not have one line yet (in fact, many areas have neither gas supply nor sewage runaways), why the website is only searchable in its Welsh language version, and why the prospectus uses photographs of oak-mantled fireplaces, and thousands of pounds worth of electronic equipment in its depiction of the ‘typical learner’.

Conclusion

Having examined the technological basis and potential learner demand for the Coleg Digidol as well as the strategies currently being used to attract learners, we are now in a position to explore the remaining questions posited at the beginning of the article; i.e. how effective can these strategies be in attracting potential users and, secondly, what is the evidence that such opportunities will widen access to include those previously disenfranchised from lifetime learning?

From a technological point of view, the successful creation of a truly inclusive Coleg Digidol would appear to be no less problematic than increasing the motivation of present non-participants. It is clear, in the short of medium term at least, that access to the Internet will continue to be delineated along the lines of socio-economic status, gender and ethnicity, and that as a medium it is to a large extent reproducing traditional patterns of unequal access to technology. Moreover, the Coleg Digidol’s faith in digital television as the vehicle through which to reach the masses is itself fraught with difficulty. Digital television is widely seen by the telecommunications community as the technology which

will overcome the existing elite of professional Internet users and bring the worldwide web 'into the living room', thereby making it a 'true consumer medium' (Withey, 1998). As such, DTV is being heavily signposted by broadcasters before most people will use it. Thus, to what extent the integral role that DTV is seen as playing in the Coleg Digidol is partly commercial 'wishful thinking' on the part of S4C and BBC Wales remains to be seen. In Wales, as in the rest of Europe, audience demand for DTV remains low, replicating the previous failure of satellite and cable television to establish more than a minority hold in the UK market place. Thus, as Concoran (1999, p. 67) observes: 'on the face of it, DTV would seem to be a technology for which consumer demand is weak at best. As a production, delivery and display innovation, its deployment is more obviously driven by a technological rather than audience imperative'.

It could therefore be argued that the Coleg Digidol's current reliance on DTV and Welsh language provision are highly politically and economically motivated decisions. With the Coleg Digidol themselves admitting that their 'digital' title and focus was decided by S4C even before the initial feasibility study in 1994, to what extent is the Coleg Digidol merely an attempt by the Welsh language broadcasters to boost the numbers of Welsh speakers and permeation of DTV into their market place? But even if we reject this commercially orientated scenario, at present the Coleg Digidol is not being constructed in a way to widen participation in lifelong learning. The reliance of the Coleg Digidol on technologies such as DTV and the Internet, which are primarily reliant on private rather than public control in their distribution and spread (Collins, 1998), is a major area of concern in terms of its overinclusive mission, as is its Welsh dominated learning provision.

In suggesting considerable ineffectiveness in widening participation, we are not, however, suggesting that the Coleg Digidol will merely leave patterns and inequalities of participation in learning unaltered. There is little doubt that ICT-based education will have an effect on the make-up of adult learners, yet our underlying concern is that inequalities of access to technology look set to exaggerate in some ways rather than alleviate 'traditional' barriers to participation in lifelong learning. As Luke (1997, p. 135) argues:

Clearly one can access [cyberspace] remotely and interoperate amidst some connections from many places with the right equipment and adequate resources, but these prerequisites are exceptional in most real-life situations. Moreover, making the world digital in access or equal in capability is destined simply to generate digitised inequalities, uncabilities and inaccessibilities. (Luke, 1997, p. 135)

Of most concern, however, is that these fundamental questions do not appear to be being addressed by those constructing 'virtual' educational opportunities. Of course, a faith in technical fixes is not the sole preserve of adult educators (Volti, 1992). Yet, here a failure to transgress existing social and economic inequalities will only lead to the failure of the programme in achieving its well-stated objectives. As Luke (1997, p. 133) continues, it is not enough for advocates of virtual education to 'speak in the name of abstract equality and empowerment amidst concrete conditions of severe inequality and disempowerment'.

Thus, there are many complex issues to be addressed, and further problems to be overcome, before participation in lifelong learning can be widened through ICT. Indeed, to view access to on-line learning in terms of 'haves' and 'have-nots' (Wresch, 1996) is

in itself misleading. As Toulouse (1997) observes, there are two distinct types of inequality of access; whether groups have access at all and the hierarchy of access amongst those that do. Thus, beyond the simple issue of access to the Internet and DTV come more complex questions of levels of connectivity in terms of the capability and distribution of the access concerned. For example, the quality of access to telecommunications networks is not generally considered when discussing the permeation of technology throughout the population yet the 'churn' of domestic technology should be an important consideration. A popular guideline from the IT industry, referred to as Moore's Law, states that computer technology is effectively superseded every 18 months. Given the rapidly increasing capability of computers needed to access up-to-date websites, it is apparent that merely considering 'access to the Internet', as our survey does, is an almost meaningless indicator of 'connectedness'.

Beyond issues of technical capability, the context of access is also important. Will accessing online learning materials from a home-based PC be equitable to accessing the same materials via an open access workstation in a public library or other ICT distributed learning centres? Moreover, will accessing on-line learning via DTV be equivalent to accessing on-line via a PC? The danger is that by focusing solely on issues of levels of basic access we are overlooking the quality of that access and, it follows, the quality of the learning experienced on-line (Selwyn, 1999). Here Kanter's (1995) views of an emerging information-divide in terms of 'cosmopolitans' and 'localists', with opposite extremes of informational capabilities and assets, seems appropriate. If, as according to Kanter, effective participation in the 'information age' (and therefore information technology-based learning) will be contingent on the 'three Cs' of connections, competence and content, to what lengths are programmes such as the Coleg Digidol Cymru addressing these issues and ensuring that its provision does not fall into two highly distinct groups of learners—the active participants and passive receivers of on-line 'learning'? There is growing evidence that motivation to learn via ICT goes far beyond mere issues of access to technology (Selwyn *et al.*, 2000, Lawless *et al.*, 2000). Nevertheless, from Newt Gringich's offhand comment that it may be worthwhile 'giving every poor person a laptop' (Resnich, 1997) to the Labour Government's current attempts to low-lease refurbished computers to those on low-incomes, drastically reducing the cost of Internet access and, indeed, achieving 'universal access by 2005' (Blair, 2000), political thinking about achieving equitable participation in on-line services has yet to move beyond issues of basic access to hardware. How this hardware can and cannot then be used is not, as yet, seen as a pressing issue for concern.

Finally, in policy terms, a sense of coherence to the Government's overall ICT drive has been, to date, lacking. Indeed, initiatives such as the Ufi, National Grid for Learning, ICT Learning Centres and People's Network have been developed largely in isolation of each other, with the exact boundaries, roles and responsibilities of each initiative yet to be clearly defined. This embryonic sense of development is best typified by the still uncertain relationship between the Coleg Digidol and the Ufi—with the Coleg Digidol's initial claims to be the Welsh node of the Ufi contrasting with the present existence of both a Welsh Ufi and the Coleg Digidol. Of course, unlike in countries such as the USA, the UK does not have the overarching framework of a 'National Information Infrastructure' policy to lend this element of 'joined-up' thinking to these national ICT-led initiatives. This is undoubtedly exacerbated by the number of government and quasi-government bodies currently involved in ICT policy implementation, ranging from the government departments of Education and

Employment, Trade and Industry and Culture, Media and Sport to the New Opportunities Fund and private actors such as the BBC and S4C. Yet, a more centralised framework to such policy-making could be argued to be imperative if all are to flourish and achieve their overall aim of establishing New Labour's ICT-based learning age.

Of course, these rather pessimistic conclusions must be tempered by the realisation that it is only *half-term*. It must be emphasised that at this point in time, the UfI and its associated initiatives is only just becoming fully operational. The chief innovation of Coleg Digidol, for example, the provision of digital broadcasts, has yet to commence. One of its chief concerns at the moment is establishing infrastructure and building up relationships with sponsors. However, this article suggests some problems and issues that need to be explored if it is to be successful in its own terms. Technical problems (of broadcast to remote areas) are being solved, and valuable content in terms of learning materials is likely to expand at a similar pace to the technology. Where we need to try harder is, as in all previous attempts, in the interface between provision and the identities of the potential learners. A policy of targets, accreditation and technology is unlikely to be sufficient.

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NOTES

- [1] The occupational class categories used here are, of necessity, those of the NIACE survey as used by MORI. Categories A and B represent the service class of professionals, associate professionals and managers, C1 and C2 represent non-manual and skilled manual respectively, and categories D and E represent part- and unskilled occupations.

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