

Critical Perspectives in E-learning

Paul Catherall

Web Developer at The North East Wales Institute of Higher Education
Author of *Delivering E-Learning for Information Services in Higher Education*
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E-learning in the UK post-statutory education sector

In recent years, the post-statutory UK education sectors have seen dramatic change in policy and focus, largely driven by the education policies of the New Labour government elected in 1997. This government's vision for education has cited a combination of widening access to post-statutory education and training and use of emerging technologies to achieve these aims. Reports such as the *Dearing Report* (1997), *The Learning Age* (1998) and *21st Century Skills Realising Our Potential* (2003) presented both industry and the education sectors with a number of goals focused on improving educational standards as a vehicle to strengthen the UK economy. The aims of this legislation can be summarised in the following extract from *21st Century Skills*:

There are four principles underlying our approach to improved publicly-funded training provision for adults. It should:

- Be led by the needs of employers and learners.
- Be shaped by the skill needs prioritised in each sector, region and locality.
- Make the best use of Information and Communications Technology (ICT) to deliver and assess learning.
- Give colleges and training providers maximum discretion to decide how best to respond to needs ... (p. 87)

These reports emphasised the importance of a demand-led approach within the education sectors and the development of links between education providers and industry – prompting a debate on the role of colleges and universities in the wider economy and implications for subject areas within a market-led approach to educational funding. Gibson, Newton and Dixon (1999) comment on this emerging agenda:

...sub-degree level courses and flexible structures of certification have become more common. Access to lifelong learning has increasingly been seen by policymakers at all levels as a social and economic priority.

Occurring around the same time as the New Labour educational policies, we have seen an acceleration in the role of Information and Communications Technology (ICT) in the life of post-statutory education institutions, including online library catalogues (OPACs), online journals and many more technologies that have become commonplace in educational life. The growth of the World Wide Web from the mid 1990s as an information and communications medium has seen the Web browser, typified by Microsoft Internet Explorer emerge as an almost universal gateway to digital content, arguably providing a popular and usable interface to the Internet. Additionally, increased adoption of the World Wide Web by home users has allowed this medium to deliver off-site access to many university systems.

Of course, ubiquitous access to educational systems is really an ideal, relying on a range of factors for success, including suitable internet/network access, IT literacy amongst the user base and effective systems themselves to name a few.

In addition to the general emergence of ICT and networked information systems in the education sectors, there have been significant developments regarding learning systems themselves. Early attempts at publishing Web based educational material included use of 'static' HTML pages authored using programs such as FrontPage, but this approach amongst academic staff has been largely replaced by use of the VLE or Virtual Learning Environment, a typically Web-based system which allows lecturers and other staff to upload documents and use communication tools without the need for technical knowledge. The prevalence of VLEs since the late 1990s has been accompanied and arguably exacerbated by government advocacy and widespread commentary within the IT, education, library and associated sectors; the emergence of the VLE has also seen a proliferation of terms such as 'e-learning', 'online learning' and 'networked learning' to designate study in a networked digital environment. Additionally, terms such as 'blended' or 'distributed learning' have been used to convey a combined use of traditional class-based teaching alongside e-learning systems. Market leaders amongst VLE software developers include Blackboard, Web CT, Learnwise and Firstclass, with the Blackboard system having the greatest share of the market with perhaps 70% of the post-statutory education market in 2006 (especially following its recent merger with Web CT). Additionally, a large number of open-source and not-for-profit VLE systems have emerged to compete with the big corporate developers, including Moodle and Bodington.

The role e-learning plays in expanding the distance learning market and delivery of overseas courses has been the subject of much recent debate, offering a range of communication tools and content publishing features to facilitate Web-based interaction and content dissemination for low-contact and distance learning students.

Thus, it can be seen that the VLE model of e-learning has been widely adopted across academic institutions, exacerbating the growth of the e-learning software industry and emergence of a new class of e-learning practitioners and technical experts to support this new medium. As a consequence of the rise of e-learning and VLEs, many educationalists have begun to seriously question what has become a moot feature of educational practice.

Critical perspective 1: the digital divide

The widespread adoption of e-learning and VLEs has largely been driven by the recommendations of educational technologists seeking to convey the benefits of e-learning as a valuable accessory to teaching and possible solution for distance-based education. It is often proffered that e-learning can offer solutions to the communication and content-delivery problems associated with part-time and distance-based teaching, in addition to providing repository-style resources and enhanced communication for traditional class-based tuition. However, it is important to consider the wide breadth of determinants in delivering an e-learning system from an operational perspective, including factors such as systems integrity and functionality, usability issues for students, staff and system administrators, organisational issues such as user access to resources, the training and support needs of students and staff and integration with other systems. Additionally, there are also academic determinants, including the organisation of learning resources, appropriate use of communication tools for tutor and student interaction, the design of educational resources themselves and academic support issues in a distance learning context.

From the perspective of staff and students confronted with the use of e-learning systems, we might consider the rising levels of ICT literacy and home internet use widely reported in the media. However, not all students, entering Further or Higher education will be school leavers, nor can it be assumed they are Internet users.

The recent marketing and policy campaigns of the New Labour government have sought to increase participation in education at all levels, with increased spending in Further Education for participation from non-traditional entrants, including work-based schemes such

as Learn Direct and the University for Industry. Universities have also been encouraged to adopt an inclusive approach to student recruitment, i.e. mature, disabled and ethnic minority entrants and individuals from backgrounds where university participation is uncommon. Recent statistics suggest an increase in the number of entrants matching these profiles, suggesting a trend towards mature, part-time study:

1,236,300 (66%) of all enrolments are full-time, an increase in numbers of 3% since 2000/01. The number of part-time enrolments also grew by 3% over the same period. (Office of National Statistics, 2003).

The demands on institutions to facilitate low-contact study are particularly pertinent in these circumstances and e-learning systems are often cited as a solution for this emerging trend in educational provision. However, we should consider the ICT literacy of this wider student context and the appropriateness of the VLE to facilitate these student profiles, many of whom may not have a prior knowledge of IT or the World Wide Web in their private or vocational lives. Cullen (2001) echoes this:

Where people in business or professional occupations acquire skills as part of their employment, manual workers and the unemployed are less likely to be exposed to such opportunities. Young people who do not go on to any form of tertiary education are equally disadvantaged (p.314).

Additionally, the VLE does rely on internet access and this is still not universally available to all members of the public. Despite the impact of the People's Network on public libraries, many individuals such as the disabled or elderly may be unable to use Web based resources for accessibility reasons. Additionally international students from developing countries may have no experience of Web browser software. It should also not be assumed that all school-leavers will be comfortable studying through the medium of the Web, with class-based instruction still the prevalent form of teaching in statutory education. Cullen (2001) comments:

A number of research and policy papers addressing the issue of the digital divide identify specific groups of people as being especially disadvantaged in their uptake of ICTs. These include: people on low incomes, people with few educational qualifications or with low literacy levels, the unemployed, elderly people, people in isolated or rural areas, people with disabilities, sole parents, women and girls. Because they are often already disadvantaged in terms of education, income and health status... (p.312).

It can therefore be seen that reliance on ICT skills in an increasingly diverse student population raises a number of usability and accessibility concerns for the adoption of e-learning systems. Whilst

the VLE offers a substantially less complex interface to information than say, older UNIX or Terminal based systems, there are still fundamental issues related to computing culture and usage across the spectrum of potential college and university participants.

Critical perspective 2: the standards debate

E-learning systems, particularly VLEs are the product of a new and growing industry based around the education, training and business sectors. The development of e-learning systems has been traditionally seen in context to other proprietary commercial software, with system-specific formats and data which functioned only within the host system. However, common standards within VLE systems have recently emerged (e.g. SCORM, IMS), largely under the coordination of CETIS (Centre For Educational Technology Interoperability Standards). These standards are intended to allow for the development of 'learning objects', stand-alone educational resources which can be developed and re-used within a range of compatible software applications, VLEs etc.

The development of transferable learning objects for VLEs and other systems has given credibility to the efforts of the e-learning industry at developing a more open framework, encouraging the sharing of learning objects and development of resource repositories across academic institutions. However, in reality, the development of these standards has been problematic, with limited inter-compatibility of standards-based objects within some VLEs and reliance on often complex XML-based applications to create learning resources.

There are also concerns that the learning object concept is simply an excuse to develop another layer of commercial activity on top of the VLE, with learning objects for sale from VLE vendors and third party companies. Furthermore, this approach to e-learning has prompted some academic staff to contemplate a tutor-less future for education, where courses are composed of stock learning objects, delivered via the VLE to distance learners with minimal staffing overheads.

Another issue of concern for many educationalists is the lack of interoperability between distinct VLE systems, where most systems are still designed in a proprietary context, lacking the ability to download a specific module or online course and re-use this data in an alternative VLE. This aspect has led to the accusation that institutions are locking themselves into a perpetual contract with VLE developers/suppliers with increasing dependence on the VLE

company's support and maintenance. More recently, the biggest VLE company, Blackboard has been accused of creating a monopoly in the e-learning software industry by patenting aspects of its systems and taking legal action against a rival company, Desire2Learn.

Clearly, the issues of poor interoperability and compatibility between VLE systems is a problem for the re-use of educational content, limiting the ability of academic staff to export content between systems. The dependence of institutions on proprietary VLE systems also indicates a decline in ownership and control of the educational process by institutions themselves and emergence of the VLE companies as major stakeholders in the educational sector.

Critical perspective 3: academic objections to e-learning

The profession of teaching has evolved from ancient times (e.g. the classical Greek schools of dialectics), and is informed by a vast body of literature in theory, research and advocacy of teaching and learning. For many academic staff, e-learning represents a fundamental break with traditional teaching practices and a medium at odds with established theories of pedagogy.

For many educationalists, e-learning is a technology in the earliest stages of development as a teaching method, with delivery of online courses representing an experimental experience for many staff and students. Some educators have questioned the credibility of education in this context and also if it is justifiable to charge for courses delivered via e-learning.

Other objections include the increased support demands of e-learning systems, including system administration functions such as online registration on virtual courses. Additionally, academic staff often have concerns that they are not adequately trained in the use of systems beyond superficial procedures (such as uploading files), disregarding a wide range of complex relationships between tutor, student and system, including interaction with students through asynchronous tools (e.g. discussion boards, email) and synchronous 'chat' and whiteboard tools. The interactive, social and mentoring relationship between tutors and students has also been cited as a casualty of e-learning where increasing use of technology rather than class-based methods inevitably exacerbates low contact between teacher and student, having obvious implications for the student experience, the loss of learning insights, non-visual cues

and other social aspects of traditional class based study. Berge (1998) comments on a study of academic staff implementing e-learning in the USA:

Impediments to online teaching and learning can be situational, epistemological, philosophical, psychological, pedagogical, technical, social, and/or cultural...

Other criticisms include the lack of control over academic content by educators, where systems are invariably managed by IT professionals and administrators. Academics can also feel institutional policy is forcing their adoption of systems. Noble (1998) considers the imposition of institutional policy on academic practice:

Once faculty and courses go online, administrators gain much greater direct control over faculty performance and course content than ever before and the potential for administrative scrutiny, supervision, regimentation, discipline and even censorship increase dramatically.

Workload issues are also cited by academic staff as a cause of concern, including the design and development of digital resources in Word, PowerPoint or other formats. Clearly some staff may feel less comfortable developing resources for VLEs, i.e. whose teaching methods rely on face to face interaction or hardcopy texts.

The availability of email, discussion boards, messaging tools etc. can also increase the expectations of students regarding tutor interaction, leading some academics to consider their role has become a twenty-four hour one. Robert Newton (2003) reports the outcome of research conducted as part of a project funded by the Learning and Technology Support Network - Information and Computing Studies Group (LTSN-ICS):

Web-based teaching of distance learning students requires almost twice as much time as teaching on-campus students...

Furthermore, the deployment of e-learning as a quick-fix solution for distance learning and delivery of courses overseas can put pressures on academic staff who may be unprepared for the organisational and technical challenges of teaching in this context.

Issues of security and plagiarism are also important considerations when considering online tests, exams and other sensitive activities via the VLE. Whilst some systems provide a range of security features for these purposes, there are still questions on the integrity of results from online assessment where exams are taken on a desktop computer rather than in a traditional exam setting.

Additionally, academic staff may question the strategic leadership of e-learning and the relationship of VLE and other system use within the formal teaching strategy of the institute. Clearly, these systems can only function effectively when deployed on a structured basis with appropriate integration between the registry, school administration, technical services and other departments, reflecting issues of user account administration, systems integration and day to day user support. The imposition of e-learning systems on staff in an *ad hoc* manner, without clear vision or consideration for wider institutional planning and administration can only lead to technical difficulties and misery for academic staff and students. On the implementation of e-learning, Noble (1998) comments on the lack of clear strategy in some e-learning projects, where e-learning implementation is itself the aim rather than educational strategy:

Last but not least, behind this effort are the ubiquitous technozealots who simply view computers as the panacea for everything, because they like to play with them. With the avid encouragement of their private sector and university patrons, they forge ahead, without support for their pedagogical claims about the alleged enhancement of education, without any real evidence of productivity improvement, and without any effective demand from either students or teachers.

Finally, staff may feel that whilst traditional achievements in research and teaching excellence are rewarded, the use of e-learning may be less visible as a teaching activity and thus attract fewer rewards in terms of promotions, awards etc.

It must be mentioned however that the experience of some academic staff can be positive when using e-learning to support their teaching, improving tutor-student communication and giving the staff themselves the ability to upload documentation for student access at home or other locations through the medium of the Web, whereas earlier Web publishing required significant skill to author and upload HTML documents on a Web server. However, it is clear that e-learning represents significant justifiable concerns for the academic sector.

Critical perspectives 4: the commercialization of academia

We have already discussed the commercial background to the e-learning industry and its relationship with academic providers. There is arguably a new educational industry developing around the e-learning product which ostensibly facilitates education, solving many of the problems associated with low contact study. However, it can be seen that in many ways, this emerging industry is facilitating a

fundamental shift towards an entirely new medium of instructional design, based on the VLE model. Pailing (2002) comments:

...the industry has suffered from a lot of hype and suppliers and customers need to look at e-learning in perspective. It is hardly surprising that most of the predictions about the e-learning market come out of the USA.

In 'Digital Diploma Mills: The Automation of Higher Education' (1998), David Noble presents a theory of the 'commoditization' of learning, describing the emerging relationship between the education sectors, government and technology industries in the USA, reflecting similar developments in the UK and Europe:

For the universities are not simply undergoing a technological transformation. Beneath that change, and camouflaged by it, lies another: the commercialization of higher education. For here as elsewhere technology is but a vehicle and a disarming disguise.

Noble links the growth of the e-learning industry with increasing commercialisation (commoditization) of post-statutory education, citing the growth of digital industries as a direct result of the collapse of older heavy industries in the 1980s:

The foremost promoters of this transformation are rather the vendors of the network hardware, software, and "content" - Apple, IBM, Bell, the cable companies, Microsoft, and the edutainment and publishing companies Disney, Simon and Schuster, Prentice-Hall, et al - who view education as a market for their wares, a market estimated by the Lehman Brothers investment firm potentially to be worth several hundred billion dollars (Noble 1998).

In this sense, we may be witnessing a transformation of education from the traditional taught approach to a commodity-based instruction model, where courses can be run through digital systems without the imposition of experienced academic staff. Noble suggests these changes are linked directly to government policy (in the US), which has encouraged patenting of intellectual knowledge to create new corporate markets in the face of failing heavy industries. Thus, we see a focus on the information industry by government through the university system:

As patent holding companies, the universities set about at once to codify their intellectual property policies, develop the infrastructure for the conduct of commercially-viable research, cultivate their corporate ties, and create the mechanisms for marketing their new commodity, exclusive licenses to their patents. The result of this first phase of university commoditization was a wholesale reallocation of university resources toward its research function at the expense of its educational function (Noble 1998).

The widespread adoption of e-learning systems can therefore be seen to facilitate a new commercial market - this is part of the growing information industry which has replaced traditional industries in Western nations and which is ultimately bound to research and the patent system (to exploit intellectual property rights for product deployment in the global marketplace).

These developments reflect the concern of academic staff in regard to the threat of automated e-learning systems, using self-directed 'learning objects' and other interactive content to replace traditional academic staff. This systemification of learning is suggested as an inevitable outcome for education by Halket (2002):

There is no need for the creation of courses by those who did not create them before. There is no need for any new institutions. There is every need for existing institutions and existing educators to rise to the new challenge and have the best possible tools put at their disposal.

The provision of training in an e-learning context, with minimal instructor input is already being deployed by some training companies such as Thompson NETg, with contracts for training in the business and public sectors in the USA and UK. Nixon and Helms (2002) have indicated the spread of e-learning in some government and public bodies:

Corporate universities are not new, but have experienced tremendous growth during the last ten years. Predictions are that corporate universities will outnumber traditional colleges and universities within the next ten years ... Corporate universities exist in government settings and include the Internal Revenue Service, the City of Tempe's Learning Center and NASA's Marshall Space Flight Center.

Noble (1998) questions the motives of companies having access to private or sensitive data, suggesting that this data has been abused in the past:

In Canada, for example, universities have been given royalty-free licenses to Virtual U software in return for providing data on its use to the vendors.

The role of e-learning, cited as a progressive solution to distance learning has therefore prompted concerns for the commoditization of post-statutory education. It remains to be seen if e-learning will diminish the role of academic practitioners, with the expansion of e-training in competition with traditional post-statutory education, or if e-learning is just another technological craze which settles into the academic landscape much as email, online journals, the Web and other technologies that have come before.

Critical perspectives 5: Other organisational and deployment challenges

The role of administrative structures in developing, maintaining and supporting e-learning has already been mentioned in this paper, but perhaps it is worth considering the organisational challenges of e-learning, from the wider perspective of technical staff, academics, students and other users.

The initial selection and delivery of an e-learning system is largely carried out by administrative departments. Academic staff may be involved in consultation and pilot projects, but with time constraints and limited awareness of the VLE market, the academic staff member would be hard pressed to offer a full critique of such systems. Often, the initial selection of a VLE is based on a combination of the expertise of IT or Information Professional staff, wider reading, observation of comparative systems, vendor marketing and other sources of sector advocacy. However, since the VLE project is often led by non-academic staff, it is questionable how much pedagogical input will inform the choice of system.

Significant obstacles face the various stakeholders (users, administrators, moderators etc.) of the e-learning system. We have initial design questions of how to present the VLE system, including interface design and possibly integration within the wider institutional 'portal' or Web based services. There are also issues of user management, involving user account creation, integration with user directory systems (e.g. allowing single sign on) and access to virtual courses which appear in parallel to actual programmes. Indeed this latter aspect presents the question of how effectively the VLE course structure can be presented - clearly the system may appear confusing if virtual courses are named differently than actual courses. On the other hand, it may be necessary to develop these sites according to the wishes of academic staff, reflecting the way these teachers wish to operate in the online context. Clearly these organisational issues are all important for the success or failure of the e-learning system.

The development of support services around the VLE involves considerable staffing, usually involving the appointment of teams dealing with VLE delivery. In some cases, departments are created to support academic staff in the pedagogic aspects of course delivery and management, whilst smaller institutions may use existing IT or Information Services staff to undertake this role. However, smaller organisations are likely to place much of the responsibility for system administration on existing staff, e.g. school

administrators and academic staff, increasing their workloads in the process.

Conclusion

We have examined a range of critical positions on e-learning and perhaps we should mention some of the counter-arguments to these criticisms. Increased provision of support staff and additional training can offset some of the concerns for work overload by existing staff. Additionally, the imposition of new e-learning responsibilities can arguably enrich the role of some administrative staff. A wide range of guidelines for the deployment and delivery of e-learning (often based on research) have been disseminated within the education sectors by organisations such as JISC (the Joint Information Systems Committee).

The objections to fundamental e-learning concepts and the systemisation of education however cannot easily be dismissed. For some academic staff, e-learning clearly represents a technology to enhance communication with low-contact students, in distance, part time and work-based education. However, others may remain suspicious of e-learning trends and the wider UK agenda.

It is perhaps also necessary to consider some of the ethical and polemic issues surrounding the use of e-learning. It should be considered that the systemification of learning is invariably motivated by the need to develop and enhance the labour market within our wider economic system, thereby perpetuating the capitalist ethic of commercial profit. It is this focus on the labour market and underlying economic process which appears to drive the widening participation and lifelong learning agendas, rather than the perceived ethical justification for improvement in educational standards often cited in policy.

The emergence of a training-focused agenda driven by government and implemented by educational providers struggling to survive in a market-led environment (characterised by increasing private sector competition for contracts, grants and student fees) has led to a reduction in funding for traditional subjects and an increasing focus on vocational courses. The essentially political and economic agenda of widening access to education is facilitating the transformation of educational experience from the richer opportunities of traditional provision, to a narrow, work-focused training system. This is evident from the growth of GNVO and vocational-based subjects in the secondary school sector. E-learning it seems, is playing a key

role in this training agenda through the systemification of learning itself. These concepts are developed by Glenn Rikowski in his work *The Battle in Seattle Its Significance for Education* (2001). Indeed, the entire concept of e-learning and lifelong learning suggests an onerous demand on the citizen to maintain their own personal knowledge and skills in the economic system, Rikowski (2001) comments on the perpetual responsibility for lifelong learning placed on the individual:

Concretely, the infinite social drive to enhance labour-power quality expresses itself in a myriad of education policies and outlooks; 'raising standards' (to ever higher levels); school improvements (you can *always* improve); attaining better 'human capital' than this or that competitor (with no *end* to the process possible) (p.35).

The transformation of education from a process of enrichment and wider cultural experience to a systemic training process is reflected in the seminal work of Karl Marx, *Das Kapital* (Capital) where Marx cites the importance of intellectual labour as comparative with manual labour. In the capitalist system, the intellectual labour of the educator simply becomes a component of the 'teaching factory', the intellectual labour of the schoolmaster is exploited and overworked in an effort to produce the next generation of workers, where the surplus-labour of schoolmaster and pupils is the basis of profit derived by the economic system:

Capitalist production is not merely the production of commodities, it is essentially the production of surplus-value... If we may take an example from outside the sphere of production of material objects, a schoolmaster is a productive labourer, when, in addition to belabouring the heads of his scholars, he works like a horse to enrich the school proprietor. That the latter has laid out his capital in a teaching factory, instead of in a sausage factory, does not alter the relation (V.XVI.3).

Further discussion on the status of intellectual labour from a Marxist perspective is available in Ruth Rikowski's detailed analysis of recent World Trade Organisation policies in *Globalisation, Information and Libraries: The implications of the World Trade Organisation's GATS and TRIPS Agreements* (Chandos Publishing, 2005).

In conclusion, the ethical, operational and pedagogical objections to e-learning are compelling, but this has not stopped the widespread adoption of this medium across the Further and Higher education sectors, suggesting that e-learning is more than a passing phase in educational technology and will remain a major feature of the modern educational context. It is hoped this paper will provoke thought and discussion on the present and future role of e-learning,

a phenomenon which promises much but also clearly has the potential to facilitate radical change within our educational systems.

Paul Catherall is a Web Developer at the North East Wales Institute of Higher Education, and a postgraduate research student with the Department of Information and Communications at Manchester Metropolitan University. He is also the author of Delivering E-Learning for Information Services in Higher Education (see <http://draigweb.co.uk>).

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