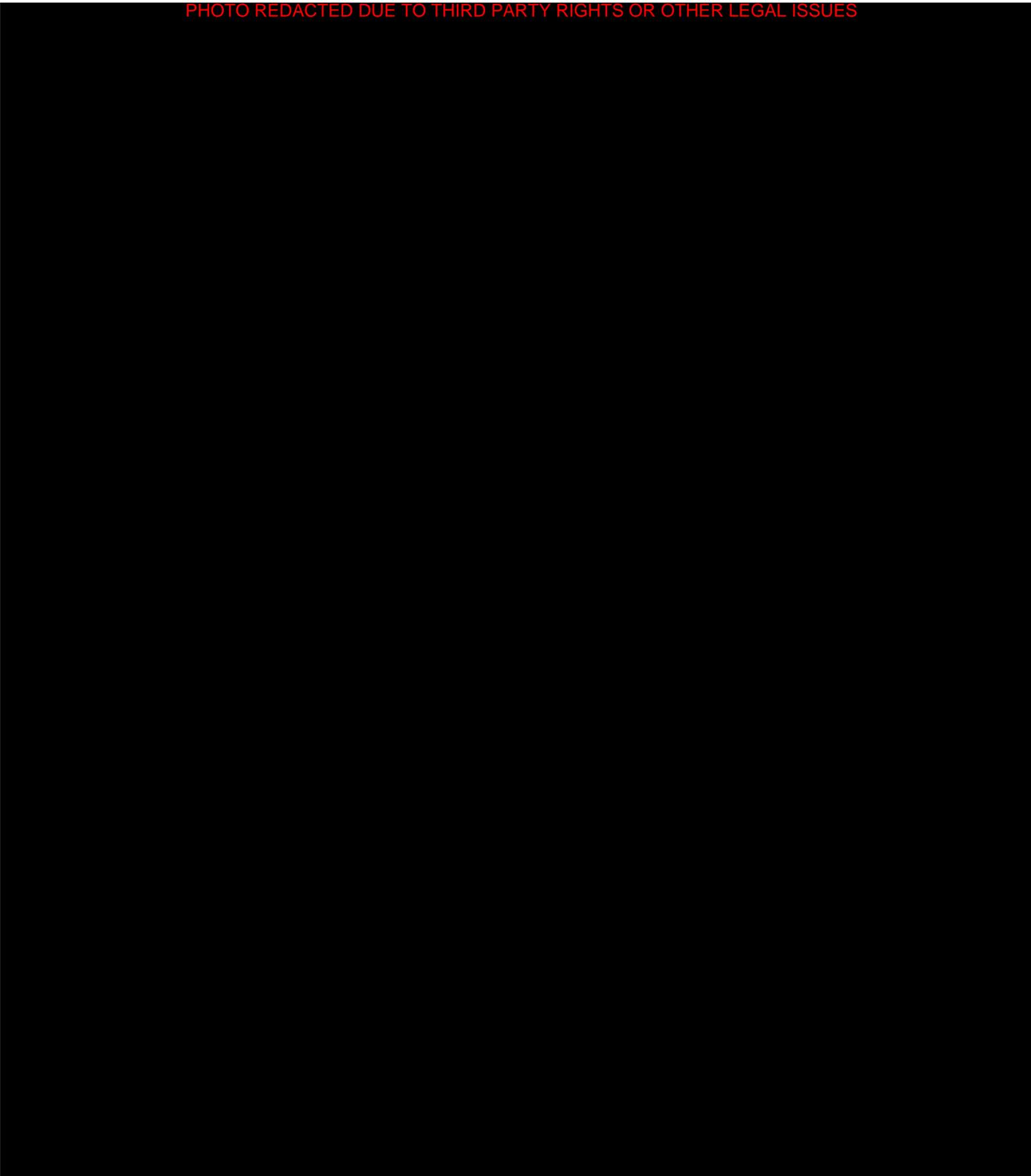


Report of the  
Learning and Skills Council's  
Distributed and Electronic Learning Group

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## Chairman's Foreword

This is the report of the Distributed and Electronic Learning Group (DELG) to the Learning and Skills Council of England (LSC). The report represents our analysis of the implications, challenges and opportunities occasioned by the growing use of information and communications technologies (ICT) in our society and of the associated expansion of e-learning. The report also includes a series of recommendations to the LSC on how best to give leadership and shape to these developments. Our proposals are deliberately made in order that LSC might lend effective support to e-learners in the post-16 sector and secure the highest possible quality provision of e-learning for them, wherever they choose to pursue their studies.

We are living in an era that is becoming increasingly information-rich and in societies that are more and more driven by the systematic application and exploitation of knowledge. Much of this growing plethora of data is now being captured, stored, transmitted and distributed in digital form. In order to cope with the scope of these changes, while simultaneously driving them forward, we are witnessing wholesale revolutions in communications, information technology and the computerised deployment of know-how.

In this developing world, people are increasingly likely to encounter digitised information in a wide range of environments: at work, in commerce and banking, in education, in leisure pursuits and shopping, in healthcare and public administration, in politics and governance, at home and in the community. In all of these contexts and circumstances, people will want to be able to access, navigate and make use of these rich and potentially bewildering sources of data according to their own needs and priorities. More and more, they will need to be able to

reach and apply information and knowledge using computers, the internet, CD-ROM, 'streamed' video, web-casts, mobile telephony and digital broadcasting.

As all of these forms of communication proliferate and become more commonplace, citizens will need to be able to exercise choices for themselves and be in a position to take full advantage of these new opportunities and challenges. They will also need the confidence, skills, support, facilities and resources to do so. Possessing 'e-skills', and being at ease with computerisation and the everyday use of ICT are fast becoming additional key competencies for all of our citizens, and will increasingly become so. Already, many young people are growing up familiar with digital gadgetry and computerised processes and are skillful in their application, as a normal part of their lives. These skills need to be harnessed, developed and consolidated through a rich and rigorous architecture of e-learning opportunities, both formal and informal. For young people who have not yet acquired these abilities, there is an urgent need to make such opportunities

systematically available. For adults of all ages, both those of working age and senior citizens, from all kinds of backgrounds, e-learning arrangements of the highest calibre should be on hand to support their lives, extend their choices, enrich their competencies and strengthen their autonomy at home, at work and in the community.

The duties and responsibilities that have been given to the LSC, both in statute and in the detailed guidance it has received from the Secretary of State for Education and Skills, place it at the heart of these exciting and challenging developments in e-learning. The Council should now assume informed leadership, show clarity of purpose and demonstrate decisiveness of action in shaping the future of post-16 e-learning in this country. That is the burden of this report.

Throughout the work of the DELG, a number of themes emerged which ought to inform the future thinking of the LSC concerning distributed and electronic learning. These themes include:

- the need to shift the perspective from technology and systems to a focus on the requirements of the learner;
- the need for the LSC to give attention to support for, investment in, and planning to facilitate effective e-learning provision;
- the need to understand where distributed and e-learning can make its greatest contribution, and to target effort and resources there;
- the need for the LSC to set standards to rationalise the provision of e-learning facilities, in place of the sometimes almost 'accidental' nature of current e-learning provision;
- the need to invest in the workforce that provides teaching and learning support throughout the sector; and
- the need to establish mechanisms for ensuring that the current progress and momentum in e-learning development are sustained.

This important work can only continue with the help and guidance of key strategic allies, including those involved in related activities, for example:

- the Department for Education and Skills (DfES);
- the Joint Information Systems Committee;
- the National Grid for Learning;

- the National Learning Network;
- Ufi Limited and its distributed network; and
- UK online centres.

Our work has indicated to its members the vital nature of e-learning developments throughout the learning and skills community. Energetic partnership working will ensure that the impressive achievements to date – in some cases without doubt world-leading – are given sufficient breathing room and sustenance to bear fruit to the benefit of all.

I wish to thank all the DELG members for their enthusiastic and committed support to our work, together with those many organisations and individuals who gave freely of their time to present evidence that was so helpful to us in framing our recommendations. I offer my personal thanks to the officers, Keith Duckitt and Paul Crisp of the LSC, and John Brown and Nina Stone of the British Educational Communications and Technology Agency (Becta), whose energy and drive made the work of the DELG possible in a relatively short timeframe.



Professor Bob Fryer, Chairman of the DELG  
Chief Executive and Vice-Chancellor,  
NHS University (NHSU).

## Section 1

# Key Issues and Main Recommendations

### Key Issues

1

Britain, in common with most of the developed world, is fast becoming a knowledge economy. A growing proportion of that knowledge is stored and distributed electronically. In many different spheres of contemporary life, information and communications are increasingly being held and presented in electronic and digital forms, and people need to be able to access these and use them in their own interests. At work, many employers are making use of databases for sales, production and performance; they are putting their staff and other records into computerised forms, and an increasing number make electronic learning available. Government has declared its intention to move towards e-government in respect of pensions, social security and political participation. Broadcasters are increasingly making programmes and information supplementary to them available on the World Wide Web. In the NHS, progress is being made with electronic patient records. On the internet, people have increasing opportunities for ordering and buying goods and services and for making choices about leisure pursuits and lifestyle matters generally. Over time, most if not all citizens will need the skills (e-skills) to access and use that information if they are to function effectively socially and economically, at home as well as at work. They also need competence in the use of the ICT tools through which that information is accessed.

2

In our view, these new competencies are fast taking on the characteristics of essential or core skills for the 21st century, increasingly on a par with basic literacy and numeracy. We believe that without these new skills and aptitudes, young people and adults will face a growing, and bleak likelihood of exclusion and disadvantage in the future at work, at home and in the community. Lacking these new skills, people will not be able to function fully in our

society, nor be properly equipped to make choices and to benefit from the changes that are already in train in capturing, organising, storing and distributing knowledge and information in electronic and digital forms. Hence, we believe that developing people's confidence, skills and competence to handle and apply this rapidly growing volume of electronic information, and successfully to navigate this increasing range of electronic environments, represents a major challenge to the educational systems in this country, especially in post-16 learning. We further believe that the LSC should now take a lead in these matters, influencing and shaping developments in e-learning, in line with its overall responsibilities, policies and strategic priorities.

3

The LSC has a vision that, by 2010, 'young people and adults in England will have knowledge and productive skills matching the best in the world'. This is supported by shorter-term targets for increasing the number of young people and adults participating in education, learning and training, raising their achievement, and raising the quality of education and training provision. We saw that the number of people participating in structured learning post-16 had stayed largely static in recent times. We concluded that significant growth would not be achieved by sticking to the old methods. New approaches provide small 'chunks' of learning, delivered using high-quality, well-designed materials, which make effective use of sound and pictures, as well as text. They are available to the learner at times and in places – such as the home or workplace – convenient to them. Learners can be well supported by a mixture of staff with an appropriate spread of expertise, and by opportunities for learners to work with each other. These methods should be combined with other more traditional approaches in the right blend, to meet the needs of the individual learner.

4

These distributed and electronic learning (DEL) opportunities are not yet widespread, but there are enough examples to persuade us that the DEL approach is both feasible and essential. There are many initiatives, projects and providers of varying quality and effectiveness. The time has come to pull them together within a broad national strategic framework, but with detailed plans at local level.

## 1

The LSC is well placed to achieve this with its 47 local LSCs working with a range of partners. These include providers such as FE colleges, Ufi Limited with its network of local learndirect hubs, and other government departments and agencies such as the DfES, Becta and the Adult Basic Skills Strategy Unit.

5

It is important in this context that we stress, and that both the LSC and the whole of the post-16 learning community understands, that we do not see e-learning as a panacea for all of the challenges facing education and change in this sector. Nor do we envisage that e-learning should be seen as a substitute for, or simple replacement of, existing and often well-trying forms of learning and teaching. Of course, they will continue to have a vital role to play. Our vision is rather one of learning opportunities that can be powerfully enriched, extended and varied by the judicious, expert and high-quality deployment of e-learning. Thus, e-learning should be seen as a developing and increasingly useful addition to the existing repertoire of learning and teaching provision at post-16 levels, provided always that it is well planned and supported and appropriate for the needs and circumstances of the learners in question. Lurching headlong into e-learning, driven more by sheer enthusiasm than clarity of purpose and thorough planning, would, in our opinion, risk far more harm than good and could prove costly in both financial and educational terms. So, we advocate a well-balanced, rigorous, firmly grounded approach, purposefully and professionally led by the LSC.

6

In this regard, it is fashionable to talk of the value of so-called 'blended' learning, recognising the need to deploy e-learning as just one element in a portfolio of learning techniques and experiences. We have more to say on this issue and in its support later in our report. But, crucially, blended learning approaches accept that e-learning itself is likely to thrive best and be most useful where it encompasses some elements of face to face contact and opportunities for informal exchanges with tutors and among fellow learners. These well-known 'sociabilities' of learning serve to strengthen, reinforce and support more formal and structured forms of learning, including e-learning.

## Our Approach

7

Throughout our inquiry, and in the course of preparing our report, we have been guided by a number of assumptions and these have to be borne in mind in reading this report. First, we have focused our concerns on what we perceive to be the responsibilities and potential for leadership and action of the LSC and the 47 local LSCs. Hence, we have deliberately resisted making recommendations that touch more on the domains and responsibilities of the Department for Education and Skills, Government generally, or other independent bodies. From time to time, we make proposals to the LSC where we believe that it could, and should, influence the thinking or policies of Government and those other bodies, and work collaboratively with them to achieve the LSC's own ends and in ways that will benefit post-16 learners. Second, although our remit has been with both distributed and electronic learning, most of our analysis and recommendations centre on the tasks that require attention in respect of e-learning, for reasons that will become clear in Section Two, where we tackle the vexed issue of terminology.

Third, we have sought throughout to avoid exaggeration in respect of the growing importance of e-learning.

Our approach is based on an understanding that the opportunities and challenges of this approach to learning need to be located firmly within the broader context of a rich array of forms of teaching and learning, modes of engagement and styles of learning.

Finally, it is this approach that has led us always to seek to put the learner and learning clearly at the centre of our concerns. We commend this approach to the LSC.

8

It is clear to us that the LSC could not achieve its vision without a major contribution from DEL; that it needs to do so within the context of a strategic framework; and that it needs to address the three elements of the DfES' e-learning strategy, namely to:

- create an accessible infrastructure which makes ICT universally available to learners;
- make ICT integral to our learning processes and to stimulate the development and acceptance of new ways of learning; and

- create, implement and support a dynamic framework for ICT skills and a corresponding framework for teachers.

9

In order to achieve these three goals, our own approach – and one which we strongly advocate to the LSC – is based upon 11 main pillars or principles. They are that the LSC's approach to e-learning should:

- a be based firmly upon a clear, simple and achievable strategic framework, to be implemented step by step;
- b be explicitly reflected in every other strategic initiative taken forward by the LSC, both nationally and locally;
- c begin with an unequivocal focus upon the needs of the learner and of supporting effective learning;
- d regard the proper and professional deployment of technological learning environments as one means of effectively meeting learners' needs;
- e recognise that e-learning can play a role in promoting social inclusion and should be designed to secure inclusive learning and to work in support of equity and diversity in post-16 learning;
- f determine that compliance with agreed national standards should be central to the design and application of courseware, technology platforms, e-learning software, interoperability and learner-management systems;
- g emphasise that effective and high-quality learner support arrangements are an absolute prerequisite of the successful application of e-learning;
- h give high priority to supporting and overseeing programmes of systematic staff training and development for post-16 sector staff in e-learning, including the establishment of appropriate new posts designed to support e-learners;
- i emphasise, from the outset of planning and deployment of e-learning, the application of high standards, quality assurance and continuous quality improvement and sustainability;
- j draw on knowledge of what works, and target resources on those types of provision or learners where DEL is most effective; and
- k accept that well-managed collaboration and co-ordination are now essential in a field manifesting an increasingly diverse and potentially bewildering range of initiatives and applications, and that the LSC should give a lead in securing partnership and clarification.

## Summary of Main Recommendations

10

We have tried to avoid 'recommendation overload' and to limit ourselves to proposing action where we think it important and within the LSC's powers. There is, nevertheless, quite a lot to be done, much of it in collaboration with others. The recommendations are best understood by reading the sections in which the recommendations and the arguments for them appear. For the reader's convenience we have brought all the recommendations together in Section Eight and have summarised the main points here:

### Vision and strategy

- Well-planned, high-quality, expertly supported e-learning will play an increasingly important role in enriching and extending post-16 learning provision, making a major contribution to the delivery of the LSC's targets.
- The LSC should establish a national strategic framework for distributed and electronic learning, based on 11 principles.
- Local LSCs, as part of their normal planning process, should integrate e-learning and ICT into local strategies specific to their areas.
- The LSC's workforce development strategy should specifically identify the contribution to be made by e-learning.
- To deliver a coherent pattern of provision, locally and nationally, the LSC's responsibilities should include the planning of learning delivery by UK online centres.

### The learner

- The LSC, collaborating with other funding councils and the DfES, should invest in a programme of e-learning research focusing on pedagogy and cost-effectiveness.
- The LSC should work with others to accelerate the development of e-learning approaches which address learners' Skills for Life needs.
- Within its planning role, the LSC should urgently address the inequalities in the e-learning infrastructure and provision in parts of the learning and skills sector.

## 1

**Learning provision**

- The LSC, with the DfES, should study the feasibility of developing a comprehensive online resource for the post-16 sector.
- The LSC, working with others, should establish common specifications, materials development and interoperability standards, which should underpin public funding of content development.
- The LSC should promote the adoption of best practice accessibility standards in e-learning materials and environments and should develop supporting guidance.
- The LSC should explore with Ufi Limited, and with the DfES' Director of Teaching and Learning, how best to achieve maximum benefit from the investment in learndirect materials, in making them available to other parts of the post-16 sector.

**The management of learning**

- The LSC should work with others to harmonise electronic systems to reduce bureaucracy for learners and providers, and improve the ease of use and quality of management information.
- The LSC should support the establishment of a unique personal learner identifier.

**Supporting learners**

- The LSC should ensure that its approach to funding, accrediting and quality assuring e-learning provision recognises the need for effective learner support.
- The LSC should work with the appropriate sector skills council and others in developing appropriate professional development programmes for tutors and other learning support staff.
- The LSC should support a substantial programme of professional development for staff involved in leadership, management, delivery and support of e-learning.

**Quality, assessment and accreditation**

- The LSC should collaborate with others in extending online assessment.
- The LSC should work closely with the Qualifications and Curriculum Authority (QCA) and awarding bodies to implement unitisation of qualifications.
- The LSC should apply minimum standards of e-learning facilities and resources in initial provider assessment and ongoing provider review.
- The LSC should develop with others a professional development programme for inspectors and other quality assurance personnel to familiarise them with DEL.

**Funding**

- The LSC's formula funding methodology should not treat DEL differently from other learning approaches.
- The LSC's funding system should allow for non-formula funding streams, managed by local LSCs, to build capacity, target resources where most effective, encourage e-learning development and fill gaps.

**11**

These recommendations align appropriately with DfES aims for e-learning and the Council's own strategic targets. They are also consonant with the recommendations of the Post-16 E-learning Task Force.

**12**

Finally, in almost every instance, our recommendations call for partnership action with other agencies and bodies that are active in this field.

## Section 2

# Mission and Context

13

The Government has set the LSC ambitious long-term goals and a range of medium-term targets. The LSC Corporate Plan to 2004 sets out its vision:

By 2010, young people and adults in England will have knowledge and productive skills matching the best in the world.

(<http://www.lsc.gov.uk/corporateplan.cfm>).

14

Building on that statement, the Performance and Innovation Unit report of November 2001 aims that, by the same year, the UK will be a society where:

Government, employers and individuals actively engage in skills development to deliver sustainable economic success for all.

15

The LSC's medium-term objectives are set out in its Corporate Plan to 2004. They include targets for raising the educational achievements of both young people and adults, extending participation in education and training, and improving the quality of learner experiences.

16

Achieving these goals and targets is vital to the economic and social well-being of the country. We consider that a much wider application of e-learning, in particular throughout the post-16 sector, will greatly assist the LSC in achieving its medium-term targets, as well as benefiting individual learners. Unless there is early and concerted action in support of e-learning, we believe that the LSC will fall short of its longer-term goals within the 2010 planning horizon.

17

The LSC came into being in April 2001. It was created by Parliament to bring greater coherence into post-16 education in England and to achieve five key objectives:

a to raise participation and achievement by young people;

- b to increase demand for learning by adults and equalise opportunities through better access to learning;
- c to raise skill levels for national competitiveness;
- d to improve the quality of education and training delivery;
- e to improve effectiveness and efficiency.

18

In his guidance to the LSC, David Blunkett (the Secretary of State for Education and Skills at that time) made his view clear that distributed and e-learning had an important part to play in achieving the Council's objectives. In a key section (paragraph 50) of the Remit Letter, the Secretary of State said: 'The Council starts its work at a time when there is rapid expansion of online learning provision, particularly through the Ufi Limited, and the network of learning centres. The Council will be responsible for a co-ordinated strategy for securing delivery of this new form of learning at local, regional and national level. It must work closely with the Ufi Limited to achieve this, and will need to work with educational broadcasters to secure their effective support for the development of online learning opportunities.'

19

One of the Council's early actions was to establish this group to help it decide how to develop the role of distributed and e-learning. The DELG was chaired by a Council member, but consisted largely of knowledgeable people from the worlds of education, business, technology and the media. Membership and terms of reference are included in Annexes A and B to this report.

20

Our overall remit was to advise the Council on all matters concerning the development, operation of, and support for DEL in pursuit of the Council's agreed objectives and priorities. In the shorter term, we were charged with producing guidance to the Council on how it might establish the co-ordinated strategy the Secretary of State was seeking, and with helping the Council decide how DEL should be accommodated in the new funding system. We consider that this report largely meets these obligations.

## 2

## The Starting Point for the DELG

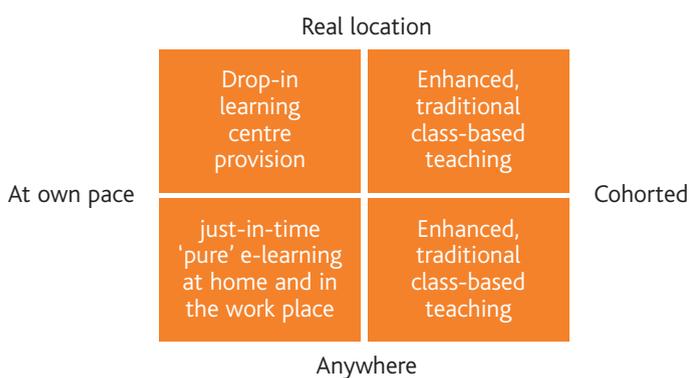
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We took as our starting point the Council's need to ensure that learning provision is adequate and effective to meet the targets set for it by Government. We looked at distributed and electronic learning in terms of how far it could assist the Council in the achievement of its five key objectives.

22

We considered the range of DEL in terms of the dimensions of space and time (or pace) for learning. We noted that DEL is not a single methodology, but takes a variety of forms depending on circumstances. Figure 1 provides examples showing the range of options that DEL represents in an expanded range of learning and teaching activities.

**Figure 1. The spectrum of distributed and electronic learning**



23

The prime focus of DEL varies considerably between different sectors. DEL is, perhaps, the latest in a well-established tradition of learner-centred approaches in the lineage of distance, resource-based, open and flexible learning – adding to all of these 'approaches' a focus on learning materials made available through electronic means. These can include CD-ROM, the internet, national and organisational intranets, possibly augmented by telephone, face to face or email based support, provided on an as-needed basis. As such, DEL can be represented as a spectrum ranging from internet supported distance

learning in which the learner has limited face to face contact with the tutor or other learners, to teacher-led, classroom-based activity which is interspersed with occasional computer-delivered or facilitated assignments.

24

Our remit covered both distributed and electronic learning. We recognise that the overlaps between distributed and electronic learning are increasing, and that in the timespan that the report is intended to serve, this trend will continue and accelerate. Of course, not all distributed learning involves electronic resources; nor is e-learning always at a distance, but the differences between the two approaches are less important than the similarities. The report and its recommendations apply to both except where specifically indicated.

25

The LSC's remit covers a great diversity of learners and learning situations, and no single set of recommendations will apply uniformly across the territory for which it carries responsibility. Our observations and recommendations will necessarily, therefore, apply differentially across the key sectors that the LSC services, namely:

- further education and sixth form colleges;
- school sixth forms;
- adult and community education;
- modern apprenticeships;
- skills and workforce development; and
- specialist colleges.

## Benefits of E-learning

26

A key recognition for us is the potential that e-learning has for:

- reaching new learners;
- meeting effectively the learning needs of key groups of learners within the Council's remit;
- enabling learners to fulfil their learning ambitions at a time, place and pace that suits them;
- breaking down physical separation between home, workplace and place of learning;
- blurring the boundaries between formal and informal learning; and



- enhancing the value of all components of the learning value chain, including diagnostics, curriculum delivery, communication, tutor and peer support, and assessment.

27

By realising this potential, a significant contribution will be made to the achievement of the Council's targets.

28

Formal, institution based learning is supplemented for many by a considerable amount of informal learning, including that done through, for example, reading, the use of public libraries and the viewing of television programmes. E-learning provides opportunities to build upon this learning by offering more formalised learning provision that continues to work without the constraints of time and location experienced by those who are either unable to, or have no wish to, attend a learning institution. In this regard, we noted the importance of establishing widespread availability of broadband communications as a fundamental requirement for rich e-learning experience. The report returns to the potential of future technologies in Section Four.

29

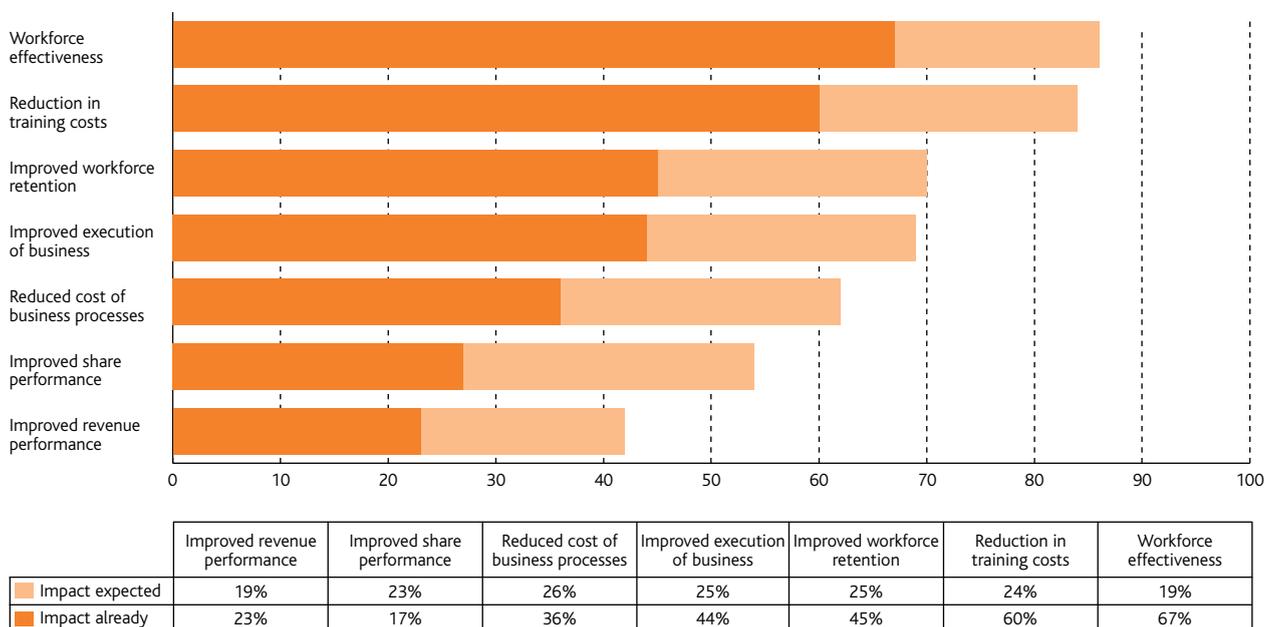
In the business world, many large companies have made, and continue to make, a substantial commitment to replacing (or supplementing) conventional trainer-led training with e-learning solutions. In some industries, notably those in which there has been rapid expansion (for example in telecommunications and networking) or there is the need to train large numbers of personnel in new systems (for example in finance) e-learning at the desktop has become a vital ingredient of modern business.

30

Significant claims are made for the business benefits of e-learning. Among the evidence we received was a report identifying benefits in a range of business areas (see Figure 2).

We drew on evidence from a wide range of sources in considering the case for continuing investment in e-learning. Clearly, Government itself has made a strong commitment to the use of ICT in learning. In the foreword to *Transforming the Way We Learn*, Estelle Morris, the present Secretary of State for Education, writes of her

**Figure 2. Business benefits of e-learning**



## 2

belief that, 'ICT has huge potential to engage pupils in ways that will help realise their individual talents'. The report notes that e-learning 'lays the foundations for effective lifelong learning' (paragraph 9, Transforming the Way We Learn, DfES, 2002).

31

We concluded that, while DEL can be offered as a distinct e-learning programme for some groups of learners, its wider application is to ensure that all learners have opportunities to develop the ICT and e-skills essential to modern life and work. The term 'e-skills' is used here to mean the ability to find and use digital knowledge resources, and includes those e-learning skills that will increasingly be essential for lifelong learning.

32

We recommend that the Learning and Skills Council adopts as a goal that all learners should have access both to ICT, and the opportunity to acquire ICT skills and e-learning skills. The Council should work closely with the DfES, providers and employers toward the achievement of this goal.

## Evidence

33

We invited submissions from a wide range of bodies, and commissioned the Learning and Skills Development Agency (LSDA) to carry out an extensive literature search in an effort to discover the most complete picture possible of the impact of DEL on learning. We also solicited presentations, papers and reports from key figures in business, and in further and higher education. We noted in particular Ufi's experience, and the persuasive results of evaluations carried out in the schools sector by Becta on behalf of the DfES. This body of research, and the majority of the papers reviewed by the group, are available on the DELG website ([www.nln.ac.uk/delg](http://www.nln.ac.uk/delg)). We learned of several relevant studies which had recently started, so there is the prospect of additional evidence in the near future.

34

We concluded that the evidence for DEL exists in five distinct areas, with different levels of confidence in the

findings available to date:

- a **Reach** – where there is a good deal of evidence for the effectiveness of e-learning in extending learning opportunities;
- b **Motivation** – where the evidence suggests that there is increased engagement, particularly among those groups that are otherwise hard to attract;
- c **Impact** – where evidence of learner success exists for some sectors, but is generally not considered to be robust as yet;
- d **Value for money** – where evidence to date is thin, though the case is more substantial in the business world than in education; and
- e **Inevitability** – where there is a recognition that society's demands for ICT and e-skills will continue to grow for the foreseeable future.

35

Summaries of the LSDA analyses of published research and the evidence to us will be found in Annex E.

36

Much of the literature and nearly all of the direct submissions to the DELG emphasised the future potential of DEL and cited developments such as the growth of the Internet as powerful and relevant indicators of the value of e-learning.

37

We concluded that despite its limitations, the evidence we received supported the view that e-learning has the potential to benefit all learners throughout the learning and skills community. A sub-theme that emerged from the research was that e-learning would be most widely used to enrich and extend other learning approaches. Hence, blended learning is likely to be the more common learning experience rather than, for instance, 'pure' online learning.

## Policy Context

38

There can be no doubt that the Government is enthusiastic about the contribution ICT can make to education. In the past 10 or so years, Government has encouraged very substantial investment in ICT infrastructure, learning

content, and the development of staff skills with a view to facilitating e-learning throughout education and training. The DfES identified for us some 55 initiatives, either in education or having implications for it, ranging from modest projects such as Parents Online to major multi-year developments such as the National Grid for Learning (NGfL). The list of projects is given in Annex C.

39

Government and funding council initiatives have put in place, over many years, world-class and world-leading initiatives, such as the Joint Academic Network (JANET), in support of e-learning. The UK enjoys in the Joint Information Systems Committee (JISC) an expert advisory and executive structure across post-16 and higher education, and benefits from research to define and provide services and development programmes in support of their stakeholders' e-learning objectives.

40

Other important developments include the People's Network in public libraries and the National Learning Network in further education. Government has also funded major initiatives in post-compulsory education and training such as Ufi and learndirect provision, and the UK online centres. Additionally, it has supported the creation of provision to address the 'digital divide', such as Excellence in Cities, and Wired-up Communities. These initiatives represent investment in the region of £1.6billion in central funding during the three year period 1999 to 2002, with further funding planned for the future.

41

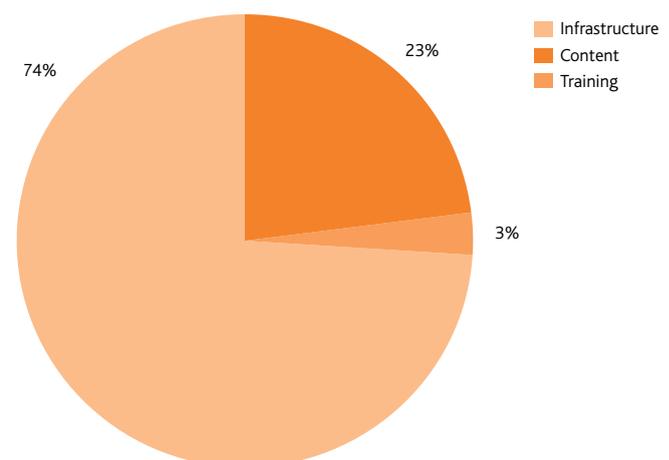
This central government expenditure is in addition to very significant expenditure by institutions themselves. In FE, for example, a survey of college finance directors indicated that in the academic year 1999 to 2000, sector colleges as a whole committed some £175million to ICT-related expenditure. Of this, only some £20million (11%) came from the major externally funded FE development at that time, the National Learning Network.

42

We did not attempt a detailed evaluation of the various initiatives: this task would have been beyond our brief and

our resources. It was clear, however, that the initiatives were not different aspects of an integrated strategy. Rather each initiative had separate objectives, target groups, funding sources and lines of management, but overlapped other programmes with similar characteristics. We were not critical of this fact. The development of ICT in this country to date has been at an early experimental stage during which multiple small scale projects might be expected. The technology, our understanding of it, and the public policy context in which it operates, all continue to evolve rapidly, and projects which appeared to be quite separate when conceived, are discovered to overlap when implemented. Notable exceptions exist; one of them is in the FE sector where the National Learning Network attempted, and substantially succeeded, to take forward an orchestrated group of ICT developments. Even here, though, funding for wide ranging staff development and spending on content have lagged behind investment in infrastructure. This is illustrated in Figure 3.

**Figure 3. Post-16 ICT initiatives funding 1999 to 2002**  
(Source: Becta)



## 2

**Strategy and Co-ordination**

43

This was the context in which we were asked to help the LSC to develop a co-ordinated strategy for securing the delivery of distributed and e-learning at local, regional and national levels. We put forward our advice to the Council in the knowledge that the Secretary of State had also established, in parallel, a Post-16 E-learning Task Force to offer her related advice. There has been collaboration between the two groups and a substantial overlap of membership. We have suggested to the Task Force that it should encourage the development of effective mechanisms through which Government can co-ordinate its own e-learning efforts and those of the principal agencies acting to deliver policy in this area.

44

We were conscious that the LSC was little more than a year old and was still working to develop strategic and operational plans. We received evidence of a lot of interesting and valuable work in individual projects, institutions and schemes. We concluded that it was appropriate and timely for the Council to include in its processes of developing strategy, a strategic framework within which local strategic plans for e-learning provision should be created. The key elements of the framework are:

- a a focus on the learner and learning;
- b harnessing DEL in promoting social inclusion and equity, and in supporting diversity;
- c promoting the benefits of e-learning as well as securing its provision and maximising its accessibility;
- d a recognition of the fundamental role of strategic partners and the establishment of structures within which they can collaborate with each other;
- e clear planning and quality assurance processes and systems; and
- f that e-learning must be explicitly reflected in every strategic initiative taken forward by the Council locally and nationally.

45

We were aware that the LSC's National Learning Network Programme Board had produced its own strategic framework for developments from 2002 to 2005, and that

our own planning needed to encompass that framework (see Annex F).

46

There is great diversity in the maps of provision within the jurisdiction of each local LSC, and a clear need for a concerted effort to provide coherence and to avoid duplication of effort and unproductive competition for learner attention. We had also been informed of the decisions of several local LSCs to produce e-learning strategies for their areas.

47

We recommend that the LSC requires its local LSCs to establish an e-learning/ICT strategy for their own areas, fully integrated into their normal planning processes and produced in collaboration with local partners.

48

These strategies will be submitted to the Council. We suggest that local providers should be required to develop and refine their own e-learning/ICT strategies to ensure that they are aligned with LSC local planning. Each local strategy should be prepared within the national policy framework and guidance, and should include:

- a an appraisal of the contribution DEL could make to delivering the Council's objectives at local and regional level;
- b the mapping of existing provision and an assessment of the fit between local need and local provision;
- c consideration of the most effective means of developing a sustainable ICT infrastructure;
- d taking account of the research and other evidence on the effectiveness of DEL in different circumstances;
- e alignment with LSC approved national and international standards in content, delivery and learner support;
- f appropriate liaison and collaboration arrangements between agencies and providers;
- g suitable provision for effective learner support;
- h recognition of the role of the home, the workplace and the community as venues for learning;
- i consideration of the balance of local and national learning materials creation and procurement;
- j arrangements for the continuing professional development of all staff;

- k the mapping of connectivity barriers to e-learning in the locality;
- l consideration of relevant quality assurance issues;
- m the contribution that learndirect will make to the local LSC's targets;
- n arrangements for co-ordinating digital divide strategies to ensure ICT is promoted and made accessible to all citizens, not least those facing social exclusion in its various forms; and
- o alignment with local approaches being taken in schools, higher education, and other educational providers to facilitate learning transfer.

49

The impact of e-learning often needs to be planned and reviewed at the regional level. Whilst a lot of e-learning provision is used by a community visiting local learning centres, there are growing numbers of learners studying from home or work and making use of a local centre only occasionally. Some of the agencies active in the field, for instance Regional Development Agencies, Government Offices and Ufi Limited, are regionally organised. The Council is asked by the Secretary of State to co-ordinate DEL at local, regional and national level. We propose that the Council uses the informal regional networks already developing among local LSCs and encourages them to co-ordinate plans in a regional context. We do not suggest the production by the LSC of formal regional e-learning strategies as to do so would risk increasing bureaucracy without consonant benefits.

## Section 3

### The Learner

#### Learner Requirements

50

This report has already drawn attention to the limitations of existing research into the effectiveness of ICT in learning. We do not regard this in itself as a reason to doubt the overall value of e-learning. Rather, it reinforces the need to invest in further research. Too little is understood and documented of the precise value, or potential, of e-learning in particular learning situations. Government and funding councils' commitment to e-learning is demonstrated by the initiatives they have put in place over many years, including JANET and Ufi Limited. What is poorly understood, however, is how best to fit the use of e-learning to particular conditions. Additional studies are required in this area.

51

Consideration needs to be given to the matrix of circumstances and conditions under which e-learning is most effective and responsive to individual needs – be they intellectual, emotional or practical – and to preferred learning styles. Preliminary investigation suggests that important dimensions of the matrix are as follows:

- a Learner factors, such as:
  - familiarisation with ICT;
  - learning style preferences;
  - the impact of sensory and other impairments, including learning disabilities;
  - limitations caused by, for example, work or family responsibilities; and
  - fluency in English.
- b Infrastructure requirements, such as:
  - the need (or otherwise) for attendance at a physical learning centre;
  - the place and availability of ICT/PC connectivity; and
  - the speed of connectivity or access to broadband.

## 3

c Access to information and knowledge, such as:

- the nature of the subject being studied;
- learning materials and content;
- electronic and paper reference material; and
- human expertise.

d Support requirements, such as:

- information, advice and guidance (IAG) requirements;
- the proximity of learning support staff;
- peer support and electronic conferencing; and
- online assessment.

52

The interaction between these factors was often noted by those providing evidence, but no one was able to propose a systematic view of the relationships between them.

53

We recommend that the Council, together with the DfES, research councils and other funding bodies, invests in a co-ordinated programme of research on e-learning issues with a specific focus on pedagogy and cost effectiveness, and ensures that the findings of the programme inform future investment and practice.

54

There are other agencies also interested in this area, for example, LSDA and the National Research Centre for ICT in Education. It would obviously be sensible for the Council to liaise closely with them when considering new research to avoid duplications and to make efficient use of resources. The funding councils have, in the JISC, an expert advisory and executive structure across post-16 and higher education and research, to provide services and development programmes which support their e-learning objectives. We propose that the JISC is tasked with commissioning further research, and subsequently the development of tools and techniques, to assist in the analysis of learner needs to facilitate the effective deployment of e-learning.

## Skills for Life

55

The Council has a target to raise achievement in basic literacy and numeracy for 750,000 individual adults by 2004, as well as to improve adult achievement at Level 3 by 5% within the same period. We believe that learners with the need to develop more advanced skills in literacy and numeracy can benefit from well-designed e-learning programmes. The benefits are in terms of motivation and the opportunities such programmes bring to develop and practice skills in a non-stigmatising environment. There is evidence from learndirect and UK online in particular that these learners often require greater than normal tutorial support, which will need to be reflected in the available funding models.

56

We are aware of the current debate over the inclusion of ICT skills within Skills for Life. We support the view that ICT skills are essential, while recognising that there are potential resource issues which the Council will have to evaluate in determining its response to the debate.

57

We recommend that the Council works with the Adult Basic Skills Strategy Unit (ABSSU), Ufi Limited and others to accelerate the development of a range of e-learning approaches to diagnosis, assessment, learning materials and support, to address learners' Skills for Life requirements.

## Access

58

We regard ICT skills and e-skills as essential for all learners. It goes without saying that such access should be a requirement across all of the learning and skills community. It is not acceptable that a learner's opportunity to develop these skills is the result of the lottery of provision.

59

Action is especially required for adult and community learning, and specialist colleges for students with learning

difficulties, where ICT provision often lags behind other parts of the post-16 sector. Subcommittees of the National Learning Network Programme Board are known to be examining options for these provider groups.

60

We acknowledge that, in considering the scale of investment required, the Council will wish to bear in mind the distribution of its core business across the different sub-sectors, which might broadly be seen as shown in Table 1.

**Table 1. Distribution of learners and resources across provider types**

Organisation	Number	Learners	Funding (£m)
FE and sixth-form colleges (includes learndirect*)	410	3,800,000	£3,800
Adult community organisations	200	1,600,000	£170
School sixth-forms	1,800	300,000	£1,400
Work-based training providers	2,000	280,000	£800
*learndirect	70 hubs	400,000	£135

61

In addition to these, the Council's remit includes workforce development for thousands of firms, a matter which is discussed further below.

62

To offer an 'order of magnitude' cost for enhancing e-learning provision in line with the recommendations above, it is worth noting that, should the Council choose to invest in its providers in ratio to the distribution of its overall funding of learning, it would require an additional investment of some £20million a year – that is, a total of some £100million across five years – to match the £42million a year currently being invested in FE and sixth form colleges. Naturally, this 'ball park' figure would require further refinement to take into account, for example, the recent significant ICT investment in schools through the National Grid for Learning, and, conversely, the widely dispersed and less well-resourced nature of much adult community learning provision. Our aspirations for the

adoption of e-learning will not be met unless there is continuing investment in infrastructure throughout the post-16 sector.

63

In view of the disparities in provision across the wide range of providers encompassed within the Council's remit, we recommend that the Council urgently addresses the need to ensure effective access to e-learning infrastructure and provision among all its provider organisations, within the overall capital investment programme.

## Addressing the Digital Divide

64

Government has declared an intention to ensure that no one in England is disadvantaged by lack of e-skills in the realm of employment, or in a world where e-government services become the norm in 2005. Promotional activity is central to this, including effective relationships with the media. For instance, the BBC's Computers Don't Bite and Webwise initiatives, in partnership with Government, education agencies and providers, reached many thousands of learners. Other initiatives which focus on communities, including the business community, and facilitate very local access are also vital. Learndirect and UK online centres are two important examples of schemes designed to address the digital divide. Approximately 80% of FE colleges, for instance, incorporate a branded UK online centre but, importantly, these initiatives show real potential for extending learning opportunities well beyond the communities currently making use of traditional institutions.

65

Ministers are currently considering appropriate arrangements for securing a sustainable future for the UK online initiative. We have proposed that the LSC has a major role in achieving greater coherence in the pattern of e-learning provision. This will be much more difficult to achieve if UK online centres stand outside the LSC's planning remit. We recognise that there are some complex details to be resolved, not least the question of funding. Even so, we recommend that the LSC works with the DfES to ensure effective planning and co-ordination of UK

## 3

online centres, ensuring congruence with learndirect and other local learning provision to meet local needs.

### Workforce Development

66

The LSC has defined workforce development as a range of activities that increase the knowledge, skills and capacity of individuals to participate effectively in the workplace. It intends to raise employer engagement in workforce development through the adoption of a new measure or target, building on Investors in People, but focusing on training and development.

67

Key to these developments will be effective local strategic planning in the 47 local LSCs, employing the methodology recommended in the LSC's Corporate Plan, linking three essential strategies:

- a skills strategy;
- b participation strategy; and
- c learning strategy;

and clarifying the potential role of e-learning in assisting in the delivery of local objectives.

68

While recognising that e-learning transcends regional boundaries and that creative solutions such as mobile learning centres exist, we acknowledged that the thinking of local e-learning strategies would be developed in the context of business and benefits. We further acknowledged that this would be a vital step in meeting the LSC's targets for skills and workforce development. We recognise the tension that exists between – and the potential for alignment of – vendor-specific qualifications and National Vocational Qualifications (NVQs). We noted the importance in meeting workplace learners' need for moves to unite the curriculum and to develop small, focused learning elements. We suggest that further work is required in this area to enable useful progress to be made.

69

Having taken evidence from private sector companies on their use of e-learning, we consider that e-learning should

be an effective 'route to market' for the LSC in much of its workforce development ambitions. This work would be appropriately carried out if it were in close collaboration with e-skills UK Ltd.

70

We recommend that the Council's strategy for workforce development should specifically identify the contribution to be made by e-learning.

71

This should include a consideration of:

- a the development of virtual employer networks to support access and counter isolation;
- b the availability of broadband communications and connectivity for employer-based learning centres;
- c multimedia basic skills toolkits aimed at adults, produced through working with unions and learndirect;
- d access to National Learning Network (NLN) and learndirect learning materials;
- e mentoring and other support for formal and informal learning in the workplace;
- f online assessment and accreditation;
- g rights of access to e-learning for employees;
- h strategic e-learning partnerships with sector skills councils;
- i the funding and incorporation of vendor-specific qualifications;
- j close strategic working with Ufi Limited, especially learndirect sector hubs;
- k support for the professional development and training of staff in work-based learning providers;
- l clarification of funding methodology, provider accreditation and quality assurance procedures in work-based learning;
- m partnerships with educational broadcasters and publishers to ensure their effective involvement in the development of online learning opportunities; and
- n development opportunities, building on the new vocational GCSEs and A levels, to give coherence to vocational education across the 14-19 phase and between school and workplace.

## Section 4

# Content and Learning Systems

### Standards and Interoperability

72

Until recently it has not been possible to identify a unified set of standards to ensure interoperability of learning systems and content. This situation is now changing, as de facto standards are being more widely adopted in national developments such as Ufi Limited, the National Learning Network and Curriculum Online. The picture is not yet complete, but it is possible to see now that the direction has been set.

73

We take the view that the adoption of global standards and specifications is vital to the development of a sound market for e-learning systems and content. Widely adopted, open standards provide a firm foundation for interoperability between systems, and they protect the public interest by reducing the risk of being locked into proprietary suppliers of systems. Behind the concept of this standards-based approach lies the vision of a world in which shareable, reusable learning objects can be 'assembled' in real time on demand, to provide learning assistance independent of time and place.

74

We noted the valuable work already done in this arena by Ufi Limited, Becta, the JISC – in particular the Managed Learning Environment (MLE) Steering Group – and the DfES, to secure the adoption of global standards and specifications, and to connect them effectively with the emerging e-government interoperability framework.

75

We noted the importance of the Council's being involved in any move to set up an e-learning authority to oversee the accreditation of conformance/compliance testing facilities.

76

Current specifications are focused in the following areas:

- metadata (a means of cataloguing information);
- content packaging;
- content management;
- question and test interoperability;
- learner profiles;
- content structure; and
- repository access.

77

We were aware that the MLE Steering Group had recommended that LSC should encourage the DfES to set up a conformance testing centre so that MLE software components can be tested for conformance to international specifications and standards.

78

In order to ensure effectiveness and value for money for the public purse, we recommend that further work is done through joint action led by Becta, JISC and Ufi Limited, in conjunction with the DfES and the Office of the e-Envoy, to agree common national specifications and materials development standards, and that compliance with these should underpin public funding of content development.

### Accessibility Issues

79

Additional clarification is required of the likely impact of the disabilities discrimination legislation on e-learning. At present, recommendations exist for the adoption of World Wide Web consortium standards for coding and interface design. However, while the NLN information and learning technologies (ILT) materials developers have been clear about the need to consider a range of possible learning impairments in the creation of their materials, it is not yet common practice to address such concerns in e-learning system and content design.

80

Disabilities discrimination legislation has drawn attention to the need for e-learning materials and learning environments to be suited to all learners, regardless of

## 4

physical or learning disabilities. Visually impaired learners, for instance, can be significantly disadvantaged when working with graphical interfaces, and even the most sophisticated screen reading software can be defeated by complex materials which are intuitive to the sighted.

81

To be genuinely accessible, all learning materials and learning environments need to conform to best-practice guidelines – an approach which has been used successfully by Becta's NLN materials development team. We recommend that the Council requires providers and suppliers to adopt best practice in the provision of e-learning materials and learning environments. We also suggest that the Council requires the JISC's TechDis service to make available clear guidance in standards for the production and delivery of learning resources and experiences, in line with recent legislation.

### Developing Pedagogically Sound Content

82

The development of e-learning content that is suited to the needs of the learner, is pedagogically sound, interactive and truly educational, is a complex and sophisticated matter. Wherever practicable, such resources should be developed so as to enable their use in different parts of the post-16 sector. Conversion of existing college resources into effective e-learning resources requires specialist skills.

83

The range, diversity and size of courses offered in the learning and skills sector present particular challenges in terms of content development. Economies of scale do not necessarily apply here. Some courses have sufficiently large take-up to attract commercial investment in content; many do not. As a result, the development of digital content has been uneven and spasmodic across the sector. Some attempt has been made to address this through the large investment in Ufi Limited and the more modest NLN materials developments.

84

In view of the large investment in content development by Ufi Limited, we recommend that the LSC and Ufi Limited

should explore, together with the DfES' Director of Teaching and Learning, how best to embed learndirect materials into other areas of the post-16 sector to achieve maximum benefit.

85

We suggest that, while being careful to ensure that its role is complementary to that of commercial developers and other public-sector funded developments, the LSC makes specific provision to facilitate the continuing and sustainable development of effective e-learning resources. Where appropriate, the Council may elect to do this via exemplar projects, staff development and seed-corn activity. We noted the substantial planned investment in Curriculum Online for schools. Whilst this model is not directly applicable to the post-16 sector, we recommend that the LSC works with the DfES to carry out a study to assess the feasibility of developing a comprehensive online resource for the sector. This study should build on our recommendations in this area and those of the Post-16 E-learning Task Force.

### The Management of Learning

86

Evidence presented to the DELG made reference to the fact that many providers funded by the LSC felt oppressed by the apparatus of audit and accountability. Systems which seemed to demand masses of paper evidence were, they thought, inappropriate to forms of learning mediated electronically. The opportunity of collecting participation and completion data as a by-product of normal learner activity was being missed. We suggested that, in order to take this opportunity, the LSC should look at ways in which both its funding methodology and its data capture strategy might offer ways of reducing bureaucracy in general and audit complexity in particular.

87

We were sympathetic to these aspirations, though it seemed likely that they would be realised on a longer timescale. Even the most integrated of e-learning delivery systems, the Ufi Learner Environment, cannot yet provide participation data for all learners on all courses. We are encouraged by Ufi's developments, and by others working

to develop and promote managed learning environments in the sector. These promise much for the future and we urge the Council to promote their rapid development and deployment, and to avoid putting barriers in the way of such longer-term developments.

88

We recognised the continuing need to ensure a close alignment of the development of virtual learning environments (VLEs), college information systems and the Individual Learner Record (ILR), in order to facilitate student progress tracking, to help respond to the needs of individual learners in reaching their learning goals, and to facilitate the efficient use of institutional resources. It will also be vital to ensure that all such developments are underpinned by a well defined set of standards describing the common elements of infrastructure provision.

89

We noted the current thinking about the value of re-useable learning objects, for instance Sharable Content Object Reference Model (SCORM), as a basis for the development of learning materials, and of the need for VLEs within which they may be managed. The use of VLEs ensures that learners' activity is properly documented, and provides a framework for a range of types of learner support designed to interact with and support learners in their tasks. VLEs are essential to the full realisation of DEL benefits, within the kind of holistic managed learning environment that colleges in particular need to realise.

90

Finally, tracking progression between providers is a possibility frustrated by the difficulties in adopting a system-wide transferable learner record which will stay with the citizen throughout his or her participation in education. There have been a number of candidates for a unique learner identifier, including National Insurance Number and Connexions Card number. The problem cannot be solved by the Council's acting alone. We suggest that the Council should, however, be pressing Government to make urgent progress.

91

We recommend that the Council works closely with Becta, the DfES, JISC, Ufi Limited and others to align

electronic systems – including establishing a unique learner identifier – so as to reduce the burden on providers in collecting data, and to improve ease of use and the quality of management information available locally, regionally and nationally.

### Future Technologies

92

We requested Becta to prepare a briefing on future developments in infrastructure to support e-learning. This paper identified a number of probable developments that will, in time, have an impact on sector e-learning practice. In particular, wireless networking may be expected to continue to grow in significance for post-16 learners.

93

We are of the view that for the next three to five years, networked personal computers will remain the norm for the routine delivery of e-learning opportunities, as opposed to handheld devices and digital television sets. However, in view of the rapid development and take-up of new technologies, we suggest that the LSC requests the JISC, in conjunction with other partners, to continue to promote experimentation with a range of new technologies with a strong research and evaluation focus, to ensure that a good upstream understanding is maintained of their potential for e-learning.

## 5

## Section 5

# Learner Support

### Support for Learners

94

The adoption of e-learning forces a careful reconsideration of the roles of tutors and learning support staff. It is a common characteristic of 'traditional' teaching methods that the designing, planning, learning materials creation, delivery and support of a programme is all undertaken by an individual or small homogeneous group. The emerging experience of e-learning providers suggests that these various components of the total teaching/learning process may be more effectively undertaken by different people with different skills, perhaps in totally separate organisations. By specialising in a part of the whole, each element can be produced to a higher standard. These processes and the skills necessary to support them did not seem to us to be well understood. We noted the valuable work already being carried out in this area by Ufi Limited and LSDA, among others. We recommend that the LSC should propose to the appropriate sector skills council and the relevant professional associations that a joint study should be undertaken from which appropriate continuing professional development (CPD) programmes can be designed for tutors and learning support staff.

95

E-learning provides opportunities to deconstruct the business of supporting learners, recognising those elements that are necessarily provided by human interaction, those that can be provided through remote provision, and those areas in which peer support has a strong part to play. Furthermore, extensive use of e-learning requires different forms of information, advice and guidance (IAG).

96

The experience of both the business world and the public sector is that stand-alone use of e-learning which lacks or limits integrated support, delivers neither the return on investment anticipated by employers, nor the level of achievement of learning goals anticipated by learners.

In essence, this means that some form of e-learning which balances human and electronic resources, in other words, blended learning, must become the norm if the full benefits of this approach are to be realised.

97

We recommend that the Council ensures that its funding methodology, provider accreditation, and quality assurance procedures recognise the need for e-learning to be properly supported by a range of human and electronic support.

### Professional Development Requirements

98

Staff will need appropriate training to facilitate the radical changes to which e-learning can lead. More immediately, the potential of e-learning, and the value of LSC and college investment in networking, infrastructure and resources, will not be realised without significant change in the norms of delivery within tutor-led, classroom-based teaching and learning. We suggest, therefore, that the Council, working with the DfES, commissions from an appropriate sector body thorough training needs analyses for its various provider types. Particular areas which the studies should address include:

- the pedagogy of e-learning;
- the variety of forms of support required;
- content design and selection; and
- the role of virtual and managed learning environments.

99

As qualified teacher status (QTS) is being introduced into further education, now is the time to consider the inclusion of appropriate ICT skills and e-skills as mandatory elements of the initial teacher qualification.

100

Ufi Limited has made significant progress in developing standards for staff working to support learners within the learndirect network, for example, for facilitators in learning centres and for online tutors. These standards will form the basis of a suite of qualifications that Ufi Limited is developing with City and Guilds. We were aware that a sub-committee of the National Learning Network

Programme Board is currently preparing recommendations for a series of training programmes to support the implementation of e-learning in FE and sixth form colleges, and relating them, where appropriate, to Further Education National Training Organisation (FENTO) occupational standards. The subcommittee's findings will have a wider relevance throughout providers servicing the LSC remit.

101

On the basis of the studies and deliberations noted above, we recommend that the Council arranges for the development and provision of substantial programmes of continuing professional development to ensure that all staff involved in the management, delivery and support of learning have the necessary knowledge and skills to implement effective e-learning developments. The Council should aim to ensure that the new national leadership college for further education should include the skills to lead e-learning developments in its programmes.

102

As indicated earlier in this report, the Council will need to consider benchmarking CPD for all sector staff against ICT and e-learning programmes provided for school teachers and public librarians at an overall cost of some £250million. In this case, the total investment required – if aligned with the calculation suggestion at paragraph 62 above – would be of the order of £80million for all sector teaching and learning support staff. Only a fraction of this requirement is expected to be met through current Standards Fund arrangements.

## Section 6

# Ensuring Quality

### Measuring Success

103

We had hoped that the longer experience of e-learning in the private sector might offer some valuable pointers to effective ways of measuring success which did not rely on counting qualifications. However, we could not discern in the evidence given, that private training provision, including the 'corporate universities', was subject to systematic evaluation of value for money. Indeed, it was evident that in some circumstances it was not subjected to any measurement at all.

104

DEL is more likely than traditional education to have very short learning episodes, or low intensity learning extended over a long period, or learners looking to acquire a small number of very specific skills. Some DEL, learndirect for instance, has a specific mission to attract into adult learning those who had not previously participated. These learners are 'enticed' into formal learning by making it look as little like learning as possible. Often, in these cases, success is not judged within the programme but by what learners go on to do – progression. Many learners will build on these early successful experiences by enrolling on further programmes, but not necessarily, or even probably, with the same provider. As noted elsewhere, it is currently extremely difficult to track a learner's progression when they move between providers, but it is very necessary if the success of the provision is to be tested by this criterion. The Council's Individual Learner Record (ILR) has the potential for providing these data but only if the learner has a nationally unique identifier as proposed above (paragraph 90).

105

For public accountability purposes, the Council would continue to require information on:

- the number of participants (learner numbers);
- the number of discrete programmes (enrolments);

## 6

- the number of learners completing the programme (completions); and
- the number of learners achieving their original learning goals (achievements).

106

These success criteria are universal, but the definition of achievement will be different for different groups of learners. In the workplace, for example, learners may be aiming to acquire a very specific set of skills (or example, how to lay out tables in a word-processed document, or how to assemble a floral buttonhole). However, these are not issues which are specific to distance or e-learning, though VLEs offer the prospect of less bureaucratic, more efficient ways of capturing the data.

107

There is long experience of using online or computer-based assessment in private sector training, notably for vendor-specific computing qualifications. Little of this has influenced public education providers where written tests or portfolios of evidence remain the norm. We believe that opportunities are being missed. We were pleased to learn that Ufi Limited is establishing a pilot scheme to test the feasibility of online assessment. Similar experiments have been run by universities and others. We recommend that the Council follows developments in online assessment very closely and looks for ways of collaborating with providers and awarding bodies to extend the practice as fast as possible.

### Standards and Accreditation of Learning Outcomes

108

Whereas blended learning approaches mean that e-learning will be readily integrated into mainstream teaching and learning in FE, the nature of workforce and adult community learning will call for special measures to make e-learning attractive to such learners and their sponsors, and to support their learning.

109

While such learners may themselves be interested in obtaining complete qualifications, it is likely that their employers will find an approach to learning based on smaller units or modules more appealing. We regard the unitisation of the curriculum as being of paramount importance to establishing e-learning as a vital support in workforce development.

110

Though we were offered a lot of examples of the problems, solutions were thinner on the ground. One message was clear: if qualifications were to be used as a measure of success, then the unit of learning examined had to be much smaller than hitherto. Evidence from the QCA, LSC, Ufi Limited and others referred to development work in unitising existing qualifications. This was welcome, but the units still tended to be large, equivalent to 30 or 60 hours of study. This unit size has to be reduced five- or ten-fold for it to be appropriate to a growing proportion of e-learning.

111

We recommend that the LSC works closely with QCA and the awarding bodies to implement unitisation and to review the range of assessment methods by which e-learning itself can be judged. We also suggest that the potential of individual learning logs to provide evidence of learner achievement and reflection should be examined.

### Provider Quality Assurance

112

We were considering the issue of provider quality assurance (QA) at a time when the Council's general policies and procedures on quality assurance and improvement were rapidly evolving and were still not settled. Our primary concern was to attempt to identify the ways, if any, in which providers of distributed and e-learning required different approaches. We looked particularly to the Adult Learning Inspectorate (ALI) for guidance in these matters. Its advice, together with contributions from others, led us to the conclusion that, in this area as in many others, the treatment of DEL should

not differ in principle from the treatment of other teaching and learning approaches. In all cases, the principal responsibility for the quality of the provision rests with the provider. There were, however, some significant differences of detail and of emphasis.

### 113

The key elements of provider QA are:

- self-assessment;
- the LSC's performance review process;
- inspection; and
- the use of benchmarking and external quality kitemarks.

From our perspective, the key elements in provider QA all presented similar issues:

#### **a Key role of materials in delivering pedagogy**

Where DEL is used to do more than add some marginal enrichment to the learner's programme, the material is the principal learning vehicle. To carry this burden, the materials have to be good, and there are developing standards of what constitutes 'good'. There is some way to travel before these amount to a battery of standards and criteria against which the quality of learning materials can be judged, and we suggest that the Council should be actively sponsoring the development of a coherent set of quality criteria to be applied to learning materials.

#### **b Importance of developing ICT skills in learners**

E-learning materials can and should be developing the ICT skills of the learners, in addition to whatever other objective the learner has. In this sense, ICT is a key skill and the Council should be expecting the providers it funds to deliver these skills.

#### **c Technical quality of learning environment**

Providers should be expected to provide a minimum standard of facilities for learners covering access to workstations, visual display units (VDUs), bandwidth and so on. We recommend that these standards should be included in the criteria used by local LSCs within both initial provider assessment and ongoing provider review. The Council has a range of options for dealing with a provider which does not meet the standards, including providing some resources to help them do so.

#### **d Co-ordination of learner support arrangements**

DEL is often a more collaborative enterprise than more traditional programmes and it typically calls upon a wider range of staff expertise. It is still quite usual for a traditionally taught programme to be planned, devised and delivered by a single individual or small team. It is unusual for DEL to be delivered in this way. Those inspecting or assessing quality in these circumstances need to pay particular attention to the co-ordination of these contributions.

#### **e Accessing learner experiences**

It is a characteristic of DEL that learners are not conveniently clustered together at a place and time. Inspectors and assessors have to make specific arrangements to sample learner experiences. Appropriate methods include communicating with learners by phone and email.

#### **f Use of electronic progress tracking systems**

Distance and e-learners are at greater risk of failing to complete their programmes. Efficient systems for tracking their progress, and for providing appropriate support, are vital. Electronic learning environments (such as that used by learndirect) offer effective means of tracking learners' continued engagement and progress within their programmes. They are not yet widespread and we have made a recommendation elsewhere that the development and adoption of managed learning environments should be a priority.

#### **g Familiarity of inspectors and reviewers with DEL**

Most inspectors and quality assessors will not be experts in distributed and e-learning. Only a few of them will have experienced it directly as teachers or learners. We recommend that the Council works with the ALI, Ufi Limited and others to devise and promote appropriate professional development programmes to familiarise inspectors and local LSC quality assessment personnel with the distinctive characteristics of DEL.

## 7

## Section 7

# Sustainability

### Developing a Balanced Market

114

There are many ways in which costs and risks associated with e-learning developments can be distributed between commercial and public sector organisations. Such arrangements have the potential to help maximise the use of public funds and enhance the quality of both learning opportunity and learner support. They can also ensure that public intervention is effectively directed in support of minority needs that would not normally be met through commercial activity. For example, there may continue to be circumstances in which the Council will wish to intervene directly, as it has with the National Learning Network materials development, to promote the creation of exemplar e-learning materials where commercial products could not expect to find a market. This is a matter probably best handled through discussion, and perhaps collaborative action, with existing e-content providers. The feasibility study referred to above (paragraph 85) will review the best approach for working with existing e-content providers and the balance between demand and supply side interventions.

115

Commercial organisations might provide managed services to support e-learning targeted on the provision of ICT equipment or content or both. The measure of the effectiveness of such arrangements will be the quality of learning provision and support, which we anticipate will remain the prime concern of learning providers themselves rather than of third-party suppliers. Such partnership developments should be encouraged but, in view of the sensitivity of market forces and the need to assure quality, we suggest that the Council should seek to ensure that such arrangements have at their heart the particular interests of learners.

### Funding E-learning

116

Many submissions to the DELG commented on the importance of the Council's funding approach to the future success of DEL, and on the inadequacies of the approach inherited from the Further Education Funding Council (FEFC). Unfortunately, people were far less forthcoming with alternatives. The Council had inherited very different approaches to the funding of the four sectors – FE, work-based learning, adult and community learning, and school sixth forms – and it was working through the processes of producing an integrated funding system in a series of stages. We were alerted to the difficulties of accommodating all the variety in the four sectors within one funding framework, and were clear that we did not want to recommend to the Council that it should make the system more complex still. We took the view that e-learning should be at the centre of the development of LSC-funded provision in the next three to five years, not at the periphery. It is essential that learners and providers should be able to select the right blend of learning approaches without having that choice distorted by the apparatus of the funding methodology.

117

For this reason, we recommend that the formula-based element of the funding methodology should not distinguish between distributed and electronic learning and other modes of delivery.

118

Many programmes have individual funding values attached to them and this is the Council's preferred approach. Although this was originally applied to courses leading to nationally recognised qualifications, the Council adapted that system to accommodate learndirect provision, which does not have externally accredited outcomes. Other e-learning provision lies currently outside these funding arrangements. We see no good reason for this discrimination to continue and propose that all DEL should be subject to the same funding rules.

119

We were persuaded that the Council could not rely solely on formula funding and that other methods were required to supplement this. In particular, we believed that the local LSC strategic planning exercise described above (paragraph 48) would demonstrate a need to build capacity in some areas. We saw this as having two streams of non-formula funding. The first was capital resources required to equip learning centres and other ICT-based delivery systems. The second was project-based funding to be allocated by local LSCs to support the generation of other types of capacity (management, curriculum expertise, learner support). We reviewed the existing evidence about the value of DEL (in Section Two), which suggested that it currently has greater impact on participation and motivation than, for instance, on learner qualifications. We would expect local LSCs to take these forms of evidence into account when making decisions about the allocation of resources.

120

The arguments for these approaches are set out in more detail in Annex D.

121

We recommend that the LSC's funding system should allow for non-formula funding streams be established, to be managed by local LSCs in a similar manner to the current Local Initiative Funds mechanism, in order to build capacity, target resources where most effective, encourage the development of e-learning provision, and to fill gaps.

## Section 8

# Recommendations and Proposals

122

The individual recommendations included in the body of the report are as follows.

### General Principles

123

The LSC's approach to e-learning should be based on the following principles. It should:

- a be based firmly upon a clear, simple and achievable strategic framework, to be implemented step by step;
- b be explicitly reflected in every other strategic initiative taken forward by the LSC, both nationally and locally;
- c begin with an unequivocal focus upon the needs of the learner and of supporting effective learning;
- d regard the proper and professional deployment of technological learning environments as one means of effectively meeting learners' needs;
- e recognise that e-learning can play a role in promoting social inclusion and should be designed to secure inclusive learning and to work in support of equity and diversity in post-16 learning;
- f determine that compliance with agreed national standards should be central to the design and application of courseware, technology platforms, e-learning software, interoperability and learner-management systems;
- g emphasise that effective and high quality learner support arrangements are an absolute prerequisite of the successful application of e-learning;
- h give high priority to supporting and overseeing programmes of systematic staff training and development for post-16 sector staff in e-learning, including the establishment of appropriate new posts designed to support e-learners;
- i emphasise, from the outset of planning and deployment of e-learning, the application of high standards, quality assurance and continuous quality improvement and sustainability;



- j draw on knowledge of what works, and target resources on those types of provision or learners where DEL is most effective; and
- k accept that well managed collaboration and co-ordination are now essential in a field manifesting an increasingly diverse and potentially bewildering range of initiatives and applications, and that the LSC should give a lead in securing partnership and clarification.

We recommend that the Learning and Skills Council adopts as a goal that all learners should have access to ICT, and the opportunity to acquire ICT skills and e-learning skills. The Council should work closely with the DfES, providers and employers towards the achievement of this goal.

### Strategy and co-ordination

124

We have suggested to the Post-16 E-learning Task Force that it should encourage the development of effective mechanisms through which Government can co-ordinate its own e-learning efforts and those of the principal agencies acting to deliver policy in this area.

125

We recommend that the LSC requires its local LSCs to establish e-learning/ICT strategies for their own areas, fully integrated into their normal planning processes and produced in collaboration with local partners.

### Learner requirements

126

We recommend that the Council, together with the DfES, research councils and other funding bodies, invests in a co-ordinated programme of research on e-learning issues, with specific focus on pedagogy and cost effectiveness, and ensures that the findings of the programme inform future investment and practice.

### Skills for life

127

We recommend that the Council works with ABSSU, Ufi Limited and others to accelerate the development of a range of e-learning approaches to diagnosis, assessment, learning materials and support, to address learners' Skills for Life requirements.

### Access

128

We recommend that the Council urgently addresses the need to ensure effective access to e-learning infrastructure and provision among all its provider organisations, within the overall capital investment programme.

### Addressing the digital divide

129

We recommend that the LSC works with the DfES to ensure effective planning and co-ordination of UK online centres, ensuring congruence with learndirect and other local learning provision to meet local needs.

### Workforce development

130

We recognise the tension that exists between – and the potential for alignment of – vendor-specific qualifications and NVQs. We noted the importance of meeting workplace learners' need for moves to unite the curriculum. We suggest that further work is required in this area to enable useful progress to be made.

131

We recommend that the Council's strategy for workforce development should specifically identify the contribution to be made by e-learning.

## Standards and interoperability

132

In order to ensure effectiveness, and value for money for the public purse, we recommend that further work is done through joint action led by Becta, JISC and the Ufi Limited, in conjunction with the DfES and the Office of the e-Envoy, to agree common national specifications and materials development standards; and that compliance with these should underpin public funding of content development.

## Accessibility issues

133

We recommend that the Council requires providers and suppliers to adopt best practice in the provision of e-learning materials and learning environments. We also suggest that the Council requires the JISC's TechDis service to make available clear guidance on standards for the production and delivery of learning resources and experiences, in line with recent legislation.

## Developing pedagogically sound content

134

We recommend that the LSC work with DfES to carry out a study to assess the feasibility of developing a comprehensive online resource for the sector.

135

We recommend that the LSC and Ufi Limited should explore, together with the DfES' Director of Teaching and Learning, how best to embed learndirect materials into other areas of the post-16 sector to achieve maximum benefit.

136

We suggest that, while being careful to ensure that its role is complementary to that of commercial developers and other public sector funded developments, the LSC makes specific provision to facilitate the continuing and sustainable development of effective e-learning resources. Where appropriate, the Council may elect to do this via

exemplar projects, staff development and seed-corn activity.

## The management of learning

137

There have been a number of candidates for a unique learner identifier, including National Insurance Number, Connexions Card, and Individual Learning Account (ILA) number. The problem cannot be solved by the Council acting alone. We suggest that the Council should, however, be pressing Government to make urgent progress.

138

We recommend that Council works closely with Becta, the DfES, JISC, Ufi Limited and others to align electronic systems, including establishing a unique learner identifier, so as to reduce the burden on providers in collecting data, and to improve the ease of use and the quality of management information available locally, regionally and nationally.

## Future technologies

139

In view of the rapid development and take-up of new technologies, we suggest that the LSC requests the JISC to consider directly promoting experimentation with a range of new technologies with a strong research and evaluation focus, to ensure that a good upstream understanding is maintained of their potential for e-learning.

## Support for learners

140

We recommend that the LSC should propose to FENTO (or its successor) and the relevant professional associations, that a joint study should be undertaken from which appropriate CPD programmes can be designed.

141

We suggest that the Council, working with the DfES, commissions from an appropriate sector body thorough



training needs analyses for its various provider types. Particular areas which the studies should address include:

- the pedagogy of e-learning;
- the variety of forms of support required;
- content design and selection; and
- the role of virtual and managed learning environments.

142

We recommend that the LSC ensures that its funding methodology, provider accreditation, and quality assurance procedures recognise the need for e-learning to be properly supported by a range of human and electronic support.

143

We recommend that the Council arranges for the development and provision of substantial programmes of continuing professional development to ensure that all sector staff have the necessary knowledge and skills to implement effective e-learning developments.

## Measuring success

144

We recommend that the LSC follows developments in online assessment very closely, and looks for ways of collaborating with providers and awarding bodies to extend the practice as fast as possible.

## Standards and accreditation of learning outcomes

145

We recommend that the LSC works closely with the QCA and awarding bodies to take forward unitisation, and to review the range of assessment methods by which e-learning itself can be judged.

146

We also suggest that the potential of individual learning logs to provide evidence of learner achievement and reflection should be examined.

## Provider quality assurance

147

We recommend that minimum standards of facilities for learners, covering access to workstations, VDUs, bandwidth and so on, should be included in the criteria used by local LSCs, both in initial provider assessment and in ongoing provider review.

148

We recommend that the Council should work with the ALL, Ufi Limited and others to devise and promote appropriate professional development programmes to familiarise inspectors and local LSC quality assessment personnel with the distinctive characteristics of DEL.

## Developing a balanced market

149

Commercial organisations might provide managed services to support e-learning, targeted on the provision of ICT equipment or content or both. Such partnership developments should be encouraged, but in view of the sensitivity of market forces and the need to assure quality, we suggest that the Council should seek to ensure that such arrangements have at their heart the particular interests of learners.

150

We suggest that the Council should be actively sponsoring the development of a coherent set of quality criteria to be applied to learning materials.

## Funding e-learning

151

We recommend that the formula-based element of the funding methodology should not distinguish between distributed and electronic learning and other modes of delivery.

152

We recommend that the LSC's funding system should allow for non-formula funding streams to be established

(to be managed by local LSCs in a similar manner to the current Local Initiative Funds mechanism) to build capacity, target resources where most effective, encourage the development of e-learning provision, and to fill gaps.

## Section 9

### Further Work

153

Implementation of our recommendations, if accepted, will require careful management and committed resources over a considerable period of time. It is accepted that in the National Learning Network Programme Board, the Council has an effective implementation advisory arm. However, its role and composition need to be reviewed in the light of our recommendations. In particular, it may now be more appropriate for a national director to chair that body.

154

In the first instance, we recommend that the Council's Director of Policy and Development be tasked with producing a phased and costed implementation plan. This plan should identify areas of management responsibility and include the review referred to above. The plan would need to be approved by the Council's Management Board or the Council itself, if appropriate.



## Annex A

### DELG Membership

<b>Margaret Bennett</b>	Divisional Manager, DfES
<b>John Brown</b>	Director, Lifelong Learning, Becta
<b>David Burrows</b>	Head of Education Group, Microsoft UK
<b>Alan Clarke</b>	Senior Development Officer, NIACE
<b>Lorna Cocking</b>	Publishing Director, Pearson Education
<b>Paul Crisp</b>	Distance and E-Learning Adviser, Learning and Skills Council
<b>Keith Duckitt</b>	Head of ICT Team, Learning and Skills Council
<b>Bob Fryer*</b>	Chief Executive and Vice-Chancellor, NHSU
<b>John Gray</b>	Principal, Newark and Sherwood College
<b>Robert Halhead</b>	formerly Managing Director of Public Sector, NTL Group Ltd
<b>Josh Hillman</b>	Head of Education Policy, BBC
<b>Graham Kemp</b>	Education and Research Manager, Sun Microsystems
<b>Fred McCrindle</b>	Principal, Reading College
<b>Helen Milner</b>	Director of Distributed Learning and Operations, Ufi Limited
<b>Steve Molyneux</b>	Director, National Research Centre for ICT in Education, Training and Employment
<b>Laura Overton</b>	Global Programs Manager, Smartforce
<b>Andrew Pember</b>	E-learning and Strategy Executive, City and Guilds
<b>Karen Price</b>	Chief Executive, e-skills NTO UK
<b>Malcolm Read</b>	Executive Secretary, JISC
<b>Chris Reynolds</b>	Head teacher, St Benedict RC School and VI Centre, Derby
<b>John Slater</b>	Director of e-Learning, e-University
<b>Nick Stuart</b>	Board Member, Ufi Limited

\*chair

## Annex B

# Terms of Reference

1

To advise the Council, Chair and Chief Executive on all relevant matters concerning the development, operation of and support for, distributed and electronic learning, in pursuit of the Council's agreed objectives and priorities.

2

To ascertain the current preparedness and future planning for utilising distributed and electronic learning amongst providers supported by the Council or eligible to be so supported.

3

To propose ways in which the use of distributed and electronic learning can best be extended to support effective formal or informal learning at work, at home, at learning centres and in the community.

4

To promote approaches to teaching and learning which encourage learners to succeed, to gain appropriate qualifications, and to progress to further study or employment.

5

To enquire into and advise the Council on the most effective and efficient ways in which the Council should support and stimulate the use of distributed and electronic learning for learners and amongst providers.

6

To discover and advise the Council on how to give publicity to, and support for, the extension of good practice in the provision and use of distributed and electronic learning.

7

To propose to the Council ways of securing effective collaboration with public and private sector organisations, representative groups and others, to establish appropriate standards and ways of working for distributed and electronic learning.

(Potential collaborators might include: Ufi Limited, UK Online, the National Grid for Learning (NGfL), the e-University, private sector providers, the DfES, national training organisations (NTOs), JISC, the LSDA, the National Information and Learning Technology Association (NILTA), Becta.)



## Annex C

# List of Government ICT Initiatives

### Department for Education and Skills: ICT initiatives infrastructure

<b>Table 1. ICT equipment in educational establishments</b>					
<b>Programme</b>	<b>Client Group</b>	<b>Purpose</b>	<b>Strategic Contribution</b>	<b>Milestones/Targets /Achievements</b>	<b>Links to other Initiatives/Additional Information</b>
National Grid for Learning (NGfL) – ICT equipment in schools	School pupils, teachers and other professionals	Working with LEAs to raise standards in schools. Provides a national focal point for learning on the internet	Equips and connects schools, colleges and other places of learning with ICT, including assistance to purchase computers	Computer to pupil target ratios of 1:11 primary, 1:7 secondary by 2002; 1:8 primary, 1:5 secondary by 2004	Links with other NGfL work on content (including Grid Club), broadband connectivity, and improved technical support. Links with e-Learning Foundation provision of laptops for school children
National Grid for Learning (NGfL) – Regional Broadband Consortia (RBCs)	School pupils, teachers and other professionals	Working through the Regional Broadband Consortia to provide broadband connectivity to all schools	Enabling schools to access a wide range of media-rich learning resources through Curriculum Online and other sources	20% of schools (inc. all secondary) to be connected at minimum of 2mbps by August 2002	Links with other NGfL work on improved technical support, infrastructure and content. Primary link with Curriculum Online, which requires a robust broadband infrastructure
National Grid for Learning (NGfL) – technical support for schools	School pupils, teachers and other professionals	Improved technical support for schools, for example, one phone call to a provider to put a technical problem right quickly	Works with suppliers, LEAs and others to ensure that the best ICT support service is provided to schools		Links with Becta and other NGfL work on infrastructure, connectivity and content

**Table 1. ICT equipment in educational establishments**

Programme	Client Group	Purpose	Strategic Contribution		Links to other Initiatives/Additional Information
IT in Further Education (FE). The National Learning Network (NLN)	FE, adult and community learning, specialist colleges, students, teachers, technicians and managers	To raise standards by modernising ICT infrastructure, content and training in all FE colleges, specialist colleges and adult and community learning institutions. Improve teaching methods and practices, and facilitate better management practices. Mandatory ILT strategy for all colleges. Also to link ICT in HE and FE	Provision of ICT equipment to support learning and effective management in delivering the LSC's post-16 ICT agenda		
ICT in Higher Education (HE)	HE students, teachers and managers	To improve HE ICT infrastructure and development. Enhance teaching and learning for all HE students. Also to improve ICT links between FE and HE, with improved access to ICT and investment in the SuperJANET network	Students, particularly those without PCs, have improved access to ICT. Investment in SuperJANET to ensure the sector remains a world leader. Increase in material available online		March 2001: SuperJANET backbone upgraded from 155 Mbps to 2.5 Gbps (over 16 times faster)

<b>Table 2. ICT for teachers and learners</b>					
<b>Programme</b>	<b>Client Group</b>	<b>Purpose</b>	<b>Strategic Contribution</b>	<b>Milestones/Targets /Achievements</b>	<b>Links to other Initiatives/Additional Information</b>
Online CPD (Continuing Professional Development)	Teachers	To pilot the development of online teacher training material to make ICT an integral part of every teachers' continuing professional development	To embed the use of ICT in subject teaching		Builds on NOF training and complements the numeracy and literacy strategies
Laptops for teachers	Teachers	To provide laptop PCs for QTS teachers	To improve personal access to ICT for all teachers		Links to Becta. Consultation with NCSL and NAACE
Laptops for new head teachers	New heads	Assists online networking among heads, as well as online professional development and day-to-day school management	Enhances school leadership skills which leads to raising standards		Announced by SoS at New Heads' Conference, Nov 2001
Computers for FE Teachers	FE teachers	Assists FE teachers to purchase Internet-enabled computers	To improve the IT skills of teachers in FE		Part of NLN funding
ICT strand of workload pathfinder pilot	Schools	To identify and implement ways in which teacher workload can be used. The ICT strand focuses on how ICT can be used to reduce teacher workload	Reducing teacher workloads is central to the Government's education plans	Self-assessment toolkit for schools, tested and ready for use in the pilot by 29 March. Toolkit will enable schools to identify improvements in their use of ICT	
PFI ICT credits	LEAs	To allocate PFI credits available to projects that raise standards of teaching and learning	Will help raise standards of teaching and learning	Selecting projects to go to Treasury's project review group on 21 and 22 February	
Computers within Reach (CwR)	Low-income learners and families. Initial focus on Excellence in Cities (EiC) areas	To improve accessibility to ICT for low-income groups	Tackles social exclusion. Target: 35,000 machines in two phases		Runs parallel to Wired-up Communities and RCIS
e-Learning Foundation	Children from low income families and in disadvantaged areas	To provide children with portable computers and internet access to learning materials	Government, community and private sector partnership to provide ICT equipment for children who would not otherwise have access	45 local e-Learning Foundations have been set up, of which 14 are registered charities	Launched 26 Feb 2001, the scheme will help to improve computer/pupil ratios, running in parallel with NGfL and in WuC areas

**Table 2. ICT for teachers and learners**

Programme	Client Group	Purpose	Strategic Contribution	Milestones/Targets /Achievements	Links to other Initiatives/Additional Information
Wired up Communities (WuC)	People in disadvantaged areas (currently seven pilot projects in England) Phase 1: Liverpool 2000-2002 Phase 2: Manchester, Framlingham, Blackburn, Brompton, Alston, Newham 2001-2002	To test the impact on people's skills, attainment, employability and social cohesiveness, of installing Internet technology directly into their homes, in whole communities in some of England's most disadvantaged areas	It will improve the ICT skills of the unemployed and those most at risk from the effects of the digital divide. Those who participate will have access to ICT, which will enable them to develop essential skills, and to access online learning	14,000 households to be connected to the Internet through the seven pilot areas. As of 31/12/01, 3,979 locations had been connected	£5 million of DfES funding will be channelled through the National e-Learning Foundation to provide technology in 33 schools in the seven WuC areas, leading to improved individual access to technology for their 12,000 school children. Links with NGfL, CwR. Other links with Treasury, OeE, various local authorities, private sector companies, for example, On Digital and Granada
Adult and Community Laptop Initiative	Dis-advantaged Groups	A three-year initiative through which workers in the adult and community learning sector – via LEAs – have been provided with laptop computers to deliver ICT-based learning to some of the hardest to reach groups of non-traditional adult learners	Widen participation in learning through ICTs within disadvantaged groups, improve adult basic skills, help adults to progress		Current initiative ends in March 2002 and future development is dependent upon success of CSR bid. With this in mind, discussions are underway with UK online centres and Wired Up Communities' policy colleagues to develop a more joined-up strategy for future delivery within disadvantaged communities. The initiatives managers (Basic Skills Agency and NIACE) are being closely consulted throughout
City Learning Centres (CLCs) / Excellence in Cities (EiCs)	All learners in EiC areas. Core client group is pupils and teachers, but will also provide lifelong learning opportunities for the wider community	To enhance teaching and learning through use of the latest technology, particularly in disadvantaged areas. To improve attainment levels through the use of that technology. Also to reduce truancy rates and improve employment prospects. To provide state-of-the-art learning centres in EiC target areas	Provides state-of-the-art learning centres in EiC target areas. Based in major city schools, they will meet the learning needs of pupils and adults in the community		Computers within Reach also focuses on EiC areas

<b>Table 3. Creation of digital resources</b>					
<b>Programme</b>	<b>Client Group</b>	<b>Purpose</b>	<b>Strategic Contribution</b>	<b>Milestones/Targets /Achievements</b>	<b>Links to other Initiatives/Additional Information</b>
NCSL Online	Aimed at national and international community including serving and aspiring head teachers	To support heads in the day to day management of schools, provide information about headship training and leadership development, and to provide 'Talking Heads' for serving heads and 'Virtual Heads' for aspiring heads undertaking the National Professional Qualification for Headship	Enhances school leadership skills, which leads to raising standards	Website receives on average 30,000 visits a month	Links to Talking Heads, fast track trainee teachers' online community, and National Professional Qualification for Headship (Virtual Heads)
Curriculum Online	Teachers	To promote effective teaching and raise standards by giving teachers and learners easy access to the next generation of media-rich learning resources	Help stimulate the market and create a world-class content industry	Portal to go live Sep 2002	Launched in December 2001 by PM and SoS. Initial phase due to go live Sep 2002
NGfL Content Development	Teachers, pupils, learners	To encourage content development and to improve and maintain the NGfL portal	To stimulate the market and create a world-class educational software content industry	A new-look portal was re-launched in January 2002, together with a new, faster search engine. Content is now double that in 2001	
Key Stage 3 pilots	Pupils at KS3	To deliver online courses in Maths, Latin and Japanese for Year 7 pupils	To deliver three high-quality, innovative and interactive courses for students at Key Stage 3, and to improve the understanding of the contribution that ICT can make to teaching and learning	The evaluation of the pilots has been completed and there were overwhelmingly positive comments, from both teachers and pupils, of enhanced levels of motivation to learn	Any further developments to be complementary to Curriculum Online
e-Universities	HE students in UK and abroad	To deliver top quality, full degrees and other HE qualifications over the Internet	Helps makes the UK an effective competitor in the global HE market. Also helps the social inclusion agenda through non-campus based delivery of HE programmes	October 2001: Operating company, UK e-Universities Worldwide, established. Autumn 2002: First courses expected to be available	Institutions and private sector partnership. External partners: UK e-Universities Worldwide; HEFCE

**Table 3. Creation of digital resources**

Programme	Client Group	Purpose	Strategic Contribution	Milestones/Targets /Achievements	Links to other Initiatives/Additional Information
Proof of concept trials of digital broadcasting materials	Teachers, pupils and independent learners	To create materials to support pupils taking GCSE programmes of study, that could be delivered through a digital broadcasting service	To pilot the development of a rich variety of digitally broadcast learning materials for GCSE subjects	The trials have now been completed and evaluated. Many useful lessons have been learned, but it has been decided to discontinue the competition	Linked to the NGfL.
NESTA FutureLab	Teachers and pupils	A centre to research and develop new and innovative technology	To act as a catalyst for the development of blue-sky creative research to complement existing ICT-based learning	To produce prototypes by 2004	
Montage project	Teachers and pupils	To develop stimulating and innovative online projects through teachers collaborating with their international colleagues	To contribute towards resources on the NGfL	To hold two UK teacher and partner-focused workshops in February 2002, followed by the creation of 20 primary school projects	Website created by the British Council Education Training Group
Grid Club	Pupils	To provide a fun learning resource for pupils aged 7 to 11	To motivate pupils' learning in a fun and safe environment	Grid Club was launched in January 2001, and has since achieved three awards for its development of innovative educational materials	Linked to the NGfL
Parents Online	Parents	To demonstrate to parents the wealth of educational content available online today	To increase the awareness and confidence of parents' use of the Internet, and in turn to aid their ability to support their children with their ICT use at home	Parents Online had its second event week in November 2001, with over 500 schools, libraries and UK online centres taking part. Plans for a similar event in 2002 are currently in train	Linked to the NGfL
National Learning Network Materials	Teachers and students in FE and the wider post-16 sector	To improve access to high-quality online learning resources for the post-16 sector			

<b>Table 4. Good practice and evaluation</b>					
<b>Programme</b>	<b>Client Group</b>	<b>Purpose</b>	<b>Strategic Contribution</b>	<b>Milestones/Targets /Achievements</b>	<b>Links to other Initiatives/Additional Information</b>
QUILT	FE teachers	To provide development in the use of ICT for all staff in FE	Raises standards in FE		Five year programme, started in 1997
ILT Champions	FE staff	To provide training for ILT Champions in each FE college, to disseminate good practice to their colleagues	Increase the effective use and profile of IT and ILT within FE		
National College for School Leadership – Talking Heads	Head teachers	To provide a confidential, online networking facility for heads to share good practice and reduce sense of isolation	Enhances school leadership skills, which leads to raising standards	Around 5,000 heads have registered since the pilot in 1999. NCSL aims to register all heads (25,000), and ultimately all other school leaders, such as subject and specialist leaders	The Talking Heads and Virtual Heads (for aspiring heads), together with an online community for fast track trainee teachers, feature opportunities to debate government policy online with DfES officials. This allows officials to discuss some policies directly with those who implement them, and reduces the perception that Government is impermeable
ICT Research Centre	Policy staff	To investigate the impact of ICT on teaching, learning and employability	Helps ensure future ICT policies are based on sound research evidence		Centre's initial themes will be issues of access to ICT, and the interface between ICT skills and employment

**Table 5. Signposting tools**

Programme	Client Group	Purpose	Strategic Contribution	Milestones/Targets /Achievements	Links to other Initiatives/Additional Information
Cybrarian	The target users for Cybrarian will be those who do not yet use the Internet, and in particular, the socially excluded and disabled	Cybrarian aims to take the fear and frustration out of using the Internet by providing a customised Internet search facility to cater for the individual's online needs – whether these specific needs are due to physical, cognitive or sensory impairments, or to limited ICT skills	It fits into the DfES e-Learning strategy by making ICT accessible and universally available, and stimulating new ways of learning	Pilot during Autumn 2003	UK online Centres, Digital Divide
TeacherNet	Teachers	Provides teachers with single point of access to information and resources. Brings together materials from a range of government agencies	Supports the effective communication of educational strategy and priorities to teachers, providing an online feedback mechanism. Brings policy and practice together in a cohesive structure		Provides focused e-mail updates to over 15,000 registered users
The Parents' Centre Website	Parents	To provide parents with access to useful information and specialist help for specific learning and behavioural needs	Supports parents by providing information such as local performance tables, OFSTED reports, and schools' own websites. Also information on where to go for fun and informative days out		Re-launched 29 August 2001. Redesigned with new graphics and features to make it easier to navigate
Children's Website	Children; supports teachers and parents	Children's element of the Learning Journey	Provides children with an overview of their studies by using the National Curriculum as a framework, for example, through interactive puzzles		BBC Online website called 'Digger and the Gang' was launched by Ivan Lewis on 1 August 2001

<b>Table 6. Teachers/pupils</b>					
<b>Programme</b>	<b>Client Group</b>	<b>Purpose</b>	<b>Strategic Contribution</b>	<b>Milestones/Targets /Achievements</b>	<b>Links to other Initiatives/Additional Information</b>
National Professional Qualification for Headship (NPQH)	Aspiring head teachers	Candidates participate in Virtual Heads – a confidential, online learning and networking environment. They can access learning materials and tutor support online, as well as network with other candidates. They also have the opportunity to debate DfES policy with policy officials, and leadership questions with national and international experts	Enhances school leadership skills which leads to raising standards	Around 5,000 NPQH candidates participate in Virtual Heads, and numbers continue to grow as more candidates enter the programme	Provision of learning material online allows the prompt update of content to reflect changes in DfES policy, and complements hard-copy materials. Virtual Heads is linked to Talking Heads, and both programmes are provided by NCSL Online
Fast track trainee teachers' online community provided by NCSL	Trainee teachers	Community facilitator has developed links to online curriculum material and other resources	Helps raise standards by getting bright trainee teachers into the classroom, who are expected to fast-track to school leadership posts and headship		Online community provided by NCSL Online as part of overall Talking Heads package
ICT Training for Teachers	Teachers who qualified before imposition of the Initial Teacher Training National Curriculum in the use of ICT in subject teaching. School librarians in the maintained sector	To provide serving teachers and school librarians in the maintained sector in the UK with the opportunity to receive training in the use of ICT	ICT literate teachers are key to the successful implementation of the NGfL in the classroom, and measures exist to ensure that, where necessary, teachers have the opportunity to develop their levels of competence and confidence	Latest figure for teachers registered with approved training providers for NOF ICT training is 213,000. Of those, 74,000 have completed their training	Links to National Grid for Learning, enabling teachers to make the best use of ICT

**Table 6. Teachers/pupils**

Programme	Client Group	Purpose	Strategic Contribution	Milestones/Targets /Achievements	Links to other Initiatives/Additional Information
Computer Aided Design and Manufacture	Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM) have become compulsory from Key Stage 3 for all pupils in the revised National Curriculum of September 2000	To modernise the teaching of design and technology	In 1998 Parametric Technology Corporation (PTC) offered the UK government Pro/Desktop software for all schools. With DfES funding, DATA established a pilot project in English schools and a support programme based on CAD/CAM hubs. Over two-thirds of secondary schools now have access to design software		DfES is providing £200,000 in 2001 to 2002 (on top of over £1 million already spent) for modernising the teaching of Design and Technology in schools. Teachers receive training in use of CAD/CAM in the classroom, plus free software, donated by industry, for use in school
European Schools Network	School pupils	Promotes use and development of ICT in European schools	Improves skills of pupils by means of a multimedia communications network		Multimedia communications network provides a framework for collaboration across schools in Europe
KS3 strategy ICT strand pilots	School pupils in Years 7, 8 and 9	To improve the teaching of ICT for 11 to 14 year olds	Focuses on strengthening teaching and learning in ICT as a subject in its own right	Milestones: by 2004, 75% of 14 year olds will achieve level 5 or above. Targets: by 2007, 85% of pupils will achieve level 5 or above	As part of our wider strategy to raise standards at KS3, ICT will be taught as a discrete subject in its own right
Education Action Zones (EAZs)	Teachers and learners, particularly in areas of social exclusion	To raise standards and quality of learning and teaching. Tackles social exclusion	Raising standards through an innovative range of programmes focused on: i) improving the quality of teaching; ii) improving pupils' study skills; iii) support for pupils; iv) support for families; v) tackling social exclusion; vi) working with business and other organisations		Not primarily an ICT initiative, but includes use of ICT both for working within the EAZ and sharing ideas beyond it. Joint funding with private sector
ILT training and support in post-16 education	All staff in FE, ACL, specialist colleges	To provide a needs analysis and coherent strategy for IT and ILT training for FE, ACL and SC staff – tutors, managers, administrators and technicians	To ensure that staff have the necessary skills to maximise the benefits of new technologies, and embed IT throughout the college or institution	Institutional Support Task Group (ISTG) to deliver strategy document to LSC/DfES, spring 2002	

<b>Table 7. Women</b>					
<b>Programme</b>	<b>Client Group</b>	<b>Purpose</b>	<b>Strategic Contribution</b>	<b>Milestones/Targets /Achievements</b>	<b>Links to other Initiatives/Additional Information</b>
All-girl computer clubs	Girls aged 8 to 14 years	Will create a virtual learning environment in which girls can develop both hard and soft skills	There will be access to online resources that will hold innovative learning material to inspire girls, improving the image of ICT as a career	Feasibility pilot completed. SEEDA to take forward pilot implementation	An initiative recommended by the Feminising ICT Taskforce – a partnership between DfES and the Cabinet Office Women's Unit. It will encourage girls to study ICT and take up ICT careers in the future
Women in IT	Women	To make ICT more attractive to women	Will encourage women to study ICT-related courses, and encourage more women graduates from both ICT and non-ICT disciplines into ICT careers. Latest work considers other groups such as women returners, New Dealers and non-graduate recruits		Conference held January 2002. A series of workshops currently being planned for later in the year

**Table 8. Jobseekers**

Programme	Client Group	Purpose	Strategic Contribution	Milestones/Targets /Achievements	Links to other Initiatives/Additional Information
Worktrain	Jobseekers	Worktrain provides access to jobs, training opportunities, career profiles and childcare provision	The site links together ES Job Bank, the learndirect site, and ChildcareLink, to provide a one-stop shop for jobs, training, careers and local childcare provision. Users can access the site wherever there is access to an internet PC – for example in libraries, careers advice centres, and UK online centres. Pilots underway with Consignia and Lloyds Pharmacy, providing worktrain information in their premises	Average of 8,000 daily visitor sessions in January 2002. Winner of British Computer Society Award for IT, November 2001	Data provided by ES Job Bank, learndirect and ChildcareLink. Worktrain provides the life episode 'Looking for a job' on the UK online site. Links also provided to over 150 other websites. Proposals to make worktrain information available on interactive digital TV
Ambition: IT	New Dealers	Ambition: IT is a new Government-business partnership that will provide 5,000 new IT job opportunities for the unemployed	Three strands of Ambition: IT are: Career Ambition – technician training pilot in five cities to place 5,000 individuals into the ICT sector for the coming three years. First Ambition – £15 million for training New Dealers, over the next three years, to the European Computer Driving Licence standard. In five pilot cities, starting in October, helping 15,000 in its first year. And Challenge Ambition – £2.5million allows New Deal providers to bid for resources to try out innovative ICT solutions		Links with the private sector

<b>Table 9. Disadvantaged communities</b>					
<b>Programme</b>	<b>Client Group</b>	<b>Purpose</b>	<b>Strategic Contribution</b>	<b>Milestones/Targets /Achievements</b>	<b>Links to other Initiatives/Additional Information</b>
The National Learning Network (NLN)	Hard-to-reach learners in community locations	To extend the benefits of NLN to the ACL sector	To improve the ILT infrastructure in the ACL sector and make content freely available to providers		NLN, UK online, libraries, schools, Laptops Initiative
UK online centres	Target hard-to-reach people in disadvantaged communities, to encourage them into learning and to gain ICT skills	UK online centres support the Government's strategy to provide access to ICT and the Internet to all who want it	They aim to bridge the gap between those in society who have access to ICT and those who do not	Our policy commitment is to have 6,000 UK online centres across England by the end of December 2002	In addition to the 2,840 centres funded by CMF centres, 3,000 libraries and over 1,500 existing IT centres will be branded as UK online centres

**Table 10. All learners**

Programme	Client Group	Purpose	Strategic Contribution	Milestones/Targets /Achievements	Links to other Initiatives/Additional Information
University for Industry (Ufi Limited) and learndirect	learndirect is aimed at the entire adult population – both employed and unemployed – but its initial priorities are basic skills, IT skills at all levels, and business skills for SMEs	learndirect aims to provide advice for up to 2.5 million people a year by 2002, and to stimulate demand for up to 1 million courses and learning packages a year by 2003	Uses modern ICT to broker high quality online learning products, and makes them available at home, in the workplace, and at learning centres nationwide. learndirect is playing a key role in improving the nation's competitiveness by raising peoples' skill levels and employability		Links with UK Online centres
Union Learning Fund	Union members	To promote activity by trade unions in support of the Government's aim of creating a learning society	Effective and sustainable activity by trade unions and their partners, which promotes learning in the widest sense, and builds a strategy for competitiveness, employability and inclusion		
Prisons ICT learning programme	Prisoners in up to 18 prisons	Public-private sector partnership with CISCO and NACRO to establish about 1,500 learning opportunities for prisoners and ex-prisoners to gain ICT skills, continue learning, or gain work on release	Test and develop models for ICT learning for wider roll-out in prisons, which helps meet basic and, where appropriate, advanced ICT skills needs in this hard-to-reach group of individuals. Contributes to Government strategy to reduce re-offending	1,500 places in up to 18 prisons	Will contribute to PLSU ICT strategy for prisons. Links to be made with mainstream learning programmes like New Deal and FE
Skills for the Information Age	Jobseekers, prospective employees, and employers	A strategy to address shortages of ITEC professionals	Addresses the skill needs of ITEC industries, for example, the image of ITEC employment, careers information, and improving labour market information		Supports the work of the ITEC Strategic Group of National Training Organisations (NTOs) External partners: e-skills UK

<b>Table 11. Advanced skills</b>					
<b>Programme</b>	<b>Client Group</b>	<b>Purpose</b>	<b>Strategic Contribution</b>	<b>Milestones/Targets /Achievements</b>	<b>Links to other Initiatives/Additional Information</b>
Centres of Vocational Excellence (CoVEs)	New entrants and employees wanting to increase skills	CoVEs will develop new, and enhance existing, excellent vocational provision, which is focused on meeting the skills needs (primarily at level 3) of employers: nationally, sectorally, regionally and locally	To strengthen FE's relationships with employers, so that it can fulfil a central role in developing the workforce for the 21st century	<ul style="list-style-type: none"> <li>● 16 Pathfinder CoVEs announced in July 2001</li> <li>● Extension to non-FE announced March 2002</li> <li>● First main roll-out CoVEs announced April 2002</li> </ul>	Anticipate there will be about 10 to 15 CoVEs specialising in ICT. All will have links with neighbouring New Technology Institutes (NTIs) – in most cases they will be formal partners. ICT CoVEs will also have links with DTI's University Innovation Centres and Manufacturing Advisory Service
New Technology Institutes (NTIs)	Full-time and part-time students and people in employment	NTIs will provide ICT and other advanced technology learning programmes, and work closely with local SMEs to ensure they have the know-how to apply advanced technologies	Announced in the government White Paper on enterprise, skills and innovation: Opportunity for All in a World of Change, in February 2001. NTIs will form part of a major new network involving University Innovation Centres, based in every region. They will boost the level of R and D, innovation, and technology transfer, and will provide regions with the skills in ICT and high technology they need	The Government is investing £25 million from the Capital Modernisation Fund (CMF) over two years 2002/03 and 2003/04, to establish two NTIs per English region	NTIs will foster collaboration between higher and further education, widen participation in higher education, and help to meet regional and labour market requirements by making appropriate links with Centres of Vocational Excellence (CoVEs), University Innovation Centres (UICs), the Small Business Service, (SBS), manufacturing Advisory Service (MAS), and RDAs. It is expected that the first NTIs will become operational in autumn 2002, and that all NTIs will become fully operational in autumn 2004



## Annex D

# Future Funding of Distributed and E-learning

### Introduction

1 We wanted to see in place a funding method which allowed the learner and the provider to choose the mix of learning methods which most suited the learner's needs. We did not want that choice driven or constrained by the apparatus of the funding system. Most learners will follow programmes which combine a variety of delivery methods in the approach described in the report as 'blended learning'. It followed, we believed, that the funding system should neither favour nor discourage e-learning in the long term. In the short term, however, there was a need to apply capital and revenue funds to develop capacity as identified in local e-learning strategic plans.

### The formula approach

2 The LSC was working through a process of harmonising the different funding approaches applied by its predecessors in the four main sectors (further education and sixth form colleges; workplace learning; school sixth forms; adult and community learning). The process was not complete, but it was fairly clear that the heart of the funding method would be a formula-based methodology which:

- a was calculated on the basis of individual learners (rather than cohorts or the whole institution);
- b attempted to pay the average actual cost of providing the programme;
- c expected a significant contribution from the learner or his/her employer – with exemptions in specific cases;
- d rewarded good performance through an element payable only for success;
- e reflected the additional costs of reaching learners in socio-economically deprived areas; and
- f allowed for special costs associated with an individual's exceptional additional needs to be recovered.

### How is the 'Actual Cost' Determined?

3 The LSC's formula identified two key variables driving the cost of a learner's programme – its length and the curriculum area. Longer programmes were considered to cost more than shorter ones, all else being equal, and some curriculum areas (for example, construction) were judged to be more costly to provide than others (for example, business studies). For conventionally delivered taught programmes, the length of time the programme is taught is broadly the same as the length of time the learner spends learning. The 'taught' time is taken to be the key indicator of its length, which is measured as 'guided learning hours' (GLH). Here, potentially, is one of the differences with DEL – there is no necessary correlation between the learner's study time and the tutor's teaching time.

4 Even in traditional delivery, the GLH varies between providers, and sometimes between individuals. For college courses, the LSC and its predecessor aimed to calculate a normal length of a programme so that a standard funding value could be attached to it. For courses leading to a nationally recognised qualification, a standard value was derived from a statistical analysis of the evidence of actual GLH used by providers. This value was then used to calculate the funding applied to a programme, regardless of how many hours it was actually taught in individual cases.

### Are the costs of DEL different?

5 We received a number of submissions which criticised the existing funding methodology as being unsuitable for DEL, but received none which proposed a substantive alternative. It has been advanced by the exponents of DEL – e-learning providers in particular – that its cost structure is very different from that of 'traditional' delivery. It is typically asserted that DEL costs are capital intensive, involving a large investment in materials development, equipment acquisition and the like, with the subsequent running costs being relatively lower. This is frequently contrasted with what is seen as the conventional FE model



in which the largest, and relatively continuous cost is taken to be the salaries of lecturers.

6

FEFC, and, later, the LSC, found it difficult to support or refute with evidence any of the assertions made about DEL. A study commissioned by FEFC from BKL Weeks in 1999 failed to produce any authoritative evidence, largely because the consultants could find few genuine examples of distributed and/or electronic learning delivery. A more recent study by PricewaterhouseCoopers was more useful (see [www.nln.ac.uk/delg](http://www.nln.ac.uk/delg)), though it concentrated on the cost implications of learndirect-style provision and attempted to contrast that with traditional delivery approaches. That study pointed up some potential and large discrepancies between the costs of delivering Skills for Life programmes and the funds currently applied to them. It did not challenge the basic logic of the funding formula or propose any alternative.

7

DEL providers have argued that the guided learning hour, as defined by LSC, is not relevant for DEL delivery. Time invested in the development of materials, establishing infrastructure, and setting up and running administration systems is, they say, ignored by the Council's system as it is not reflected in the reduced amount of lecturer input. Nor is it appropriate to judge the costs of DEL as rising linearly with increasing GLH. In this model of funding learning, learners provided with lots of quality materials but no 'guided learning' would attract no funding at all.

8

The very definition of 'guided learning' can have a substantial impact on the funding of DEL. It is often interpreted by college managers as referring to learner time supervised by lecturers. In fact, the definition encompasses any time when a staff member is present to give specific guidance, and it includes supervised study in open learning centres or learning workshops. It does not include time supervised by administrative personnel.

### Key elements of the approach recommended by the DELG

9

We accepted that the LSC's funding formula should be 'mode free', that is, it should not establish a different funding formula for distributed or e-learning.

10

We noted that the Council had long-established arrangements for standard values for programmes leading to nationally recognised qualifications. The Council had also extended this approach to the courses offered by learndirect, which do not have externally accredited outcomes. We believed that this provided the basis for a consistent funding system applied to all providers offering DEL, as follows:

- a Programmes wholly or partly delivered using DEL methods would be funded at the standard level, if that programme was listed in the Council's qualification aim database.
- b Programmes delivering single or multiple units of a listed qualification aim should receive the relevant proportion of the full value of the listed qualification.
- c Programmes which had no full or partial analogue in the qualification aims database should be valued by the provider, and a figure should be proposed by them, with the costing calculation, to the LSC. This would be agreed, subject to a basic plausibility check, but the provider should expect that the costing base would be subject to examination by the auditors.
- d Some of the funding of DEL should not be formula driven. There are specific initial costs of providing the necessary physical resources which are unusually high for e-learning. Some of these would be met through the current NLN funding stream, but others would not. We believed that the Council would need to make some capital funds available to overcome the barriers to entering the e-learning market place.
- e Capacity building is not just about providing hardware. Establishing the organisational structure and the staffing, providing training and development, acquiring the learning materials, are all examples of non-capital additional costs.



11

We wanted to see the development funds distributed via local LSCs, and used by them to establish the pattern of providers and provision set out in the local Council's e-learning strategic plan. The total resources required to support capacity building in this way are difficult to evaluate before the planning had been undertaken, but an initial estimate suggests figures of the order of £50million to £80million per year.

## Annex E

# LSDA Summary of Evidence

### A summary of the response to the DELG's call for evidence

A total of 83 responses were received by e-mail, post or the NLN website. These came from: further education and sixth form colleges (39%); specialist or other providers (6%); universities or other HE institutions (11%); LEA or adult education providers (10%); Ufi Limited or LSC (5%); suppliers of materials, support or consultancy (21%); and other stakeholders (8%). The answers to a series of open-ended questions are summarised below.

#### **How does DEL promote social inclusion and widen participation in education?**

DEL contributes to these objectives by taking learning out into the community and providing an alternative to the environment that alienated many learners. It also enables housebound learners to participate and delivers workplace training. However, DEL can hinder social inclusion because the target groups are those least likely to have access to the technology, and are those less likely to be highly motivated to learn. DEL alone is not the whole answer as participation in education is a complex cultural issue.

#### **How can DEL help the LSC promote the benefits of learning to young people and adults?**

The up to date image of the technology is the major attraction for the younger learner. For adults the key advantage is the flexibility DEL offers. A combination of a 'pull' strategy from the employment market with a 'push' strategy through making learning 'fashionable' is required to convince young people. The LSC could target potential clients with advertising materials. Initial free access is essential to give users a taste of what is possible.



### **What geographical, physical, social or psychological barriers does DEL remove or create?**

Delivery at a time and place to suit the individual automatically removes many barriers. Learning centres can be attractive social as well as learning environments. 'Bite-sized' taster courses can reduce fears of technology, and learning in small steps, without the pressure of tests or examinations, can build confidence. DEL can remove fears of getting answers wrong in front of others, and automatic, specific intervention can be provided when the learner is doing either well or poorly. ICT can be a barrier for adults accustomed to learning in a classroom. DEL can add to feelings of isolation or frustration, and learners with disabilities or learning difficulties may be further excluded by DEL.

### **What advice and guidance arrangements are needed, and how should they be provided?**

Face to face contact is essential, even for those who are fully competent e-learners, and induction is required. Much information and advice and guidance can be provided online, together with online mentoring and tutoring. E-groups for learners can encourage the development of learning communities, which become self-help groups and improve motivation and retention. It is critical to have learner support for those with learning difficulties.

### **What distinctive contribution can DEL make to developing the skills of the workforce?**

Training opportunities in the workplace, and flexibility, are the main contributions of DEL. For businesses, demand for new learning is often triggered by concerns about short term performance, for example, problems with sales, production, service efficiency or quality. Therefore the most valued form of training is that delivered in the context of the problems and the tasks faced, with the minimum amount of time away from the job. DEL should provide 'the know-how to solve problems on a need-to-know basis'. The time saved by on-site training is especially helpful for small and medium enterprises (SMEs). The ability to tailor training to specific requirements is also important.

### **What are these skills?**

Specific vocational skills can be delivered via DEL, as well as generic skills such as literacy and numeracy (basic skills),

ICT skills, research and report writing skills, presentation skills, health and safety and legal knowledge. DEL can also be applied to 'soft skills' including customer care, teamwork, initiative, interpersonal skills, communication skills, appraising/interviewing and upskilling the workforce to cope with and contribute to the knowledge economy. Some respondents feel there is too much concentration on ICT skills delivery. Others believe the key skill is learning how to learn most effectively in a digital and networked world.

### **To enable development of a world-class workforce, what is the role of assessment and qualifications?**

Assessment and qualifications offer employers comparability, national standards and assessment of individuals' abilities. However, many employers consider skills acquisition more important than qualifications. Some providers report, however, that most of their learners seem to want a qualification and expect to be assessed. For employees, assessment and qualifications provide confirmation of competence and facilitate career development by providing transferable outcomes.

### **What changes to assessment and qualifications are necessary, if any?**

Assessment and qualifications need to be more flexible and more appropriate to the needs of individual learners and to the learning medium. Modularisation enables learners to build up qualifications in small chunks over time. Simpler, more flexible and transparent systems of international recognition are required. These should allow learners to achieve credit for learning in many formats and against recognised qualifications. There is a need to improve mapping between qualifications in agreed national and international frameworks. Assessment of DEL learning should be online, although there can be problems with authentication. Computer-aided assessment should enable new forms of assessment, for example, assessment of collaboration, or of the processes in reaching a result. This type of assessment could help to make courses more relevant to employment.

### **How can the distinctive characteristics of DEL be accommodated within a universal funding methodology?**

Any universal methodology must be neutral and not favour one type of delivery over another, suggesting a methodology based on outputs. Suggested changes include funding of modules or 'chunks' of learning. The concept of 'guided learning hours' is difficult to apply in DEL. Supporting paper records are considered to be unnecessary, and it is suggested that it should be possible to generate funding electronically and transfer it automatically to providers. Separation of funding of infrastructure, content, and delivery would allow economies of scale in infrastructure and mass market content, while maintaining enthusiasm and excellence in low-volume content and specialist or local support. Breaking down artificial barriers between capital and revenue funding would help. One respondent observed that the Ufi Limited system of funding could be used as a starting point, although it requires further refinement.

### **How are the costs of DEL to be recognised and compared with other delivery forms?**

DEL is not cheaper, and many DEL costs may be hidden, including set-up costs met from special funding initiatives, tutor support, and the cost of maintenance and upgrading of equipment. Development of high quality DEL materials is very expensive, and several respondents call for additional funding for colleges to meet these costs. Others claim that good materials reduce the amount and cost of tutorial support required. Some believe initial development costs may be recovered over time as more learners and new audiences are attracted, and because of ease of updating.

### **How are the interests of the taxpayer to be safeguarded, and how should this be balanced against the monitoring burden on the learner and provider?**

Audit is vital to ensure value for money, but accountability structures should be in-built without being too complex. Monitoring and audit burdens for DEL are seen as excessive, and based on inappropriate classroom-based models. There are opportunities to cut the bureaucratic burden through electronic data capture. However, there is a need to ensure that DEL is actually widening participation and not being developed just because the technology exists to make it possible.

### **What financial advice and support arrangements do DEL learners need which are different from other learners?**

More one to one support is needed for DEL compared with traditional learning, and this needs to be provided in a flexible manner. DEL learners need to be made aware of additional costs that they may incur when acquiring and using equipment and services. However, it is suggested that some key questions are the same, for example, 'Can I afford the fees?' (where these apply), 'Do I have the time?' and 'Do I have the commitment?'

### **What DEL delivery systems are there now or in the near future, and what are the distinctive features?**

Few respondents answered this question directly. Most feel that the systems are too many and varied to detail, that they are fully documented elsewhere, or that it is not possible to provide an accurate answer as the market is changing so rapidly. Some commercial companies and colleges saw this question as an opportunity to promote their own products or systems. Internet enabled game consoles, TV set-top boxes, mobile phones and handheld computers, are all mentioned as having potential to increase or widen participation in learning. VLEs are seen as an important component, but there are too many platforms and there is not enough interoperability. DEL environments can and should be used to support peer-to-peer or collaborative learning. Whiteboards and other 'whole class' teaching tools can also be used to promote discussion, interactivity and group working.

### **Is the technology out there to deliver in reality the benefits claimed for DEL?**

Overwhelmingly the answer to this question is 'yes, but...'. A few respondents say 'no', and some qualify this response with additional comments such as 'Technology always lags behind expectations', or 'We are not quite there yet'. Many respondents describe key problems including: inadequate bandwidth; fragmentation of purchasing; lack of investment in infrastructure; lack of design and development guidelines to promote inclusion; lack of learner IT skills; doubts about learners' ability to utilise the technologies appropriately; lack of a DEL learning culture; inadequate technical support and the cost of technical support.



### **Is there enough of the right kind of content to meet the needs of all LSC learners?**

Overwhelmingly the answer is 'no' (only 11% say 'yes' or 'probably/maybe'). A great deal of content exists, but much of it needs customising; is badly designed; is merely re-worked paper material not exploiting the potential of ICT; does not cover the whole curriculum; is not accessible to people with disabilities or basic skills difficulties; is learendirect material and therefore not available to all learners; is difficult for learning providers to find (meta tagging would help); and/or is too expensive. Some respondents observe that there will never be 'enough' content in a dynamic system. Others suggest that there is ample content to start dramatically expanding the use of DEL.

### **What learner support arrangements are necessary?**

Tutor support is essential and should include face to face contact as appropriate. Support by subject specialists is important and mentors can be very helpful. Induction, initial assessment, and guidance are important and technical support is critical. Support to enable learners to participate, including funding for fees, childcare, exam fees, travel, and so on, is necessary. The Open University (OU) suggests as a principle that learner support systems should be based upon customer preference. They also warn that the swifter responses to learners enabled by ICT can raise expectations, and that these have to be managed.

### **What staff development needs are there, and how should these needs be met?**

The majority of respondents, from all kinds of organisations, consider staff development to be critical. The specific development needs identified were:

- how to access appropriate electronic resources and introduce them to learners effectively;
- online or distance learning tutoring or e-tutoring, mentoring, guidance and counselling skills;
- use of VLE systems, some content-creation training, and continuous updating;
- collaborative action research projects, developing content at the same time as developing skills; and
- generic disability awareness training, and specific assistive technology training.

Technical staff need training to support managed learning environments (MLEs) and networks in order to ensure reliable and secure delivery. Managers need to be aware of human resource (HR) implications, staff development needs, flexible working patterns, funding processes, and the importance of customer orientation associated with DEL. Teaching staff need the time to develop their skills and expertise, plus opportunities to share good practice and to network with others. Delivery of staff development via DEL is suggested to give staff the first hand experience similar to their learners' experiences. Administrative staff, managers and policy makers should also be encouraged to take part in DEL learning, in order to gain a better understanding of the potential and the issues. Specific staff shortages are identified, namely: qualified instructional designers; 'hybrid' people (that is, those with both educational and technical expertise) to develop content and support learners; and staff who are skilled in supporting learners whose first language is not English, and/or have poor literacy or numeracy.

### **How do quality standards for DEL differ, if at all, from those which exist (or are needed) for traditional forms of learning?**

The consensus of opinion is that quality standards should not differ but should apply equally to all learning provision. They also need to be just as robust as existing systems and to be integrated rather than parallel systems. However, inspection and audit regimes need to be revised, and opportunities developed for inspectors to observe aspects of DEL delivery online. Some argue for a tighter monitoring process including attendance, learner/tutor communications, progress tracking and achievement. The suggested focus was on outcomes and retention, although measurement of retention is recognised as being difficult. The quality of the learning materials is paramount where these are used to deliver the learning, and not just as support materials for tutor-led delivery.

### **What evidence is there that these forms of learning delivery are effective and efficient?**

Most respondents feel that there is little clear evidence available regarding the effectiveness and efficiency of DEL. Some suggest that the numbers of new learners indicates a clear demand but that achievement can be very poor.

It is suggested that quite a lot of evidence of both success and failure is available within the armed forces and industry. Learning to Teach On-Line (LeTTOL) claim their programme is run within the same budget constraints as standard provision, has a satisfactory completion rate, and external moderation reports confirm both high quality and significant gains by learners. The OU has evidence from student performance and feedback that high quality distance learning is effective and efficient when delivered in a supported learning environment.

#### **How, if at all, are the learning outcomes for DEL learners different from others?**

It is generally felt that outcomes do not differ significantly. However, learners are in control of their learning and the outcome is what the learner wants and is not necessarily a qualification. Where an employer uses DEL to assist in the resolution of a business problem, the outcomes of successful learning may be changed organisational or individual behaviours and/or improved business performance.

#### **If DEL learning outcomes are different, how are they measured and evaluated?**

There is no consensus of opinion in answers to this question. The OU says many outcomes can be assessed through traditional methods, online activity can be moderated and tracked, and portfolio assessment might be used for skills which have been developed without formal oversight or supervision. The following methods or tools are mentioned by other respondents: individual learning plans; value added schemes; participation rate targets; access to specific target groups; credit accumulation; and online assessment undertaken as an integral part of the learning process.

#### **How, practically, can learning at a distance be inspected?**

Most respondents anticipate some degree of difficulty regarding inspection. Suggestions for means of inspection that could be used include:

- a spot checks and robust audit functions;
- b examining other quality processes such as internal verification, appropriateness of learning materials used, tutor support models, and so on;

- c sampling and surveying of individual learners, with as much (or more) emphasis on personal attitudes and learning skills as on the particular learning currently being undertaken;
- d a programme of meetings with students/trainees as part of the inspection process;
- e telephone or email dialogue with learners and tutors;
- f examining records of learners' work, and of learner/learner and learner/tutor dialogues;
- g examining pass and completion rates;
- h reviewing external moderators' or equivalent reports; and
- i assessing the management processes which support a particular piece of DEL provision.

One inspector suggests specific training and support for inspectors to enable them to make and apply consistent judgements about the quality of distance learning provision. Another respondent notes that DEL offers the great advantage of allowing sampling of the learning experience directly, without the distortions that usually arise in traditional tutor/class observations owing to the physical presence of the inspector.

### **Key Messages from the Literature Reviews Carried out by the LSDA on Behalf of the DELG**

#### **Evidence**

Over 500 relevant, or partially relevant, documents were identified by online searches carried out in late 2000 to early 2001. The main criteria for inclusion were that studies should focus on 'learners within the LSC remit' and that they were published 'within the last 10 years'. In some cases, studies which did not satisfy both of these criteria (for example, a few focusing on school age learners) were included as they were considered clearly relevant. A smaller subset of the identified documents were judged to contain evidence of interest to the DELG, and these were reviewed in depth in relation to: DEL and workforce development; inclusion and widening participation; systems and content; quality and funding.

The studies identified generally illustrate a strong belief by educators and policy makers, in the UK and overseas, that the use of information and communications technologies



(ICT) in education and training has the potential to deliver positive benefits for learners and society. It is suggested that distributed and electronic learning (DEL) can improve access to and support of learning, motivate learners, improve achievement and increase participation in lifelong learning. There is some research evidence to support these conclusions. However, many educators appear to have been convinced mostly by their own experiences in teaching and learning situations, whilst policy makers may have, at least partially, based their conclusions on observations of the significant role ICT has played in changing other sectors of our society, and on the willingness of commercial companies to invest in DEL.

#### Effectiveness of DEL

Many studies have considered the effectiveness of DEL, but few of these could be said to provide the type of proof or solid evidence of effectiveness which the LSC sought on behalf of DELG. Most of the research identified by the review is essentially qualitative. Many of these studies provide valid and interesting data about the experiences of (often quite small) particular groups of learners. Taken individually, it is difficult to categorise these as reliable evidence, as it is not possible to generalise from them to larger populations of learners. However, taken as a whole, it might be argued that there is a substantial body of work that suggests the use of DEL may provide significant benefits to individuals and society.

Where controlled experiments have been carried out in the education sector some positive and reliable evidence has emerged, including:

- groups of online learners achieving higher scores in tests compared with the control group taught in a traditional classroom;
- overall achievement the same or better for online learners compared with a control group; and
- better retention for those involved in collaborative electronic learning.

However, qualifying messages also emerge from these studies.

- In some cases, retention was worse than for the traditional learning control group.
- Researchers felt that many of the positive effects noted may have been due to the different pedagogy employed,

as well as (or rather than) the use of technology. Collaboration between learners was identified as very significant to progress and achievement. Strategies of minimal rote tuition, and a focus on raising learners' motivation to explore topics at their own pace, were also found to be important.

Where commercial companies have introduced DEL to replace traditional training courses, direct comparison between the two approaches is possible. This provides evidence that DEL:

- can train more employees quicker;
- can reduce off-the-job time;
- allows standardisation of delivery;
- supports just-in-time and just-what-I-want approaches; and
- can result in better knowledge retention by trainees.

Also, where very large numbers of staff require the same training, economies of scale can result in cost savings compared to traditional delivery.

Other benefits suggested included:

- a belief that application of theory can be reinforced more effectively by the reality of learning in the workplace;
- that simulations and modelling allow realistic observation of processes too rapid, too slow, or too dangerous to observe in real time;
- a breaking down of the barriers of stigma which are a common problem in basic skills and ESOL teaching.

#### Pedagogy

Regarding pedagogy, although few studies focus on this area, many writers perceive a trend in educational practice towards learner-centred, or constructivist, approaches. Some argue that this trend is more important than the trend towards greater use of technology. It may be that DEL, which often includes an emphasis on learning in 'bite-sized chunks' and tailoring education to individual learners' needs, is particularly well suited to supporting a constructivist approach. Some researchers argue that the full potential of online learning is not being realised because too much of the pedagogy of online learning has been transferred unreflectively from didactic traditional teaching. Some studies suggest critical success factors for DEL, including:

- use of DEL to help confidence building, motivation and learning, not just delivery of subject knowledge;
- applying technology to assist achievement of learning objectives, and not adapting learning to suit the technology used;
- a well-structured approach, proceeding incrementally and allowing for progression; and
- consideration of individual and group learning styles and preferences.

There is a consensus that DEL should provide a full range of educational services and alternative learning resources for learners with disabilities and learning difficulties. Research has found that not all current hardware, software, systems, learning tools and online programmes are designed with the varied requirements of people with special educational needs and disabilities in mind. Adapting this technology can be a costly process, and consideration of how these costs could be met is suggested.

### The learner

There is much in the literature concerning the motivational effects of DEL, and there is evidence of improvements in achievement. However, some studies suggest that this may often be due to the novelty effect of a new and engaging teaching method. There is evidence that in some cases, once the novelty effect has worn off and the learners develop a familiarity with the medium, there seems to be little embedded change. The success of individual e-learners has been found to be influenced by the learner's readiness for self-directed learning, their competence with study skills and their motivation, as well as the learning context.

### Resource and staff development

Human interaction emerges as a key factor in many studies that try to identify critical successful factors for DEL. Both online and face to face tutoring, and peer-to-peer support, are identified as important, as is some social interaction. The importance of human interaction suggests to many writers a need for staff development. There is evidence of effective staff development initiatives in the UK FE sector and an identified need for further work to build on these.

Evidence from evaluation of the Quality in ILT (QUILT) staff development programme, and the National Learning Network Innovative ICT projects, indicates that college based development projects are a particularly effective form of staff development.

Further consideration needs to be given to appropriate strategies to help ensure adequate supplies of electronic learning materials. Studies reviewed suggest that DEL offers the potential to make:

- higher quality content more cheaply available;
- content which promotes analysis, synthesis and evaluation, thus producing improved results; and
- more visual content, better suited to people who are not at ease with the written word.

However, there are counter-considerations.

- High quality relevant materials are still limited in quantity and scope.
- Some existing materials can be characterised as providing information overload, or content which is 'rich in poor information'.
- Appropriate technologies and pedagogies need to be utilised when developing content.

Key questions arise.

- Should development for the LSC sector be carried out centrally, by institutions, or by consortia – and in each case, how should this be funded?
- At what level of granularity should materials be produced to increase their flexibility and the likelihood of acceptance and use by teaching staff?
- How might the creation of a sector-wide market for sharing developed chunks of material be facilitated?

### Social factors

There is considerable consensus about the potential of DEL in the context of its use to address problems of social exclusion and non-participation in learning, and to provide easier access to learning. There is a related widespread concern about the digital divide, and a fear that existing participation patterns could be reinforced through DEL, as the social groups who make most use of technology are those most likely to participate in learning. The reviews identified many local, national, and international plans and



strategies that seek to increase inclusion in society, and participation in lifelong learning, through the application of ICT to bridge the digital divide. The reviews have also found research that detects some signs of a reduction in the digital divide in the USA with, for example, lower income groups making more use of the internet.

Some studies suggest that DEL is more effective than other forms of learning in promoting social inclusion and wider participation. Alongside this there is some scepticism, either that DEL can promote inclusion, or that there is sound evidence to support this. Some studies conclude that research claiming that distance learning is more effective is seriously flawed and unreliable.

Some studies draw attention to problems, issues and barriers to learning or participation that can arise when DEL is poorly implemented. One writer notes that, 'social exclusion must be recognised as a long-standing social problem which exists and existed irrespective of the development of ICTs'.

Many studies suggest critical success factors for the use of DEL to improve inclusion and participation. These include:

- local availability of DEL for communities or individuals that need support;
- use of 'bite-sized chunks' of learning, and provision of 'first rung' opportunities, to make learning more accessible and manageable;
- development of socio-technical solutions combining social and technical innovation;
- integration of learning, social, and personal development with community development; and
- use of a range of technologies (for example, TV, digital video, mobile telephony, games) rather than just the internet, and use of assistive technologies for learners with disabilities.

The successful use of localised centres, and communities of learners or citizens – particularly 'telecentres' and community networks – emerged from significant studies. The emphasis of these is on DEL being a key component in an overall process of inclusion and widening participation. Many studies concluded that providing a greater supply of opportunities will not in itself succeed if the demand amongst under-represented groups is not increased

through focused and relevant promotion which is concerted, targeted, and continuous. Partnership-based collaborative approaches to advice and guidance through outreach, involving the local community, have shown positive benefits.

### Quality

The reviews did not identify much substantive literature concerned with the quality of DEL at either a macro or a teaching and learning level. What literature there is tends to be focused on the organisation, rather than on practical advice dealing with the learner/teacher/technology interface. No evidence of how DEL teaching and learning is inspected was found, nor were any substantial definitions of what constitutes good or bad DEL provision discovered. Very little literature addresses the question of whether the methods used for traditional teaching and learning are relevant to DEL.

### Funding

Some relevant and authoritative documents were identified on the subject of funding DEL. Some of these are based on research, and rather more draw on the expertise and experience of bodies involved in planning, funding and delivering learning services. Much of the research evidence identified focuses more on costing electronic delivery than on developing strategies for funding this provision.

The studies suggest that funding DEL requires development of:

- methodologies to finance provision for individual learners;
- hypotheses regarding appropriate approaches to the funding of creation, development and maintenance of the infrastructure, systems (including socio-technical systems) and materials which enable DEL to be offered.

There is also a need for:

- clear definition of terms when developing strategies and methodologies;
- careful consideration of underlying concepts such as research and development, unit cost, product, delivery, and distribution.



The current funding methodology for FE colleges requires auditable tracking of learners' achievements, as well as auditing of educational institutions' capacity to recruit and retain learners on appropriate programmes. Electronic lifelong learning – involving learning that may not be linked to traditional qualifications, and accrues in 'bite-sized' chunks, possibly over lengthy timescales – implies a need for more sophisticated assessment and monitoring systems (including managed and virtual learning environments and learner tracking systems) as well as new funding methodologies.

Several reports suggest applying a principle that, where fees to learners apply, these should be the same – and levels of support available equivalent – regardless of the mode of delivery involved.

#### **Costs**

The available research indicates that most UK educational institutions are embracing DEL as an enhancement activity, rather than as a replacement for traditional delivery. The implication, for researchers focusing on costing, is that this reduces the likelihood of significant cost savings. Some sources suggested that distance education can be more costly than traditional education for both the student and institutions. Researchers have found that recurring costs are often under estimated, with analysis of costs focusing on capital investment in development of technological infrastructure. Other areas requiring significant resources to be allocated are the development and maintenance of the content, assessment, induction, and the tracking and support mechanisms.

## **Annex F**

# **Strategic Plan for the National Learning Network**

### **The National Learning Network – A strategic framework for development 2002 to 2005**

#### **Chair's introduction**

1

The purpose of this document is two-fold. It is intended:

- to advise the Learning and Skills Council of the NLN Programme Board's strategic thinking as to how the National Learning Network should be developed to benefit learners throughout the post-16 sector;
- to give all post-16 providers a strategic framework within which to develop their own organisational planning for information and learning technology.

2

It is rooted in work begun in 1999, when the Department for Education and Skills made available funding to facilitate the establishment of the National Learning Network for further education and sixth form colleges. Since that time the DfES has articulated its three strategic aims for information and communications technology, which are:

- a to create an accessible infrastructure which makes ICT universally available to learners;
- b to make ICT integral to all learning processes and to stimulate the development and acceptance of new ways of learning;
- c to create, implement and support a dynamic framework for ICT skills and a corresponding framework for teachers.

Within this set of aims, the NLN Programme Board has set out the issues to be addressed by post-16 providers to enable learners to develop the ICT and e-learning skills that it believes are vital for engagement in modern life, as well as allowing them to fulfil their specific vocational learning aims.



The NLN Strategic Framework complements, but is not a substitute for, the work of the Council's Distributed and Electronic Learning Group (DELG). The work of that group is to advise the Council on how to shape its policy and funding arrangements to ensure the most effective use of e-learning throughout the areas of its remit from the Secretary of State. The DELG is due to report to the Council in July, '02.

### The NLN programme board's vision

This document builds on the Networking Lifelong Learning strategy published in 1999. That strategy was developed for FE and sixth form colleges. We now wish to embrace the whole learning and skills community, including:

- further education and sixth form colleges;
- adult and community learning;
- school sixth forms;
- specialist colleges;
- workforce development;
- work based learning (including Modern Apprenticeships);
- Ufi and UK online centres.

While much of the work, and the development of ideas and policies for colleges will be relevant to the whole enlarged sector, there will be differences within the wider sector which now need to be addressed. In some cases the detailed implications of the needs of learners in organisations other than FE colleges will require further analysis and consideration. Nevertheless, we consider that the broad strategic framework outlined in this draft strategy applies to the whole sector concerned with lifelong learning.

The major types of organisations and the numbers of learners that fall within the Learning and Skills Council's scope are:

Organisation Type	Number	Learners
FE and sixth form colleges	410	3,800,000
Adult and community organisations	200	1,600,000
School sixth forms	1800	300,000
Work based training providers	2000	280,000
Specialist colleges	65	2,300

In addition to these, the Council's remit includes workforce development for thousands of firms. The Learning and Skills Council annual budget is approximately £7billion.

We are now clear that information and learning technology (ILT) has significant potential to deliver key Government and education policies and assist the LSC in meeting its targets. There is a real opportunity here to address the issues of social inclusion and the necessary skills for future employability. ILT offers opportunities for inclusive and differentiated learning, flexibility and access and is perhaps the most powerful tool that learners and their teachers and facilitators have ever been offered. ILT includes, but is wider than, e-learning.

### A holistic vision

The Programme Board regards reliable access to e-learning and the opportunity to develop ICT skills and e-learning skills as a requirement for participation in modern society and an absolute entitlement for learners throughout the learning and skills sector.

'ILT' encapsulates a view that information technology can, and should, be deployed to benefit the extended community of learners who are served by all the organisations within the sector, enhancing all aspects of learning and of organisational structures and systems that support that learning.

Our vision is that within a five-year period:

- a barriers to access to lifelong learning will be progressively removed;
- b all education professionals will be routinely using the full range of facilities that ILT offers;
- c learners will be able to take full advantage of

- learning opportunities regardless of their mode and place of study;
- d learning managers and facilitators will be able to make more efficient and effective use of resources;
- e business and accountability processes will be simplified.

In essence this means that in five years time we look to establish a fully connected national learning community, covering homes, schools, colleges and workplaces sharing:

- a infrastructure;
- b learning materials;
- c learning systems and data;
- d enthusiastic, well trained staff;
- e first class support services;
- f best practice.

The achievement of this vision will be accelerated by the extent to which it is possible to achieve effective collaboration with those in higher education, schools and adult learning communities, the voluntary sector and private training providers. Well articulated formal connection of ILT delivery with inspection, and sector funding frameworks and the e-learning strategies of local Learning and Skills Councils will also be essential.

Due regard will also need to be given to the potential roles of strategic partners including, for example, regional development agencies and to the local impact of national developments such as Ufi/learndirect and UK online centres.

Key to the implementation of this vision is the concept of a managed learning environment (MLE), which presents a systematic view of how learning processes, enhanced by IT, and interacting with the administrative and managerial systems that underpin that learning, can develop within an integrated framework.

The recent LSC/JISC work on the Managed Learning Environment (MLE) concept represents a systematic view of how IT components, such as a Virtual Learning Environment (VLE) or a Student Record System (SRS) – often but rarely accurately referred to as 'the MIS' – might interact with provider processes to support such a learner-centric organisational perspective. The MLE concept focuses on the critical importance of

adopting a standards-driven approach to ILT in pursuit of the interoperability needed for the whole organisation that is supporting learners to become efficient, flexible and effective. The MLE approach is about provider processes and standards, not software products. It offers a framework within which choices about software, training and above all support for learners and tutors can be made.

In those organisations that embrace it, a managed learning environment has the potential to provide a focus for the delivery of the substantial cultural change that is, for many providers of education, necessarily implied in the decision to adopt processes which place the learner at the centre of provider activity. Such cultural change will only be possible with strong leadership backed by robust management methods and procedures.

Further work will be required to develop the MLE concept appropriately for small providers and community organisations, while taking forward its development for colleges and larger providers.

### **Improving access to lifelong learning**

Wherever learning takes place, learners in the 21st century need reliable access to internet connected and robust local area networks.

Much still remains to be done to provide reliable access to adequate ILT provision for adult learners in the community and to assist those engaged in workforce development. NLN Programme Board sub committees are currently engaged in assessing the needs of adult and community learning and specialist colleges for students with learning difficulties and/or disabilities. Their reports will help to shape future planning and development.

While numbers receiving education in specialist colleges are relatively small, the focus of disability discrimination legislation reminds us of the need to cater suitably for those with particular learning difficulties and disabilities whether in mainstream colleges or in specialist provision. A relatively modest investment will be required to address the needs of such learners in specialist colleges, though it will need to be recognised that medium bandwidth



connections will almost certainly prove to be the most economical way to serve smaller groupings of learners.

In developing its initial strategic thinking, the NLN Programme Board set targets for infrastructure developments in FE colleges, focusing in particular on learners' entitlement to reliable access to internet connected and robust local area networks. The latest FE sector ILT Infrastructure Survey suggests that the FE sector now has a much improved infrastructure on which to base ILT developments. For example, significant progress has been made towards Networking Lifelong Learning targets for learner and tutor access to internet connected computers, and virtually all FE colleges now have a good broadband connection to the JANET network.

In FE it is appropriate for the focus of centrally-supported development to move away from ILT infrastructure, to realising the potential of ILT for learning and teaching processes (as suggested by the evidence of the LSDA's NLN Evaluation Report). Work over the next three years should afford higher priority to issues of practice and management, whilst sustaining the infrastructure investment. The focuses for development might best be articulated as 'helping learners to learn' and ensuring ease of use for teaching and learning support staff. This should include access to 'tools' for assembling e-learning materials at provider level.

Particular infrastructure issues to be considered include:

- community connectivity;
- multi-site connections;
- sustainability;
- new technologies.

#### **Community connectivity**

Some funding priority should be afforded for the provision of connectivity to outreach locations, enabling access in rural communities, for 'first rung' provision in deprived areas, and for improving access in work-based locations.

#### **Multi-site connections**

As we have previously indicated, some provision must be made to enable multi-site colleges to improve the level of connectivity between locations.

#### **Sustainability**

Despite the fact that the initial target ratios within FE colleges have largely been reached, we recognise the need for continued investment in order to maintain the currency of existing stock.

#### **New technologies**

It is also imperative that the broader learning and skills community is able to continue to explore the possible role in learning and teaching of newer technologies such as electronic whiteboards, and wireless networking. We envisage that FE colleges will have a key role in exploring the potential of these technologies. In other sectors, where these issues are equally pressing, it may well be that other technologies are of greater significance. In the longer term, we are confident that mobile telephony and digital TV will have increasing potential for e-learning.

#### **Enabling Education Professionals to Embrace ILT**

We recognise that any staff development programme needs to be derived from and fit into a conceptual framework which is learner centred, based on sound pedagogy and effective practice and can be shown to address the broader learning and skills community's current ILT needs. It should also be adaptable to meet the demands of future issues and technologies as they arise. The framework should be based on a standards based approach. Frameworks of staff skills will need to reflect the specific circumstances of delivery and should utilise the FENTO ILT standards or other developing occupational standards applicable to the now enlarged sector.



In particular, staff development will need to address the training needs of teachers, learning support staff and those engaged in management roles, for example:

- ILT practitioners, including:
  - tutors
  - learning resources staff
  - student support staff
  - curriculum ILT champions
  - technical support personnel
  - staff development practitioners
  - governors and managers.

The FENTO framework, which might serve as an underpinning device for staff development across the full range of the learning and skills community, includes the following key ILT functions:

- facilitating learning using ILT;
- managing the learning process with ILT;
- supporting ILT through the organisation;
- managing and developing ILT throughout the organisation;
- developing and adapting ILT Materials.

Central support will be provided through the following mechanisms:

- training events;
- dissemination mechanisms including:
  - good practice exemplars
  - benchmarking tool building initially on the FENTO standards
  - training materials
  - web-based staff support facilities.

### **Reducing the Importance of Mode, Time and Place**

The Learning and Skills Council will need to take a number of fundamental actions to ensure that blended learning (an appropriate mixture of ILT-based e-learning and more traditional classroom-style learning) can thrive within the framework of its funding methodology.

All the indications are that this form of learning, in which ILT materials and approaches are used to enrich the

learning experience and to build learners' ICT skills, will be widely adopted in all its variants within the learning and skills community. This will enable tutors and learning support staff to ensure that learning opportunities are fit for purpose, and shaped to suit the wide range of learners that the sector serves.

### **Content and materials**

There will be a continuing role for the creation of a bank of learning materials and for embedding their use within the learning and teaching process. This will include:

- central content creation and acquisition;
- local materials development;
- a comprehensive programme of support for embedding ILT materials into all learning programmes.

### **Accessibility**

Particular care will need to be given to the requirement to ensure that learning materials and systems take proper account of accessibility issues for a range of learning difficulties and impairments.

### **Improving Efficiency and Effectiveness Through ILT**

The use of ILT provides unique opportunities to contribute to the 'reducing bureaucracy' agenda, and to improve record-keeping and feedback to learners.

We will develop appropriate strategies to assist and advise all providers in the sector in appropriate development of IT to this end. Further consideration will need to be given to how, for example, ILT can help to develop student tracking and record systems within community-based lifelong learning.



## Managed Learning Environments

Building on the good work to date of the MLE Steering Group, we will continue to support colleges, and other providers as appropriate, in addressing implementation issues through the provision of consultancy and practical advice. In the first instance, we will give priority to assisting with the selection of virtual learning environments which meet recognised specifications and standards.

### Support provision

Each providing organisation, whether college, school, LEA or other community organisation, needs to make its own arrangements for first line support for the embedding of ILT into learning and teaching. It should also take account of the support needs of the learners in its wider community and the opportunities afforded by local partnerships. Local support will be supplemented by second and third line support at regional and national levels, including:

- regional support centres;
- UKERNA;
- JISC services;
- national bodies (for example, Becta, LSDA, NILTA).

### The legal framework

We will continue to ensure that guidance is given to responsible managers on the likely and actual impact of relevant legislation on ILT matters.

## Simplifying Business and Accountability Processes

The appropriate application of ILT has the potential to reduce the complexity of business systems and to simplify audit procedures.

### Management

Leadership and clarity of purpose at every level of management will be crucial to the realisation of the vision. An important element of this will be to ensure that effective dissemination mechanisms exist within each providing organisation to allow staff at all levels to keep abreast of developments. This role will be supported by the continued development of:

### ILT strategies

The development of specific ILT strategies has been a powerful developmental and management tool for change in colleges. We will develop the overall concept to suit the particular circumstances of other sorts of providers.

The strategies should fit with the broader organisational learning strategy, which, in turn, will be derived from its overall mission and strategic plan. Assistance and advice will be given to managers preparing their annual revisions, in line with the overall vision for the coming three years. To assist with college ILT planning, we will develop an audit instrument to help them to identify the current state of their ILT development and options for the future.

### ILT senior management champions

Approximately half of FE colleges have identified an individual with responsibilities as a senior management champion for ILT. The development of this approach will continue to be supported centrally. We will give further consideration, through the work of the Programme Board's sub-groups, to how far this concept should be developed for other types of organisation.

## Strategic Priorities and Funding

The NLN Programme Board will continue to recommend to the Learning and Skills Council on an annual basis:

- its recommended priorities for NLN development;
- the consequent funding priorities and flows.



## Annex G

# Glossary of Terms

ABSSU

Adult Basic Skills Strategy Unit

ACL

adult and community learning

ADL

the Advanced Distributed Learning initiative, a US collaboration to establish a distributed learning environment that permits the interoperability of learning tools and course content

ALI

Adult Learning Inspectorate

Becta

British Educational Communications and Technology Agency

blended learning

a planned programme of study, which integrates e-learning with more traditional approaches to teaching and learning

CAD

computer-aided design

CAM

computer-aided manufacturing

CLC

City Learning Centre

CMF

Capital Modernisation Fund

CoVE

Centre of Vocational Excellence

CPD

continuing professional development

CSR

Comprehensive Spending Review

CwR

Computers within Reach

DEL

distributed and electronic learning

DELG

Distributed and Electronic Learning Group

DfES

Department for Education and Skills

EAZ

education action zone

EiC

Excellence in Cities

ESRC

Economic and Social Research Council

FEFC

Further Education Funding Council

FENTO

Further Education National Training Organisation

FTE

full-time equivalent

Gbps

Gigabits per second

GLH

guided learning hours

HEFCE

Higher Education Funding Council for England

IAG

information, advice and guidance



ICT information and communications technology	NACRO National Association for the Care and Resettlement of Offenders
ILR individual learner record	NCSL National College for School Leadership
ILT information and learning technologies	NGfL National Grid for Learning
IMS IMS Global Learning Consortium Inc – an international body which develops e-learning standards and testing	NHSU National Health Service University
ITEC Information Technology Education Centre	NIACE National Institute of Adult Continuing Education
JANET Joint Academic Network	NILTA National Information and Learning Technologies Association
JISC Joint Information Systems Committee	NLN National Learning Network
learndirect the brand name of Ufi Limited learning provision	NOF New Opportunities Fund
LEA local education authority	NPQH National Professional Qualification for Headship
LeTTOL Learning to Teach On-line	NTI New Technology Institute
LSC Learning and Skills Council	NTO national training organisation
LSDA Learning and Skills Development Agency	OeE Office of the e-Envoy
MAS Manufacturing Advisory Service	OU The Open University
MLE managed learning environment (that is, a VLE linked to accounting and related business systems)	PFI private finance initiative
	PLSU Prisoners' Learning and Skills Unit



QA quality assurance	UIC University Innovation Centre
QCA Qualifications and Curriculum Authority	UKERNA United Kingdom Education and Research Networking Association
QTS qualified teacher status	UKeU A public-private partnership including UK universities with a worldwide mission in e-learning (trading under the name of UK e-Universities Worldwide)
QUILT Quality in Information and Learning Technologies	
RBC Regional Broadband Consortium	UK online a government-funded learning centre initiative
RDA Regional Development Agency	VDU visual display unit
SBS Small Business Service	VLE virtual learning environment (that is, an ICT system through which learners can be brought together with each other, their tutor, and selected learning materials)
SCORM Sharable Content Object Reference Model, a combination of international specifications and standards that enables inter-working of e-learning systems and content	WuC Wired-up Communities
SEEDA South East England Development Agency	
SMEs small and medium enterprises	
SoS Secretary of State	
Ufi Ufi Limited	







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