**THE
FURTHER
EDUCATION
FUNDING
COUNCIL**

# Networking Lifelong Learning:
# An ILT development strategy for FE

## A consultation report prepared by the
## FE Information and Learning Technology Committee

**April 1999**

# Contents

# Introduction

1    There are few fields of human endeavour where information technology (IT) is not having profound effects, often fundamentally changing the very nature of activities.  Once the domain primarily of industry and commerce, IT now permeates the worlds of science, medicine, art, literature, music, education and leisure.  Our daily social fabric is strewn with examples of human activities which are enabled by or largely dependent upon IT applications.

2    The Internet explosion and the phenomenal growth in mobile phone ownership and use are but two examples.  It is predicted that 'e-commerce', still in its infancy, will have fully matured within three years and will be embraced globally.  As the various technologies converge, the opportunities for economic, social and cultural enrichment will grow well beyond our current limited dreams.

3    FE students must participate fully in this information revolution if they are to be equipped to meet the career and lifestyle challenges of the future.  Using IT as a mainstay of learning processes will assist in that participation.  If all staff and students engage IT as a normal everyday tool for teaching and learning activities, information literacy will be a natural by-product.

4    As part of its education agenda, the government is providing substantial new funding to improve the IT infrastructure within the FE sector.  The FEFC has asked its information and learning technology committee (FEILTC) for strategic advice on ILT development over the next three years.  This document is the FEILTC response to that request.

5    In developing this strategy the needs of **learners,** both now and in the future, have been paramount in the minds of FEILTC members.  Whilst managers, teachers and support staff all have information systems needs, the FEILT committee believes that this strategy should primarily be driven and shaped by the requirements and aspirations of learners.  It is this learning dynamic which is at the centre of this strategy and its recommended actions.

6    The Council's committee on learning and technology, chaired by Sir Gordon Higginson, published its report in January 1996.  Whilst widely welcomed, funding restrictions prevented a full implementation of its proposals.  Three years on, a new government agenda, additional funding and major changes in the FE sector culture conspire together well to allow dramatic improvements in ILT to be adopted throughout the FE community.

7    This strategy builds upon the Higginson Report, but it is not a re-presentation of that report's recommendations.  Much has changed over the past three years, not least the needs of learners.  Technology has continued to move apace.  We have benefited from the QUILT[1] and FERL[2] experiences, and there is substantially more ILT expertise, as well as better infrastructure and materials, available within the FE sector now.  This strategy reflects that changed current status as well as differing future needs.

## Inclusive learning

8    It is important to recognise that IT can provide an effective means of accessing information and learning because of its independence from the written word and its ability to present information in a variety of non-textual formats, such as audio, pictures.  Videoclips and multimedia presentations are particularly helpful for people with learning difficulties and those who have difficulty with text.

9    Full access to IT for students with learning difficulties and/or disabilities and the full-scale implementation of the principles of inclusive learning cannot be achieved by institutions or sectors working in isolation.  In using technology to fulfil these needs, partnership and regional networking are key to success.

10    The strategy seeks to encompass this and provide:

- an improved IT infrastructure
- sensitive funding of individuals' support needs
- ICT equipment and services: the greater the level and range of general availability, the better the access
- well-trained technical staff
- specialist advice readily available.

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[1] QUILT Quality in Learning and Teaching – a staff development initiative.

[2] FERL: FE Resources for Learning – an Internet-based information service.

# Summary of Main Recommendations

11  We recommend that:

- colleges, the FEFC and sector organisations combine their resources to achieve a major push in the full exploitation of ILT over the next three years

- priority be given to learning materials development, and that students and staff be given access to worldwide electronic information resources

- colleges be encouraged to adopt a model ILT strategy for good practice

- colleges aim to adopt minimum entitlements for network-enabled PC access for all students and staff by 2002

- early spending priority be given to bring colleges' local area networks to minimum standards of capability and robustness

- all colleges and universities be connected to a National Learning Network

- the FEFC enters into appropriate arrangements with the Joint Information Systems Committee so that the FE and HE communities can co-operate on ILT matters of common interest

- proper arrangements are made to provide support, information and advice to colleges in all ILT areas

- there should be a major and continuing programme of staff and professional development in the use of ILT

- the FEFC commissions work to ensure that colleges have available to them robust systems for the management of learning

- the Council's tariff advisory committee (TAC) addresses funding issues arising from the increased use of ILT as a mode of delivery at an early point.

# The Lifelong Learning Context

## Vision

12    The government has a stated commitment to achieving economic prosperity and social cohesion through investment in human capital.  A number of initiatives have been taken to pursue the goal of a lifelong learning culture.  Most relevant of these is the higher priority accorded to further education.

13    In particular, the secretary of state for education and employment has set three key objectives for the FE sector:

- to raise standards
- to widen participation
- to meet the skills challenge.

14    This ILT development strategy has been produced to support these three key objectives as priorities.

### An ILT vision for FE

15    On the FEILT committee, we have explored the notion that while ILT is one tool among many, its use in the education process has enormous potential to transform the opportunities we can offer, and the effectiveness with which we enable students to achieve success.  We know we are working within the context of a revolution in technology.  Moving from analogue to digital modes is one example.  This will vastly increase the capacity of our current systems to the extent that, for instance, scheduling of television programmes may become outmoded, as individuals can download programmes to watch at any time they choose.

16    We also assume that we are working within a culture that will increasingly accept and embrace the concept of lifelong learning for all.  Depending on their circumstances, learners will want to learn in social groups or on their own, at a college or in their workplace, intensively for short periods or intermittently over several years.  The variety will increase, as will the number of potential providers, particularly from remote locations.

17    In this context, we have tried to articulate an outline vision of what this digital future might mean for FE 10 years ahead so that we can begin to make concrete assumptions for the next three years, and

adjust our longer term assumptions as time and greater experience dictate.

18    We assume, on this basis, that over the next 10 years:

- new technologies will have been fully developed to support individual learning
- 'remote' learning (at home or in the workplace), instead of college-based learning will be an option for most courses
- for most courses, even those followed at college, part at least of the course is likely to be delivered by individually followed learning packages
- as the notion of lifelong learning becomes more embedded, so too will the concept of intermittent learning.  Some students will expect to commit to their courses of study from time to time over a fairly extensive period, depending on other commitments
- credit accumulation may well therefore become the normal way of achieving qualifications
- as credit frameworks develop, so will a modular approach to course content, and the variety of optional pathways within qualifications
- pathways will develop not only within qualifications but between qualifications
- this could support the development of an overall qualifications framework for FE, increasing choice and options, and allowing students to change their pathway or final aim during the course of their studies.  This could be a major factor in increasing student success rates
- information systems will need to be able to track individual students as they accumulate credit over time and record their progress and success.

19    If we are right in most of these assumptions, it means that colleges will need to have more of the following characteristics:

- they will be expert managers of a highly diverse portfolio of individual learning
- they will have within them large, flexible study centres that are open all year round, to provide access to IT and the Internet for those who do not have it at home, or wish to access support

- they will be networked to locations in the community and to workplaces where people may find it more convenient to study
- they will be able to provide advice and support remotely as well as face-to-face
- they may have fewer buildings and more outreach and partnership-based provision – perhaps they will work in learning cafés or local libraries as much as in their own premises
- they will be fully networked with a variety of locations in their local community
- they will enrol students locally and beyond through the worldwide web, the Internet and broadcast technology
- they will rely extensively on learning materials that are packaged for individual learning plans
- they will have sophisticated and networked tracking, linked to a national information system, so that a student's progress can be followed within and beyond any particular institution, and between FE and HE institutions.

## Creating a connected community

20   This strategy is entitled *Networking Lifelong Learning.* The use of the term 'networking' here is not just in the technological sense.  It is also used to imply the human and social aspects of networking in the context of lifelong learning, especially networking between and amongst:
- learners and tutors
- learners and learners – in schools and universities as well as colleges
- learners and employers
- learners and resources, including libraries
- learners and communities
* tutors and tutors.

21   The secretary of state wishes to see established a national learning network linking further education colleges and higher education institutions. This strategy takes this on board but goes further.  It sees the community dimension of local provision, with local pooling of plans and resources, as an essential component in a meaningful lifelong learning culture.  It sees support for the University for Industry (UfI) as a high priority.

22   In developing connectivity infrastructure therefore, the strategy predicates the establishment of open and flexible approaches rather than closed ones, thus allowing future networks and individuals the opportunity to join the college in their community.

# Environment

## The knowledge-driven economy

23   The closing years of the twentieth century have witnessed a shift towards an increasing emphasis on the knowledge-driven economy as the primary source of future prosperity for developed countries. This is reflected in the increased priority placed on education.  The need for advanced skills is predicated upon the assumption that as the cost of manufacturing shrinks through a world excess of unskilled and semi-skilled labour, the way forward for countries such as the United Kingdom lies in creating wealth through knowledge-based industries.

24   Hence we have seen the growing use of IT in service industries such as banking, insurance and financial services, as well as such developments as database marketing and e-commerce in the retail and distributive trades.  No longer is it sufficient for countries to compete on cost – the key to economic survival is the development of quality, value-added services which respond to directions of which the customer is only beginning to become aware. Supermarkets and airlines, for example, compete on the basis of what is disclosed about consumer buying patterns through data mining of their customer databases and building new product services around the knowledge they gain as a consequence.

25   This kind of approach to wealth creation calls for a highly trained, highly skilled and highly paid workforce.  It is the government's intention to encourage the creation of such a workforce – as evinced by special measures in the recent budget to promote the ready availability of IT to an increasing proportion of the population.  The Moser report on basic skills underlines the scale of the problems to be addressed.  It predicates a much wider use of ILT in learning.

## Technological development

26  Producing a technology-related strategy always brings with it the problem of predicting changes during the period of the strategy. This strategy takes as axiomatic that:

- hardware will continue to become more powerful with lower unit costs
- software and applications will be subject to continuous improvement, both in terms of performance and scope
- Internet technologies will become ever more pervasive
- communications costs will continue to fall, whilst reliability and ease of use will improve.

27  By adopting open and *de facto* industry standards, we shall be able to give reasonable protection to our capital investments, including any newly developed learning resources, whilst offering some flexibility for, as yet, unknown future needs.

28  Of more importance to this strategy is technological development in the areas of learning resources and learning and teaching methods. There are still considerable challenges to be overcome in the effective use of IT to support tutoring, mentoring and assessment. The development of suitable content and materials has not kept pace with the rate of change in IT.

29  Easy to use interfaces to electronic information resources are still mostly noticeable by their absence. Information management software tools will overcome some of these difficulties during the strategy period. We shall need to have both teachers and learners, skilled in the use of such tools, to optimise the added value from our planned investments.

## Lifelong learning

30  Government objectives for the development of the economy in the face of international competition rely heavily upon the adoption of lifelong learning to improve the UK's skills base. Whilst raising educational standards will improve the skills of those currently within the education system, the skills deficiencies of the whole working population requires increasing effective provision of part-time education and work-based training. Furthermore, the government's move towards a knowledge-based economy calls for a radical reappraisal of

approaches to learning, and a significant new focus on learner-centred, any time, any place learning systems.

31  To this end, a number of government initiatives have begun to address the requirement to engage the broader base of the adult population. Improvements in basic skills to underpin lifelong learning are an important focus for new project funding such as that for IT Skills Centres. The flexible learning centres, which have existed for some time in many colleges, now take on an increased importance, as many of those who will require new skills are unable to undertake full-time courses. The need to suit provision to actual learner needs, by enabling learning in the workplace and in the home, is fuelling the drive towards a renaissance in open and distance learning practice.

32  This desire to reach out to new markets is strengthened by the opportunity that IT offers to deliver learning and learner support remotely – with learners potentially receiving course material and assignments, and interacting with both tutors and fellow learners, through email and electronic conferencing. This movement towards changing the mode of learning delivery is particularly apparent in the plans for the emerging UfI.

## The University for Industry, the National Grid for Learning and the public library network

33  The government has identified three inter-locking initiatives to help deliver its objectives in lifelong learning. Whilst the early prototype of the National Grid for Learning (NGfL) was predominantly orientated towards schools, later versions have made significant reference to post-compulsory education and training. Indeed, as well as the Further Education Hub, information concerning the UfI and public libraries is now directly available through the Grid's content architecture.

34  Substantial investment in ICT training for schoolteachers and librarians, and plans to fund the development of a body of digital content, underline the government's aspiration to truly 'joined-up' thinking. By establishing the role of ICT in the school curriculum, as well as pointing to the nation's more general need for access to lifelong learning, the government has demonstrated a commitment to improving the skills of the nation.

35    The UfI initial targets include the improvement of both basic and IT skills.  They explicitly refer to the need to support the creation of excellence in the training of specialist multimedia software developers.  When this policy is married to local access to a library network, carrying informal learning opportunities into the heart of every community, we can foresee the emergence of powerful new partnerships to direct lifelong learners at all levels towards those resources which will help meet their individual learning needs.  Clearly, colleges will have a central role to play in developing and supporting these learning communities, and in ensuring the success of this three-part initiative to establish the widest possible national learning network.

## Regional Development Agencies

36    It is important that all colleges have effective links to, and partnerships with, regional development agencies (RDAs).  Much of the FE sector agenda is common to that of RDAs.

The main objectives of RDAs are:

- economic development and social and physical regeneration
- business support, investment and competitiveness
- enhancing skills
- promoting employment
- sustainable development.

37    Enhancing skills is clearly a common objective with FE, but education and training are vital to the achievement of the other four RDA objectives.  In particular, the need to balance flexibility in employment with employability brings particular demands.  Flexible labour markets are a reality, but they do bring additional pressures and anxieties upon individuals.

38    ILT offers individual learners that flexibility which can not only reduce such anxieties but also offer new employment opportunities both within and between firms.  In developing their own ILT strategies, colleges will need to be fully aware of their local RDA agenda, and work closely with their RDA to ensure that maximum synergy is realised.  In the short term, this will affect community networking plans, but in the medium term, materials developments to meet particular regional skills needs will also have an impact.

# FE Context

39    Whilst set in a global and national context, this strategy has to address a number of FE contextual issues, if it is to be successful.  This section addresses some of those issues.

40    The secretary of state has set three key objectives for the FE sector:

- to raise standards, with substantial improvements in retention and achievement rates
- to widen participation and embrace those who have not traditionally taken advantage of learning opportunities
- to meet the skills challenge, not only by delivering high-quality further education but also by building upon existing links with employers and developing links with the RDAs.

## Changing student needs

41    Not only are the needs of individual students changing, but so is the profile of the FE student community of the future.  This ILT development strategy seeks to support both types of change.

42    Increasingly, learning opportunities will be viewed as consumer products.  Students will wish to follow individualised programmes with sets of learning modules, which are specifically tailored to meet both their personal and career needs.  They will wish to undertake these programmes in modes and at times which fit in with their jobs and lifestyles.  Intelligent use of ILT facilitates this.

43    The FE student population profile, already wide, will see its boundaries extend and the balance of components is likely to change.  This will be particularly influenced by:

- widening participation initiatives, especially those involving community and/or home based learning
- a large increase in HE provision delivered by FE colleges, with stronger links to HE institutions and imaginative use of the JANET network
- the growing recognition by people in employment of the need for regular upskilling, with much of this demand being channelled through the UfI.

44    These changes present considerable challenges to FE colleges.  Adopting good ILT practice will assist colleges here.

45    In particular, changes in student needs will place increasing demands for flexibility in curriculum content and consequently in the qualifications sought and awarded.  Staff skills will need to be honed to deliver this flexibility.

46    Business-driven programmes will reflect the specific needs of individual companies, with particular competencies at different levels in a variety of programme areas being required.

## Standards

47    The FEFC and colleges are taking steps to improve standards in all aspects of the sector's provision, including management and governance.  The government has placed the raising of standards at the top of its agenda for FE.  In a recent letter of guidance to the Council, it was noted that:

*the secretary of state takes the view that, while there is much in further education of which to be proud, rates of retention and achievement of a significant minority of colleges are unacceptably low and that across the sector as a whole there is considerable scope for improvement.*

48    The Council has published its quality improvement strategy (in FEFC Circular 98/21) and has set up a new unit to take this forward.  A standards fund for FE has been established (see FEFC Circular 99/12).

49    This ILT development strategy will support the standards agenda generally, but particularly in:

- improving teaching skills
- providing information and advice in specific subject areas
- disseminating good practice.

## Lifelong learning partnerships

50    It is widely accepted that more collaborative approaches to post-16 education and training are required if the learning needs of individuals within society are to be met in an optimal fashion.  The secretary of state has announced plans to ensure that strategic lifelong learning partnerships are in place across the country during 1999.  Colleges are now working with their local education and training partners, including TECs, to put these new arrangements into effect.  The sector's ILT development strategy needs to reflect the opportunities that such partnerships present.

51    Embedding the learning culture in every community is a commendable goal.  Achieving this in practice, against a recent backdrop of competition rather than collaboration, of conflicting rather than common goals, presents a huge challenge.

52    The considered application of ILT should assist in overcoming these difficulties.  As the focus moves away inexorably from the needs of institutions and organisations to the needs of individual learners, ILT will have a growing and increasingly important role.

53    ILT is an enabling influence here.  It permits individuals to consume different strands of learning activity from various partners within a lifelong learning partnership, at various levels and at varying times to suit their individual constraints.

54    This strategy thus seeks to underpin local lifelong learning partnerships by facilitating:

- local networking
- local access to guidance and tutoring
- local tailoring of learning materials to meet local skills needs.

## Funding issues

55    Changes in teaching and learning methods, especially the move to more open and distance learning, will inevitably mean changes to the FEFC standard tariff.  We recommend that the Council's tariff advisory committee addresses these issues at an early point.

56    Parcitular attention must be paid to the funding issues involved where learning is undertaken some distance away from the physical college.

# Participation

## The growing student population

57    The government intention to promote mass access to technology-based learning opportunities is explicit.  The green paper, *The Learning Age*, sets out a vision of lifelong learning for all.  Increasingly, the delivery of lifelong learning will depend upon the availability of technology-based materials and mechanisms.  The mission of the FE sector as a whole, and of all colleges, is to offer high-quality and relevant learning opportunities to a learning constituency, which is both growing in numbers and displaying ever-changing needs.

58    A college with the appropriate networking infrastructure can expect to be in the business of supporting, amongst others and in addition to their traditional client groups:

- primary and secondary schoolchildren: within the framework of their school/ national curriculum experience, on partnership programmes through, for example, education action zones, Sure Start projects, out-of-hours clubs
- employees: high volume, high turnover programmes, preparing and accrediting individuals or groups of employees for specific purposes, for example, the European computer driving licence
- everyone with the entitlement to state benefit: similar high volume programmes
- small and medium enterprises: for technology training needs analysis, programme design and delivery
- students enrolled with new (and perhaps virtual) HE institutions, probably on vocational degrees or subdegrees, especially those living some way from centres of population and clusters of conventional HE institutions
- family group users of learning centres based in workplaces, community outreach centres, and cybercafés.

59    The location and timing of these learning 'interventions' are unlikely to be constrained within the college campus and its weekday timetables based on the traditional teaching year.

60    Many of the learners from these customer groups will come with an assumption of being able to get their learning on demand.  With the ever-increasing convergence between entertainment and education, some will expect to be exhilarated and intellectually extended by turns with very few service inadequacies on the way.  Individual mass-customisation will rule, with assessment and administration built into the process.

## Widening participation

61    For the government's agenda, and FE's mission to be fulfilled, we have to cater for the many potential customers who do not belong to the conventional typology of FE student groups.  In this information age, information have-nots are with us in increasing numbers and are in danger of becoming increasingly disadvantaged.  Learning providers have two advantages by using ILT:

- there appears to be almost universal recognition of the need to be computer literate in order to be successful in work and adult life
- computers as such are relatively neutral in regard to sex, class, culture (though software may not be, as yet).

62    The issue is about getting people to participate in learning.  The culture of learning needs to be embedded in all dimensions of our society.  As stated in *Learning Works*, the report of the widening participation committee, ILT has the power to revolutionise learning.

63    ILT issues of relevance to widening participation include:

- connectivity with outreach locations and other providers to ensure capture and progression of reluctant learners and technophobes
- combining the 'bite-sized chunks' of learning into a worthwhile, sustaining diet over time
- maintaining the technical fitness- for-purpose of the furthest extent of the infrastructure/grid/network
- imaginative and integrated thinking at all levels about ILT as a vehicle for all aspects of learning: entertainment, workplace, competence, getting qualified, helping the family.

## Relationships with HE and schools

64    Many colleges already have important relationships with HE partners and schools.  The separation of the FE sector from other educational institutions is beginning to break down, resulting in the need to develop effective inter-sector structures. A networked FE sector would encourage academic exchange via email and could simplify the progression and admission issues between the sectors.

65    We must not underestimate the fact that the HE sector has a reputation for having one of the most developed ILT and on-line education and training facilities, The Open University, in the world.  The Higher Education Funding Council for England (HEFCE) has already made access to the JANET

network available to the 72 colleges it funds directly for HE courses. A further 133 colleges also have JANET links, mostly through a neighbouring university. Closer working between the two sectors has resulted in FE sector representatives sitting on JISC committees to ensure that proper account is taken of the FE perspective in ILT developments. It should also be possible:

- to build upon a number of strong links between FE and HE in terms of curriculum development and in particular on-line and flexible learning delivery

- to connect learning resource centres and library materials to the vast resources available in the HE sector.

66    With regard to school collaboration, ILT developments in the sector could enhance guidance and progression post 16. To achieve this:

- in addition to the existing FE hub on the National Grid, other connections to the NGfL should be effected

- we should move towards a 'network of networks' approach, which will link schools, colleges, universities and the UfI.

67    Recent government initiatives to encourage employers and schools to adopt ILT will raise the profile and the requirements for both staff and students when they progress into further and higher education.

## Targets for 2002

68    NACETT key targets for December 2002 are:

- 85% of 19-year-olds to be qualified to level 2

- 60% of 21-year-olds to be qualified to level 3

- 28% of economically active people of working age to be qualified to level 4.

69    These targets represent a massive increase on current qualification achievements. They also present exciting challenges to FE colleges, which will have a major role in striving to meet these targets. It is unlikely that traditional resources, especially staff and buildings, will be available in sufficient quantities to meet these demands. A wider and imaginative use of ILT should go some way to assist in achieving these targets.

## Student numbers

70    Of the additional 700,000 students by 2001-02 compared with 1997-98, the secretary of state expects some 50,000 to be 16–19 year olds (studying full time), and some 650,000 (mainly studying part-time) adults. Approaching 80,000 of this addition are expected in the current year, 1998-99. The plans provide for year-on-year increases thereafter of 178,000 in 1999-2000, 109,000 in 2000-01 and some 340,000 in 2001-02.

71    Additional funding to reflect these increases is not enough by itself. Every college will need to improve further its efficiency and effectiveness if it is to play its full role in catering for the increased student population. Greater use of IT in every facet of college life will be necessary.

## IT key skills

72    The national shortage of IT skills is well documented. At the end of 1998, it was estimated that more than 500,000 jobs in IT and communications were unfilled because of skills shortages. The government has set up an IT sector strategy group to produce recommendations aimed at alleviating these shortages. This is due to report shortly.

73    More generally, IT key skills are regarded as fundamental to a wide range of human performance. A recent FEDA report pointed to the problems of integrating IT skills within vocational programmes. By embedding ILT into the whole of the curriculum, some of these skills problems should be addressed, as learners grow in confidence in their use of information and IT. One barrier to people seeking careers in the IT and communications industries is their fear of IT. Continued exposure to IT, with full professional support, will help to overcome this fear, which for many people is imaginary rather than real.

74    The skills shortages report referred to above will no doubt recommend an increase in the availability of IT training opportunities. This is an increasingly important market for colleges to address. Many are already doing so, but many more will need to increase their IT training capabilities and develop their IT infrastructures accordingly. By so doing, there will be continuing long-term economic benefit to the country.

# Today's Position

## Infrastructure

### Hardware

75 The sector already invests heavily in computer technology, though a considerable proportion of this equipment provision is far from up-to-date, and, as the recent BECTa survey indicates, is incapable of effectively running the present generation of software. The survey, based on responses from 242 colleges, concludes that 25% of the total stock of PCs is of 486 specification or lower. Indeed, in one college in six more than half the installed base is of this type. This means that while recorded levels of IT provision in a small number of colleges appear to be approaching those required for ready student access, a quarter of available machines in colleges are already out of date by two generations of processor.

76 Some 45% of colleges now report themselves to be struggling with normal levels of demand for computer access. This demand is self-limiting since students will not queue indefinitely for equipment. Even so, 89% of 'coping' colleges indicated that at times of peak demand they do not meet all learners' needs for access to computers. The median ratio of PCs to FTE students is reported by colleges to be over 8:1, while their current aspiration is closer to 6:1.

77 The seriousness of the situation from the perspective of medium term financial planning is clear. The Internet became a significant factor only two years ago. Browser technology places a heavy demand on memory and processor speed. If we were to take Pentium II as the minimum specification for reasonably acceptable access to the Internet and multimedia use, we might be disturbed to discover colleges reporting that machines of this specification and higher make up only 38% of the currently installed base.

78 Some 110,000 replacement PCs are required to bring all PCs up to the required standard. To improve provision to the 6:1 access level will require the acquisition of a further 100,000 PCs for student use in the medium term. Whilst these numbers appear formidable at first sight, they should be seen in the context of the over 4 million student population the sector will be serving soon.

79 Good access to computers for all college staff is necessary if they are to capitalise upon the investment of time and effort that is vital to integrate ILT fully into learning practice. Current computer provision is typically 3.2:1 for full time staff. If all staff are included in the calculation, this figure becomes more than 6:1. Here colleges aspire to achieve ratios of 2.3:1, typically meaning that staff should share access with one other colleague. (This ratio masks the variation between the model of a dedicated computer, which 45% of respondents favoured, and ratios approaching 3:1 which others thought acceptable.)

80 A further factor is that the quality of computers made available for staff use is frequently below the specification level of the college PC available for student use. Colleges need to give particular thought to how they address the needs of part time staff, many of whom, under present arrangements, have inadequate access.

## Networking and connectivity

81 Despite the substantial number of colleges which were, in some manner, connected to the Internet in early 1997, few colleges today could truly be said to provide a high level of student access to networked information. In some cases this is due to the shortcomings of colleges' local area networks which are inadequate to meet present needs. In others, it is the result of policies which purport to offer Internet access to students but which in reality make scant provision for genuine use. In a few colleges, access to the Internet is so restricted that the ratio of student FTEs to Internet-connected machines exceeds 1000:1. The median ratio of full time students to computers with Internet access is 14:1, while this figure deteriorates to 26:1 for all students FTEs. One college in eight reported FTE ratios of worse than 80:1. Only 36% of colleges in the survey indicated that they could meet current demand for Internet access.

82 Only one college in eight of those who responded to the BECTa survey reported that they were members of a collaborative Intranet (extranet) venture with other institutions. Future developments in the sector, and particularly lifelong learning partnerships, will build upon this foundation and considerably extend the practice of working together to create networked learning environments which go beyond the boundaries of individual colleges.

## Content

### Consortium outcomes

83    Significant content development has taken place within the sector, even without such centrally driven programmes as HE's Teaching and Learning Technology Programme (TLTP).  Entrepreneurial action by individuals and groups of colleges has resulted in a meaningful allocation of resource to the design and creation of open and distance learning materials and prototype networked learning environments.

84    The FE National Consortium (FENC), with 160 member colleges, reports some £4.5 million investment to date in the creation of its content.  Whilst historically this has been largely paper-based, FENC is on track to move from its current position of electronic distribution of materials (via CD-ROM), to a wider use of ILT equipment and services in preparing, customising and managing student learning environments.

85    LDN is a network of 60 colleges which shares the writing of open learning materials for key skills, which are sortable through a unique database supporting a complete system for organising learning resources.  LDN has begun serious work on the move away from paper and towards production of electronic learning resources.  LDN has in recent years led collaboration between member colleges to further the development of materials for on-line learning and multimedia approaches.  Its staff development support to members is currently being extended through a major research project to identify how good curriculum practice and a sound pedagogical approach can be transferred to a multimedia environment to support individual programmes.

### Initiative outcomes

86    FE colleagues have been quick to seize the opportunity afforded by a range of government initiatives – such as the competitiveness fund, collaboration fund, IT centres of excellence, IT skill centres and more recently European ADAPT funding – to begin to build networked learning environments for their students.  Content development, however, has been much slower.  The small-scale college developments funded through the QUILT programme have made significant contribution to the progress within individual colleges, where staff have in some cases received timetable remission to facilitate the creation of ILT content resources.

87    However, the FE sector has had no national programme to parallel higher education's TLTP which has invested some £50 million in learning content creation and related support activities since 1992.  Thus, while there have been examples of good practice in single colleges or small consortia, even where the hardware infrastructure has been supplied through particular initiatives, there has to date been little wholesale development of suitable ILT content from these initiatives.

88    Even quite well-known developments, such as the Northern Colleges Network and the West Yorkshire colleges' TROJAN project, are at too early a stage to have embraced the wider college community with their work in the creation of multimedia content.

## Information and advice (FERL)

89    The Council has provided funding of £575,000 over two years for a pilot service to support colleges in their growing use of ILT.  FERL, whose work is overseen by the FEILT committee, is managed on the Council's behalf by BECTa.  This service, largely web-based, has contributed to the development of a database of reviewed courseware and a list of useful Internet resources.

90    The project has also documented research findings from colleges which have already made a commitment to the use of ILT in the learning process, and has provided a measure of guidance on issues connected with college networking.  The FERL website has been visited regularly by something in excess of 200 colleges each week, and the project's evaluation is very encouraging.  However, much more needs to be done to build on this beginning if colleges are to receive the level of support they will require as the use of ILT comes closer to the heart of their learning offers.

91    The FERL website currently contains some 50 case studies and approximately 90 reviews.  A printed magazine, *FERL Offline,* is also mailed to colleges each term to draw attention to the service.  In addition, regular mailings are sent out to advertise sector briefing days, at which college staff can visit good practice exemplar sites to see developments at first hand.  A series of 12 briefing days which ran between June and December 1998 attracted over 125 senior college staff.  There are links to relevant colleges and key sector organisations such as LDN, FENC and FEDA.

92 The website also contains a range of specifications for college networks of varying sizes. A networking forum has now been established which is linked to the FERL website.

93 Reports of nine research projects conducted under FEDA's management are available on the website, addressing the themes of:

- use of ILT in FE
- use of the Internet in FE
- college intranets.

# Practice

## Management systems

94 Colleges continue to develop systems to collect and process information to manage students' learning effectively. The major underdeveloped aspect of college information systems is the ability to record comprehensively students' progress towards their learning goals and to integrate this with the rest of the management information. At present, most colleges are able to identify quickly when students have withdrawn and many can analyse the reasons after they have left. Only a minority of colleges have comprehensive systems that enable precise monitoring of individual students' attendance, punctuality and progress at frequent intervals during the year and can identify and explore reasons for slow progress. Few systems have any historical data that provide opportunities to compare students' progress on successive courses and identify students who may be at risk of failing.

## Staff development (QUILT)

95 In 1996, the Council allocated some £1.9 million over five years to facilitate staff development in ILT. (However much appreciated by the sector, this sum now appears relatively modest in comparison to the resource allocated to the ICT training of school teachers through the new opportunities fund, where the funding *per capita* is approximately 10 times as great.) There is hardly a college that has not been touched in some way by the QUILT programme. FEDA's work in managing this project, steered by the FEILT committee, has done much to promote effective staff development in ILT using a wide range of approaches. (A parallel QUILT development in Wales has also achieved some notable successes.)

96 Governors, principals and members of senior management teams have all been targets for training, as have team leaders and subject lecturers. For example, in the last quarter of 1998, some 114 FE staff from 100 colleges attended eight QUILT events, and of these staff, 87% graded the events as good or very good. In all, the QUILT events calendar has attracted 2,025 delegates in the three years since its inception. The QUILT programme has also enabled publication of a range of guidance materials, including the FE-CD CD-ROM. The QUILT website continues to provide a valuable resource for college staff.

97 In addition to specific staff development activities and events, the QUILT programme has benefited the sector by the provision of significant funding for action-research style college-based ILT development projects. These projects have achieved an impact far beyond the modest levels of resource that they have available – a maximum of £5,000 for an individual college, and £15,000 for a consortium. The projects have demonstrated time and again that the skills of sector staff can be harnessed and that committed lecturers and support staff can and do make a strong contribution to the development of materials and new approaches to learning. This catalytic use of modest amounts of funding points to an important way forward for future developments within the sector.

## Staff and student entitlement

98 Pivotally important for the successful development of IT skills, and for the integration of ILT into the learning environment, is ready access to computers and networking connectivity. To this end, students and staff must be assured of appropriate entitlements in relation to ICT equipment and services. The recent BECTa survey demonstrates that many colleges are significantly handicapped in this area.

# Investment

## Current ILT expenditure

99 FEFC estimates suggest that the FE sector currently spends around £100 million annually on computers and related services and support. (This estimate is borne out in the results of the recent BECTa survey. One large college spends some £450,000 a year on hardware, software and services and a similar sum on associated staff salaries.)

Taking a three-year view, this represents a total rolling investment of some £300 million.  This should be seen as a base upon which additional funding will be used to bring added value.

100  Colleges anticipate and are actively planning for continued growth in the scale and significance of ILT use.  This is reflected in a range of responses to the recent BECTa survey, most notably:

- planning to improve network access within and between colleges
- planning for upgrading Internet connectivity and bandwidth
- senior appointments to manage ILT development
- staff development
- curriculum planning and accommodation strategies which reflect the growing use of ILT.

# An ILT Strategy for FE

## Aims and Objectives

101  The main aims of the strategy are:

- to exploit ILT in order to:
  – enrich the learning experiences of students
  – improve teaching methods and standards
  – facilitate better management practices
- to assist in the development of a more IT-literate society.

102  In pursuit of these aims, the following objectives have been set:

- to advise the FEFC on the strategic distribution of government funds for the establishment of networked lifelong learning within the sector
- to establish standards for student and staff access to ILT
- to enable all sector colleges to develop robust systems for the management of teaching and learning
- to establish partnerships at sector level to assist with maximising the potential for IT in FE on a cost-effective basis
- to enable the sector to keep pace with the anticipated development of Internet-enabled information and learning resources.

## Priorities

### Student needs and entitlements

103  All students should have:

- access to programmes on the core skills of IT to make a productive contribution to the economy and wider community
- an email facility so they can communicate with students and staff, to assist group working and for wider communication
- the opportunity to study programmes by alternative modes of delivery including electronic on-line learning

- guidance in the availability of electronic resources to assist and enhance learning
- assistance in the means of access to electronic delivery of learning if they are unable to afford the facility
- education about the information revolution and its implications for their work and daily life.

104  By the end of this strategy period, the sector minimum target should be that there is at least one Internet-enabled PC for every five students, expressed in terms of each college's peak student occupancy, (not full-time equivalents).  This will ensure that every student has meaningful access to good facilities every time they attend college or their place of learning.

### A networked learning environment

105  However willing or committed in principle, staff will be unable to fulfil government expectations concerning the use of ILT to support learning and its management if colleges are unable to provide effective networked learning environments for their students.

106  An appropriate networked learning environment will enable staff to assist students to access a range of resources, move between different technical environments, find appropriate sound, video and text files and develop their own original applications of web-sourced material to incorporate in their assignment work.  Colleges will wish to support the learner in moving fluidly from working, say, in one of the college's learning centres, to the 'subject' classroom or the local library, out into a convenient community venue, their workplace and, if home resources permit, in putting the finishing touches to their assignment at home.

107  The creation of a new learning environment, supported by electronic networks giving ready access to a wide range of learning materials will be an essential element of this support.  Equally important will be the provision of peer and tutor support – both 'live' and through telephone, email and electronic conferencing – so that learners have ready access to advice and guidance at key points in their learning.

108  In a mature networked learning environment, the reduction in demand for direct instruction facilitates a changed and potentially more satisfying role for staff in providing support for learners with

defined individual needs.  The addition of electronic networking to the well-established flexible learning environment offers learners previously undreamt of levels of customised learning support.

## Information resources availability

109  Electronic information resources have traditionally been thought of in the context of software on disk and CD-ROM.  In a networked learning environment, however, the range of available information resources is greatly extended by those available through the Internet.  The FERL website alone, for example, contains link details and reviews for more than 200 worldwide websites, and many colleges have assembled their own extensive lists of useful sites to support learning.

## Learning materials development

110  The need for a major materials development initiative in support of the FEILT strategy is clear.  There will need to be two interrelated aspects to this development.  In some instances, where materials address widespread and relatively stable learning needs, we can expect a well-developed market to grow to meet demand.  Thus, there will always be a place in the compendium of learning materials for the high-volume/high-content materials that are best procured through commercial suppliers.

111  However, the diversity of provision and the need to customise learning environments for specific uses – for example in workplace training – means that there will also be a need for an approach based on materials produced either through individual college endeavour or through creative collaboration between colleges.  FE is well placed to develop much of the learning material to meet the government's lifelong learning agenda.  The enormous intellectual property and skills available from FE sector colleges must be transferred to the newly emerging electronic environment to give staff in colleges the skills they will need to continue to support students.

112  Creative collaboration between staff who can transfer sound pedagogical principles to new ILT-based approaches can help to ensure that college staff are properly empowered and equipped to harness ILT to support the learning process and creative positive learning experiences for a range of students.  Such an approach can also enable tutors to respond readily to particular learner needs, company requests and syllabus specification changes by modifying and linking other resources with commercially available materials or by customising their own.

113  The FE tutors of the future will be called upon to adapt materials to conform to standards critical for long term development, particularly those of the UfI, and that support learners using a variety of media as appropriate to the needs of the learner and/or their sponsor.  Tutors will wish to empower learners with the skills to access a far greater range of information and discern what is useful to the tasks in hand and then to select, organise, process and creatively edit the information in order to generate their own original work.

114  To develop such materials and approaches for students, staff will need these skills themselves.  The professional development of staff should include substantial elements of using on-line learning multimedia approaches to encourage their adoption in the teaching environment and enable staff to develop or adapt learning materials which encapsulate the latest technologies.  Fluent use of the worldwide web, video stream, CD/DVD and broadband television will enable staff to develop learning materials which both encapsulate the latest technologies and are fit for purpose.  Learning materials development will need to have a strong link to information retrieval processes to encourage independent learning both inside and outside the institutional environment.

## Management imperatives

115  For the strategy to succeed, college managements must recognise a number of imperatives.  These include the need for:

- ILT development to be included in all college strategic planning
- clearly identifiable resources to be allocated for ILT training
- the development of senior managers, including in particular principals and corporation boards, with regard to ILT
- ILT to be viewed as complementary to the overall staff and student learning experience
- the recognition of the strong correlation between effective use of ILT and the agenda to raise achievement and retention levels

- a strong management focus on the effective use of management information linked to the curriculum as well as the requirements of FEFC
- all full-time teaching staff to have a desktop facility, which includes both Internet and intranet access (one for each desk, as in HE)
- 'a joined up ILT agenda', linking UfI, learning partnerships, NGfL and other interested bodies.

## Staff needs and entitlements

116  All teaching staff should be provided with IT facilities and the skills to:

- access curriculum materials held electronically in different databases
- offer on-line tuition support
- participate electronically in their own personal development programmes
- operate the necessary support systems to facilitate electronic delivery of learning
- use email to communicate with each other, with students of the college and with staff across the FE and HE sectors
- access college databases when working away from a college site
- identify and use curriculum materials available electronically.

117  All management, administrative and support staff should have similar IT access and facilities, together with the IT skills training appropriate to their needs.

118  In addition, contractual arrangements with staff should enable flexible working arrangements, including home working where appropriate.

## Learning management systems

119  The ability to collect and analyse data on students' performance forms the basis of any quality system.  Data currently collected for ISR returns are used by many colleges as the evidence for self-assessment.  For this reason many quality systems in colleges only allow end-of-course or end-of-year analysis.  Additional information on students' progress and achievement which is readily available is frequently limited.

120  Effective management of learning is also essential to support curriculum unitisation and credit accumulation and transfer, to increase the flexibility of attendance patterns and support students to learn independently.  Many colleges are exploring ways of improving their ability to offer even greater flexibility in learning patterns through independent learning either in the college or at a distance.  Key skills initial assessment and ongoing development in a small but increasing number of colleges are delivered through on-line learning systems because large numbers of students are involved.  Research on cost-benefits and the eventual development of robust systems is inhibited by a lack of expertise and/or funds in many colleges.  It is recommended that the FEFC commissions work to ensure that colleges have available to them robust systems for the management of learning.

# Timetable and Funding

## Strategy timetable

121  A detailed implementation timetable will form part of the action plan to be produced shortly.  The short-term timetable is as follows:

| | |
|---|---|
| April | consultation circular and draft strategy published |
| Late April/early May | consultation events |
| Mid-May | end of consultation |
| July | final strategy and action plan published |
| September | implementation programme begins. |

## Building on existing investments

122  It is reasonable to assume that the FE sector currently has a total rolling investment in ILT of some £300 million.  This new funding is not intended to be used for the renewal of existing investments or to replace colleges' future planned expenditure.  Primarily, it is intended that most of the additional funding should be directed to those ILT activities which will bring sector-wide benefits.

## Funding alliances

123  The strategy envisages that full use will be made of the many opportunities that are available for forming alliances for funding IT ventures.  These include partnerships with the private sector, and

alliances with local employers and local authorities. The wide range of European and government grants under various initiatives must also be exploited fully.

# Staff and Professional Development

## Changing roles

124  If the educational infrastructure is to be re-engineered, the role of the tutor will be transformed to that of the learning coach.  A comprehensive, inclusive, rigorous programme of staff training and development must be devised and enforced.  A 'driving instructor's licence' will be required for the tutor or coach to practise in accredited centres, such as UfI learning centres, and will be preferred over subject-based qualifications.

125  The core competencies required for learners, and in which the tutor or coach must specialise, include (as well as conventional core skills):

- learning methodology
- project management
- information analysis and dissemination
- problem-solving
- design and presentation.

126  Distinctions between tutors and other staff such as information or library assistants, or admissions and support tutors become increasingly blurred. Changing work patterns relating to location, weekly and annual timetable, and learner caseload (for tutorial or coaching and assessment) could mean significant upheaval for many.

## New skills

127  Staff and professional development programmes will comprise some technical training on software packages, to be updated as new versions appear.  The largest part will deal with new ways of relating to one's specialist area, the learners and their learning.  User groups and bulletin boards will provide ongoing team support.

128  An essential underpinning element of the ILT strategy will be investment in the new skills required by the FE tutor of the future.  It is increasingly recognised that the basic skills that will be needed in the next decades can at present only be guessed at. What is certain is that we continue to move towards a truly lifelong learning culture in a world which will demand sophisticated, complex tasks, leadership

and original thought from a far greater proportion of the workforce than today.

129  To prepare learners for these demands, FE staff will need to be prepared too and tutors will need a new set of teaching and learning skills. Colleges will not be able to help learners make really effective use of ILT as a new learning and conceptual tool unless the fluent use of ILT is seen by all tutors as an essential element of their own pedagogy.  Consequently, the sector's developing ILT strategy will need to help to resource the major shift required to ensure that FE staff can truly act as learning guides for students through a vast compendium of resources to support diverse groups of learners.

## Staff development initiatives

130  The sector will require a major staff development initiative to enable staff to develop the skills required not only to use ILT learning materials in the classroom, but also to create or customise them.  Such skills will enable tutors to ensure that ILT is used not to deliver a mechanistic approach to programmed learning, as some may fear, but rather to support a truly interactive and learner-centred pedagogy.  Such skills will enable tutors to tailor materials for their own students and blend them into a portfolio of resources to support particular individuals and groups in order to forward a truly inclusive approach.  In the interest of both efficiency and a more democratic approach to the use of resources, both staff and students will need to be able to manage electronic assets in their native format, for example, as text or graphic files.  This will enable previously developed assets to be easily reused, and woven into a particular piece of curriculum work.

131  Tutors will need to learn how to build their own intranet pages, not only to present information to groups of learners but also to provide interactive material.  As expertise and student demands increase, staff will wish to maximise the pedagogic benefits of these new media and, for example, move beyond simple 'point and click' activities and multiple choice assessment routines to more richly meaningful interactions such as simulations.  The ILT strategy will therefore need to support the development of learning materials both directly – through funding collaborative ventures – and indirectly – through enabling staff to gain the required skills to customise the learning environment to meet learner needs.

132 The successes and lessons of QUILT provide a useful starting point for a further wide-ranging staff development initiative. Increasingly, colleges will need to be more self-sufficient in their development activities. Any new initiative will allow for local as well as more general needs.

## Resources

133 A staff development initiative of this scale and reach will require proper funding and suitable management to ensure that sector resources are deployed effectively. This will be particularly important when working to encourage the development of learning materials that have wide appeal and application. In some instances, this will involve colleges in the identification of a multi-disciplinary team of staff who between them have subject content skills, authoring skills, graphic design skills, programming skills and are familiar with a sound pedagogic approach to materials design that is sensitive to the needs of a range of learners.

134 Such work may focus on the collaborative development and/or acquisition through commercial suppliers of material that presents small units of learning suitable for maintaining motivation and perceived relevance in college or through a distance learning mode at work or in the community or home, underpinned by good student support, and linked to assessment. Insistence that wherever possible such materials and support are designed to conform to UfI criteria will ensure that the products and services have the potential for widespread application.

# Support, Information and Advice

135 Colleges will require considerable support in sustaining networked learning environments. Evidence from recent surveys indicates a widespread intention to install faster links to the Internet in the next two years. These links require more sophisticated equipment and higher technological skills to maintain them. Where once only a few individual computers could be connected, faster links will enable whole college networks to access the Internet. Additional training will be required in both general computing skills and embedding access to the Internet into specific curriculum areas.

136 Whilst some colleges are experiencing difficulties in retaining staff, once they acquire these valuable skills, the upgrade plans of others are being held back as they are unable to find sufficient funding for additional staff with these scarce IT skills. Not all colleges have direct experience of local and wide area networking. They will require detailed technical advice and consultancy to help them develop their provision, as well as support and training to maintain it. A comprehensive support package would include:

- site visits to assist with installation, configuration of routers and local network connection and integration
- procurement of appropriate hardware, services and management of maintenance contracts
- email, web server and news server installation and administration
- ongoing telephone support and helpdesk facilities
- end-user staff training.

137 In addition to these services, colleges will benefit from information and advice on the application of ILT to learning and its management. Without central provision of co-ordinated information and advice, colleagues in colleges throughout the country will find themselves needlessly duplicating effort.

138 The existence of wide area networking renders some previous models of support, with heavy concentrations of resource in geographical centres, less relevant to today's environment. There is a case, therefore, for substantial investment in the extension of existing sources of information and advice to meet anticipated demand for guidance in the effective use of ILT throughout the sector. While the FERL project has demonstrated some of the benefits of a centrally maintained service for information and advice, it has done so with quite modest resources and its impact has been conditioned by this.

139 For the use of information and learning technology to become widespread throughout the sector; for staff to be able to access the subject detail they require in selecting learning materials and approaches; and for learners to be assured of received the highest quality in terms of both resources and tutoring, we shall be reliant on a brokerage function to ensure that the very best of

sector practice is disseminated effectively. Regional collaboration will extend the developing human networks so that local contacts grow, but we shall still have need of centres of good practice at which college staff can gain inspiration about the potential of ILT – whether as a learning aid or as a tool to improve the management of learning. The provision of a strong information and advice service, grounded in the experience of sector achievements and national priorities, will be an essential component of colleges' fundamental support mechanisms.

# Strategy Management

## National

140  The FEFC has a clear responsibility to government to ensure that this ILT strategy is effectively managed. It will continue to rely upon the FEILT committee to provide monitoring and advisory services to the Council. The FEFC is also establishing a small co-ordination unit to work with the FEILT committee, sector organisations, and the sector generally to ensure that the strategy meets the needs of colleges and others, that funds are properly used and that good progress is maintained.

## Local

141  It is also vital that the strategy is well-managed at local levels. Colleges will need to ensure that ownership of their own ILT strategies is embraced by governing bodies, senior management teams, and by all the staff within colleges. It is recommended that regular progress reports be made to the senior management team in each college showing how the local ILT strategy is being actioned.

## Funding priorities

142  This report makes no specific recommendations about the use of new monies. Such detailed advice will form part of a recommended action plan, which will arise from the consultation exercise on this strategy document. The advice will need to take account of colleges' short-term and medium-term operational needs, set against the backdrop of the limited funds in years 1 and 2 of the strategy programme.

# Implementation

## Partnerships

143 Research and practical experience indicate the corporate necessity of partnership if organisations are to compete in a knowledge-driven economy. This will be essential to achieve 'networked lifelong learning'. There are neither time nor resources to waste on parallel and separate innovations. The use of extranets and other high-tech solutions by communities of interest is essential. We need to move beyond the mentality of locked filing cabinets of similar worksheets in each institution and the sharing of good practice over the photocopier. Instead, we need to meet the challenge of effective and efficient development of ILT through partnerships and 'communities of interest' working in harmony, building on their individual strengths to develop excellence in ILT-based learning environments across the sector. In implementing the ILT agenda, co-operative approaches can:

- minimise the time for ILT resource development
- ensure better transferability and coherence for learners across institutions
- maximise value for money through joint approaches to suppliers
- exert political pressure on publishers and others to deliver high-quality ILT solutions for lifelong learning
- ensure system and information compatibility.

144 The key mechanisms for achieving this might include:

- extranets which parallel the quality initiative and standards partnerships. These might have subject-specific topic areas within them, such as basic skills good practice frameworks for practitioners or more general areas looking at effective ILT learning. They could also act as a gateway to subject specific modules of learning materials or programmes
- agreement of common data collection and analysis frameworks within a partnership area that allows robust impact measurement.

## Working with JISC

145 It is particularly important that we form effective relationships with the providers of networking and information services. Through its joint information systems committee (JISC), the HE community has created a wide and high-quality infrastructure both for networking and for information resources. The joint academic network (JANET) is widely regarded as one of the world's leading networks.

146 We are enjoined by the secretary of state to work closely with colleagues in the HE sector in our development of ILT resources and practices. We would wish to avoid duplication of effort and resources in any event. Working closely with the JISC appears to offer significant practical advantages towards reaching this strategy's goals. Over the years, the JISC has developed considerable ILT expertise, and it is willing to make that expertise available to the FE sector. It is therefore proposed that the FEFC becomes a full funding partner of the JISC, and that the JISC is reshaped to cover the needs of both FE and HE. This would bring substantial benefits to the FE sector, including:

- access at reduced costs to a world-leading network
- access at reduced costs to a range of on-line information resources
- the opportunity to shape the development of future networking and information resources. We could ensure that the academic material of the future is prepared, managed and delivered in an optimum manner for the benefit of FE students
- improved value for money through increased bulk purchases and by reduced unit costs
- the opportunity to pool resources with HE, particularly in areas such as support and training, including training in the production of training materials.

## College ILT strategies

147 ILT is now so central to the management and delivery of FE that its development must be a core element of the strategic planning process for every college. To fully exploit ILT, there will be impacts upon:

- management and governance
- resources
- accommodation
- staffing and development
- total student experience.

148 In the same way that ILT is becoming embedded in day-to-day activity, so should ILT strategic thinking become embedded in the full spectrum of the college's strategic planning processes, and be subject to the same planning, monitoring and review mechanisms as other aspects of the strategic plan.

149 The BECTa publication *Planning for ILT in Further Education*, and the FEDA QUILT publication on ILT planning cover ILT strategies in some depth.

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