What you need to know about the use of ICT and e-learning for work-based learning in the skills sector

An overview of the research

Background to the research

The DfES e-strategy ('Harnessing technology: Transforming learning and children's services' – March 2005) highlights the importance of e-learning within work-based learning. Both employers and employees can clearly benefit from what e-learning can offer in the workplace. The leading national partners for this strategy are the British Educational Communications and Technology Agency (Becta) and the Joint Information Systems Committee (JISC).

While computer-based training has been around for two decades, its uptake by employers has been patchy. However, with the now-ubiquitous nature of ICT and e-learning, government, employers and training providers are increasingly recognising that it has an important role to play in developing and maintaining the skills required by the workforce.

This research – commissioned by Becta and funded by the Learning and Skills Council (LSC) – focuses on publicly funded small and medium-sized enterprises (SMEs) and the public sector. It describes developments and identifies how to best use the opportunities offered by new technologies to improve the effectiveness of learning in the workplace.

This is a summary of both those findings and the work needed to promote and embed e-learning in the workplace, in accordance with the e-strategy.

The full research report is available to download at [http://www.becta.org.uk/research/reports].

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ICT Research

What you need to know as …

… a policy-maker

- The DfES aims to embed e-learning objectives across all its skills and education strategies. It intends to make ICT and e-learning integral to the delivery of the skills training and education needed in this country.

- The post-16 E-learning Policies and Programmes Board, a joint LSC/DfES body, was recently established to produce and implement e-learning strategies specifically in the skills sector.

- Policy changes that will help e-learning prove its value include:

  - Better co-ordination of post-16 e-learning policy. Strategic area reviews being undertaken by all local LSCs aim to ensure that learners' needs are met by a mixture of provision, responsive infrastructure and more choice. Each local LSC has been asked to address specifically the role of e-learning as part of its review.
  - Greater focus on demand-led publicly funded work-based learning provision. The Skills for Business Network of the Sector Skills Councils (SSCs) is working to ensure that such provision meets sector needs.
  - Introduction of e-assessment. The plans of the Qualifications and Curriculum Authority (QCA) for the next five years include proposals for all new qualifications to include on-screen assessment, with most examinations being available on screen, where appropriate, and awarding bodies accepting and assessing e-portfolios.

… an employer

- Future policy aims to meet employers' needs for work-based learning while allowing the use of public funds to support more flexible training.

- Following the implementation of e-learning by large corporations, a number of key drivers have been identified, including:

  - the rapid growth in information that knowledge workers need to handle
  - the great rate of change in knowledge and skills
  - the possibility of savings in training costs.

- Research involving over 500 large companies concluded that the greatest e-learning successes were related to changing attitudes to learning and reducing the cost of training, while increasing its use. Benefits included reduced travel costs, increased time spent at work and ease of delivery to a widely distributed workforce.

- However, e-learning does not necessarily mean reduced training delivery costs. Employers are increasingly taking into account the benefits that e-learning brings in terms of better-trained employees and improved performance.

… a training provider

- A review of 36 work-based learning providers undertaken for South Yorkshire LSC found that 25 per cent of them used e-learning in some form, while 28 per cent intended to start using it within one year.

- LSC-funded work-based learning providers have been experimenting with eNVQs – for example, a system whereby learners are able to maintain e-portfolios of work and use email to keep in touch with tutors and others. Benefits of this approach include greater motivation among participants and cost savings as a result of transferring paper-based materials to CD-ROM.

- A 2004 survey by the Chartered Institute of Personnel and Development (CIPD) found that 69 per cent of e-learning practitioners felt that, for people involved in training and development, e-learning demands an entirely new skill set.

- Becta's 2004 ILT monitoring survey of further education colleges revealed that 87 per cent of colleges offer staff-development programmes to those putting together e-learning materials. These programmes include support from ILT 'champions' and technical staff as well as one-to-one mentoring. Support can also include remission of time, loan of laptops and the deployment of a dedicated materials development team.

Evidence about e-learning in the workplace

- The Labour Force Survey of summer 2004 showed that the training received by 12 per cent of employees in the previous four weeks included e-learning.

- E-learning is more successful when it is linked very closely to day-to-day tasks.

- Much of the literature suggests that e-learning take-up is greater in workplaces where computers are used and easy to access. Some of the evidence indicates that a lack of ICT skills can stop people from participating in e-learning, but some projects suggest that learners with little ICT knowledge can use e-learning effectively.

- The Epic Group survey of trends in e-learning forecasts that the greatest growth will be in further education, closely followed by large corporations and then public-sector employers.

- In the previously mentioned CIPD survey, 54 per cent of respondents said that they were developing customised e-learning modules rather than buying off-the-shelf packages. The survey also reported that 80 per cent of companies think e-learning is more successful when combined with traditional forms of learning.

- It is unclear from the literature whether work-based e-learning can be used to reduce learning costs or whether it is only a tool for increasing the quality and effectiveness of training.

eNVQs

JHP Training in Leeds has had a positive experience delivering NVQs to call centre staff through e-learning. Completion rates are up, costs are down and learners report feeling more motivated when working in this way.

The use of electronic submission and communication tools has enabled candidates to track their learning and have more contact with their assessors. These methods also allow managers to keep an eye on staff progress without wading through masses of paper.

British Gas

'Practical, real and enjoyable' – that was the feedback from British Gas engineers who spent time in the company's 'Real World Environment'.

This three-dimensional training package uses simulation to recreate typical faulty-boiler scenarios. Service engineers practise their diagnostic techniques on a range of random events and work through the consequences of their actions. Their progress is logged, and this information is then used by the engineers and real-life trainers when discussing best practice.

Tangible results from these sessions include improvements in the rate at which problems are fixed first time, a reduction in customer complaints and a drop in the volume of calls to the National Technical Helpdesk.

The full research report is available to

http://www.be

Examples of work-based e-learning projects

- e-skills into business (ESiB) is an online programme designed to help SMEs become more competitive. It includes online business analysis and skills analysis toolkits as well as more than 200 online courses.

- The National Nursing Leadership Programme provides e-learning courses in leadership, management and personal development. These have helped widen access to people previously unable to participate in learning due to working patterns, location and personal commitments.

- Somerset County Council has introduced e-portfolios into an NVQ programme, in an attempt to reduce drop-out rates and bureaucracy.

- Jobcentre Plus has used simulations where learners practise their questioning skills by dealing interactively with eight 'virtual' customers who claim to have lost or not received social security payments.

- Seventy trade union study centres have been set up in colleges, union offices and workplaces, offering a range of online courses including report writing and communication. This has enabled members to take up courses at a time, place and pace to suit their needs.

- Many sector skills councils have set up learndirect learning hubs. For example, the Science, Engineering and Manufacturing Technologies Alliance (SEMTA) has a learning hub delivering flexible training to employees in the engineering sector.

- In a successful bid to reduce training costs, British Airways has developed a range of e-learning materials – including 400 courses – on its intranet.

- British Telecom recently doubled its use of online courses. As a result, overall course completion rates rose from over 3,000 to over 6,000 and training costs declined.

Potential barriers to the use of e-learning in the workplace

- Many employers lack the skills and knowledge to implement e-learning.

- The upfront costs of developing e-learning materials can be quite a stumbling block.

- Access to broadband is limited among small firms, and computers in the workplace are not always linked to the internet.

- Easy availability of ICT and access to it by learners is crucial if e-learning is to be a success, particularly in sectors where there is low computer penetration, such as construction and hairdressing.

- Many employers are simply not aware of or engaged with e-learning. This is particularly widespread among SMEs, which are less engaged with formal learning of all types than are other enterprises.

- Research with large firms reported that 42 per cent of those already using e-learning felt that the greatest challenge in its successful implementation is overcoming users' objections to cultural change.

- According to the evidence of some projects, too much focus is put on the technological aspects of e-learning materials and not enough on the learning itself. However, there is evidence that e-learning is an effective way of addressing 'just in time' training needs. In the NHS, for example, online European Computer Driving Licence (ECDL) courses are used to improve ICT skills among clinical staff prior to the roll-out of new systems.

Points to consider

- Making internet-linked computers easily available and accessed. This could include:

  - providing laptops for use by employees in the workplace
  - establishing workplace learning centres
  - ensuring that learning can be undertaken from home
  - guaranteeing that there is continuity between work and the training organisation or institution
  - making sure that learning materials are fit for purpose and, for example, do not contain unnecessary graphics that can be slow to download on dial-up connections.

- Providing support for e-learning. The evidence suggests the learning experience is better and completion rates greater when the tutor provides support, either face to face, online or over the telephone. Such support does not have to come from tutors. It can also be provided by fellow learners, workplace colleagues and line managers. Help needed by learners can include:

  - support while working through the course itself
  - getting a better understanding of the course concepts
  - hints for improving performance
  - discussing learning points with others.

The future

- The pervasiveness of computerised technology in all businesses, plus the spread of e-commerce and e-government in the UK, have placed an increasing number of requirements on all workplaces to come to grips with ICT. The pressure on firms to upgrade and refresh their skills is likely to continue to grow, and this will create a favourable environment for e-learning to become embedded in UK businesses.

- A survey of 150 large companies by Skillsoft in 2004 found that 96 per cent agreed that their use of e-learning would increase over the next two to three years.

- According to the 2004 CIPD survey, 58 per cent of respondents felt current e-learning products did not demonstrate what future ones would look like. They expected that there would be greater use of simulations.

- Research from IDC (2004) estimated that 8–10 per cent of the US corporate e-learning market uses technology-based simulations and predicts that this will rise to 40 per cent by 2008.

- Research by Balance Learning (2004), involving 300 US and UK companies, predicted that 'blended learning' – ie e-learning combined with more-traditional methods – will comprise nearly one-third of corporate training by 2006. Completely instructor-led training is expected to fall to 38 per cent over the same period.

- The University for Industry (Ufi) aims to quadruple its engagement with SMEs over the next five years. Proposals include the provision of predominantly online business training for SMEs.

- Future areas for development include exploiting the potential of mobile technologies and the use of simulations. Provision of innovative content is well placed to drive forward the demand for new equipment.

Implications for further research

- There is a lack of published evidence relating to work-based e-learning, and consequently there is a need for greater formal sharing of experience on the use, effectiveness and impact of work-based e-learning activities.

- Trends identified suggest that specific employer- and employee-focused learning appears to be most effective. As a result, the ability of projects to share good practice may be limited.

- More in-depth investigation is needed into the barriers to the take-up of work-based e-learning, as well as into activities that can be undertaken to minimise these barriers.

- Work-based e-learning must be defined in relation to blended learning activity, in order to identify the factors associated with the 'e' aspect of the learning.

Finding out more

Who offers support and advice?

Becta http://www.becta.org.uk
Becta is a UK agency that supports all four education departments in their strategic ICT developments. It delivers its work directly to the learning and skills sector through the provision of advice, digital resources, partnerships, standards and organisational development strategies.

learndirect http://www.learndirect.co.uk
learndirect courses are available to individual adults wanting to improve existing skills or learn new ones, and to employers looking for innovative ways to develop the skills of their workforce. More than three-quarters of the courses are available online. (See also the University for Industry opposite.)

Learning and Skills Council (LSC)
http://www.lsc.gov.uk
The LSC's goal is to improve the skills of England's young people and adults to make sure that the workforce is of a world-class standard. It is responsible for planning and funding vocational education and training for everyone.

National Learning Network Materials
http://www.nln.ac.uk/materials
A national post-16 partnership network programme designed to increase the uptake of ILT across the learning and skills sector in England. It provides a wide-ranging programme of support, information and training, as well as the development and provision of ILT materials for teaching and learning. The NLN Materials Team based at Becta has been responsible for commissioning and managing the development of over 800 hours of e-learning materials across a wide range of subjects.

Regional development agencies
http://www.englandsrdas.com
The business-led regional development agencies were set up to promote sustainable economic development in England. Their main tasks are to help the English regions improve their relative economic performance, and to reduce social and economic disparities within and between regions. They work with delivery partners and businesses to ensure that each regional workforce has the skills required to meet the needs of its regional economy. Last year, regional development agencies provided over 190,000 opportunities for people to learn new skills.

Skills for Business http://www.ssda.org.uk
This network – comprising the Sector Skills Councils (SSCs) and the Sector Skills Development Agency (SSDA) – has been charged with leading the skills and productivity drive in industry and in the business sectors. It brings together employers, trade unions and professional bodies that, working with government, develop the skills that UK business needs. It will also work with those bodies to consider where appropriate uses of technology can have an impact on business performance.

University for Industry (Ufi) http://www.ufi.com
Ufi's mission is to use e-learning to boost the employability of individuals and the productivity and competitiveness of organisations. Through its network of over 2,000 learndirect centres (see opposite) in England, Wales and Northern Ireland, and 6,000 UK online centres in England, it provides access to a range of e-learning opportunities and e-government services.

In addition to the above, there are a number of private-sector sources of information, including:

Association of Learning Providers
http://www.learningproviders.org.uk
The majority of the members of this association of independent learning providers are private, not-for-profit and voluntary-sector training organisations. It represents its members' views on training to policy-makers when new initiatives are being planned.

British Learning Association
http://www.british-learning.com
The British Learning Association is an independent forum for advancing techniques and technologies in learning.

eLearning Network
http://www.elearningnetwork.org
This is a non-profit-making organisation run by a committee of learning professionals for those interested in the application of technologies to learning. It aims to provide a lead in the use of best practice in all aspects of learning technologies.

The research

The full research report is available to download at [http://www.becta.org.uk/research/reports].