

## **Using E-Learning at Work - the Theory and the Reality** **Professor John Stephenson, DPhil, Middlesex University, London, UK**

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The presentation addresses the apparent misalliance between what we know from research about how people learn at work and the current state of play in corporate e-learning provision.

### **Some research into learning at work**

Two field research studies completed by the author, based on 400 shop floor workers taking vocational qualifications in 10 major UK organisations and studies of front-line workers using e-learning in 32 SMES suggests that work-based e-learning is more likely to be effective when it has the following characteristics:

- learner ownership and responsibility
- negotiated, flexible provision
- personalised to individual users
- users can manage their own work and learning priorities
- learning through work itself, with local help
- an element of personal development
- opportunity for personal reward and / or recognition for effort and progress

(See Stephenson, J. and Basiel, S. 2001 and Stephenson, J et al 1999)

A current study being completed by the presenter focuses on learning preferences of users of a blended learning programme. This study indicates that just under one half of the participants rate face-to-face training as 'very useful', with less than 1 in 3 giving high ratings for CDROM manuals, self-study materials, internet networking, self-help groups and web materials. By stark contrast, most respondents give very high ratings to learning through everyday work activities, e.g. Group problem-solving 68%, Work experience 68%, Work-place mentors 76% and 'Hands on doing' as high as 90%

These interim findings add considerable weight to the propositions from the other two studies that an e-learning approach that is work-based, learner centred and learner managed would have considerable impact and are consistent with current theoretical understandings (Boud and Solomon, 2001; Cairns and Stephenson, 2001) that learning at work is

- Autonomous
- Collaborative
- Informal
- Problem-based
- Just-in-time
- Above all, it is mostly TACIT

A fourth study by the author, L-Change, looked at suppliers' views of future trends in the European e-learning market. The L-Change study showed signs that e-learning suppliers were beginning to respond to the importance of the central role of the user by predicted that the e-learning market of the future would show greater emphasis on:

- pedagogical design in educational & corporate markets
- 'blended' or integrated learning and training packages
- 'mass customisation' of systems responsive to individuals
- support focused on mentoring as users become more independent
- opportunities for brokers between pedagogues and providers on behalf of client needs.

### **The reality**

A review of 100 research reports and accounts of e-learning in practice falls very short of the approach implied by the research into learning at work, as summarised above.

The Paradigm Grid in **Diagram One (see end)** provides a simple way of classifying e-learning design according to the extent the learner or the teacher has control over the content and learning process. This grid is a simplification of what pedagogues call constructivist and instructivist approaches to learning and has four quadrants identified by compass directions with the NE quadrant representing traditional tightly controlled instruction and the SE quadrant representing open-ended learner managed activity. The style of learning through work identified by the research reported above lies largely in the SE quadrant.

However, the vast majority of the examples included in the review of e-learning practice sit firmly in the NW quadrant. Even 'blended' and 'personalised' learning schemes can be in this instructivist paradigm in that each of its various activities is within tight supervision of the trainer.

This mismatch is surprising in that many of the tools and facilities associated with e-learning are ideal for supporting learning in the SE quadrant. These include learner managed virtual learning environments, customised intuitive tools, dis-aggregated company-specific and commercial materials tagged for personal relevance, access to outside sources, online mentoring, online portfolios and networking opportunities.

Moreover, relatively low completion rates for e-learning at work are an indication that all is not well. Curtis Bonks' study of e-instructors (2001) shows only 2% claiming 100% completion with more than 50% having less than 70% completion. The question to ask is whether a greater emphasis on the SE sector would help improve this position.

### **Why the mismatch?**

The reasons for the mismatch between requirement and provision include instructor inertia and conservatism, lack of communication and understanding between key players, and a general lack of awareness of research into what is effective e-learning and what is not. Teachers and trainers are too busy to access research literature, and researchers direct their reports to other researchers rather than practitioners. Teachers tend to replicate their traditional pedagogic styles in the new medium without examining the extent to which the new medium offers pedagogical alternatives. The cultural divide between hard-nosed business and academic discourse is a further major inhibiting factor. Moreover, key decisions about the provision of e-learning now involve a wide range of professional players. Where previously trainers or teachers decided for themselves how they wished to operate, they now need to communicate professionally with designers, providers, technicians and fund managers. Often systems are used out of expediency and short term benefit rather than considered judgements of what is best. The author presents some of his experience in the UK as an academic working with high profile representatives of other relevant professions on the development of plans for the University for Industry's plans for a national e-learning programme for people at work.

### **Some ways forward**

To conclude, the presentation takes a brief look at three different ways in which e-learning provision can be made consistent with how people learn at work.

The first is the 'Learning through Work' programme of Ufl/learndirect in which people at work are helped to develop their real-time work-based tasks and problems into programmes of learning supervised and assessed entirely online by a participating university. The programme's Virtual Learning Environment provides users with a comprehensive support service in response to problems and learning needs negotiated by the users themselves. (<http://www.learndirect-ltw.com>).

The second is an example of a company-based knowledge and learning management system based on a user controlled e-learning system (UNIPART). All employees from boardroom to shop-floor have ready access to terminals to share problems as they emerge, access company archives of similar instances, explore experience elsewhere and log solutions tried and progress made into

the growing database of corporate expertise.. This 'faculty on the floor' enables each employee to use e-learning as a means of improving their own performance and the company's effectiveness.

The third example, Do It Even Better, is an individual learning environment linked to company performance appraisal systems. It allows individuals to explore their own development needs and to access a wide range of materials and assistance according to their needs. (See Stephenson, J., 2002)

All three cases

- put and keep the user in control,
- tap into their personal motivation,
- relate directly to improvements in practice,
- provide instant access to expert help, support and resources, and
- provide opportunity for recognition and academic credit for their effort and achievement.

Each example makes effective use of ICT facilities to support an approach to work-based learning that is relevant to both the user and the employer. They represent prime examples of synergy between learning through work, new technology and learner-managed pedagogy.

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### Diagram 1

From Coomey, M Stephenson, J 2001, It's all about Dialogue, Involvement, Support and Control, in *Teaching and Learning Online*, Stephenson, J, Kogan Page London

