

The current state of e-learning in the workplace

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Abstract

Aim of this short survey paper is to frame the current state of e-learning in the workplace by looking at how differently the term “learning” is defined. E-learning tools do not bring a new perspective per-se, but reinforce or enhance one of the three main pedagogic perspectives. For example, Computer Based Training emphasises the associationist/empiricist perspective. At the other end of the spectrum, social software supports the situated perspective on learning. Learning at work is usually divided into two modes: on-the-job (informal) and off-the-job (formal). Ethnographic studies of learning in the workplace support the situated perspective and that learning must not be considered separately from work and innovation processes. Building a learning organisation requires to take into account the level of individual communities of practice, the level of e-learning tools and associated practices, and the level of the overarching organizational architecture. In our view, maturity models could offer some contribution in this direction, as they provide a road map for improving learning processes.

Introduction

We can define e-learning as “The use of ICT to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration” (Page, 2006). When traditional teaching and learning (T&L) activities are coupled by e-learning we refer to it with the phrase “blended learning”. In the last decade, the term ‘learning’ has become widely adopted by policymakers, practitioners and educational researchers in preference of ‘education’ and ‘training’. This shift becomes evident in the frequent usage of the phrase “lifelong learning”, acknowledging that people learn in many different settings and over their whole life course, and that only some learning is formally accredited and delivered by face-to-face lessons in classroom.

The percentage of adult population aged 25 to 64 participating in education and training in 2003 totalled 9.2 % in EU according to the last EUROSTAT report (Page, 2006). The percentage in UK is about 150% more with respect to the rest of Europe (25.3%). The percentage of lifelong learners having used Information and Communication Technologies (ICT) for formalised education and training activities (school, university, etc.) was still low in 2003 (10.1 %), but we feel that this figure should be fairly higher. Especially in SME, people learn on-the-job without a formal accreditation. Learning at work in fact takes many forms, although traditionally it has been divided into just two modes: on-the-job (informal) and off-the-job (formal).

Three different perspectives on (e-)learning

The word “learning” itself is quite difficult to define, because it is both a process and an outcome of this process. Its meaning has considerably changed in the last 50 years, as three different pedagogical perspectives tried to frame its meaning:

1) The associationist/empiricist perspective: learning is the process of connecting the elementary mental or behavioural units, through sequences of activities. The learning outcome is the change of behaviour.

2) The cognitive perspective: learning, as well as perception, thinking, language and reasoning is seen as the output of an individual’s mental processes: attention, memory and concept formation. The learning outcome is the building of a mental model – a framework for understanding.

3) The situated perspective. The learning activity is part of the community building and regulations activities. The learning outcome is belonging to a community of practice.

E-learning tools do not bring a new perspective to T&L activities by themselves, but they reinforce or enhance one of three perspectives (Mayes & Freitas, 2004). For example:

- (1) Computer Based Training (CBT) emphasises the interaction between an individual and the computer; courses, which are designed by instructional designers, decompose the subject matter in sequences of smaller units; sequences of instruction are designed for students to be able to succeed by learning in small and logically-ordered steps.
- (2) Simulations and Role playing games place the learner in virtual situations where they can build their knowledge through an active process of creating hypotheses and building new forms of understanding, without the risks which they would incur in real life.
- (3) Social software – including Blogs and Wikis – allows learners to collaborate in the construction of meaning and in asserting their own identities within virtual and/or real communities of practice.

A social perspective on learning in the workplace

Ethnographic studies of learning in the workplace support the situated perspective and that learning must not be considered separately from work and other primary business processes like innovation (Brown & Duguid, 1991). Given these assumptions, how is it possible to foster (e-)learning and innovation at the same time in the work place? It is difficult to answer to this question in abstract, as learning cannot be separated from the context in which it takes place.

Learning should be encouraged in an organisation developing zones of peripheral participation (Wenger, 1998), where shared narratives are developed and the apprenticeship of novices is enacted. It is a significant challenge to ensure that new collaborative technologies, designed as they so often to support formal work processes, do not exclude this sort of implicit, extendible, informal periphery. It is important to analyse the way knowledge is constructed and travels within an organization by understanding the different communities that are formed within it and the distribution of power among them. Building a learning organisation requires to take into account three levels of complexity: (a) the level of individual communities of practice, (b) the e-learning tools and associated practices and (c) the level of the overarching organizational architecture, the community-of-communities (Brown & Duguid, 1991).

E-learning maturity models

An interesting contribution given by the software engineering community to the study of learning organisations is the idea of using a maturity model as (Chrissis et al, 2004) assessing a set of key process areas. Maturity models following the SPICE format like (Mitchell & Marshall, 2004) define five levels of process capability (Initial, Planned, Defined, Managed and Optimising). Each process is broken up into practices which are assessed at each level using a four point scale (not adequate, partially adequate, largely adequate and fully adequate). In our opinion maturity models, when tailored to specific contexts, will be useful as they provide a detailed road map to improve learning processes.

Conclusion

We saw how the term learning and especially “lifelong learning” has become widely adopted with respect to “education” or “training” and how three different pedagogic perspectives (associationist/empiricist, cognitive and situated) framed its meaning in the last 50 years. E-learning tools do not bring a new perspective per-se, but reinforce or enhance one of these perspectives. Ethnographic studies of learning in the workplace support the evidence of the situated perspective and that learning must not be considered separately from work and other primary business processes like innovation. Learning should be encouraged in an organisation developing zones of peripheral participation. Understanding the context is paramount in creating a learning organisation. We advise to analyse the way knowledge is constructed and travels within an organization by understanding the different communities that are formed within it. In our opinion maturity models are potentially useful because they provide a road map to the organisation for improving learning processes in this direction.

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