Towards a learning networked organisation: human capital, compatibility and usability in e-learning systems

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Abstract

In all parts of organisations there flourish developments of different new subsystems in areas of knowledge and learning. Over recent decades, new systems for classification of jobs have emerged both at the level of organisations and at a macro-labour market level. Recent developments in job evaluation systems make it possible to cope with the new demands for equity at work (between, for example, genders, races, physical abilities). Other systems have emerged to describe job requirements in terms of skills, knowledge and competence. Systems for learning at work and web-based learning have created a demand for new ways to classify and to understand the process of learning. Often these new systems have been taken from other areas of the organisation not directly concerned with facilitating workplace learning. All these new systems are of course closely interrelated but, in most organisations, a major problem is the severe lack of cohesion and compatibility between the different subsystems.

The aim of this paper is to propose a basis for how different human resource systems can be integrated into the business development of an organisation. We discuss this problem and develop proposals alternative to integrated macro-systems. A key element in our proposition is a structure for classification of knowledge and skill to be used in all parts of the process. This structure should be used as an added dimension or an overlay on all other subsystems of the total process. This will facilitate a continued use of all existing systems within different organisations. We develop Burge's (personal communication) model for learning to show that learning is not a successive linear process, but rather an iterative process. In this way we emphasise the need for greater involvement of learners in the development of learning systems towards increased usability in a networked system.

This paper is divided into two parts which are closely related. The first part gives an overview of the lack of compatibility between the different subsystems. In this first part we note two paradoxes which impact learning and for which we propose solutions. The second part deals with 'usability' aspects of these competency-related systems; in particular, usability in e-learning systems. In this second part we describe an example of a new organisational structure. We conclude by discussing four key concepts that are necessary conditions for organisations to address when developing their human capital. Establishing these conditions helps ensure compatibility and usability in e-learning systems.
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1. Background

Market demands with rapid changes and constant action require highly competent employees with up-to-date knowledge. Today, highly competent colleagues are worth a fortune and are an organisation's only real asset—especially in a competitive market. It is crucial to ensure that such people are up-to-date in terms of knowledge, skills and competencies. One key issue with competence development is the monetary cost, but most important is the cost in human time and effort. This means that it is increasingly important for organisations to provide employees with a curriculum for learning that

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is time-efficient. This can minimise time away from productive work and maximise skill and knowledge achievements.

We see in this situation an inherent paradox. Employees need time and opportunity to develop their work-based competencies (and thus not immediately engaged in productive work). At the same time, employees need to be engaged in their productive work. Time devoted to work tasks means less time for learning. Time devoted to learning means time away from work tasks. An added complexity occurs when employees are working under strict time pressure (perhaps to meet output quotas or deadlines). Here, increased competencies towards gains in efficiency would be an asset, but the strict time pressures on the work outputs preclude (or, at least, greatly reduce) time for learning.

One solution to this paradox is to have IT-based (e-learning) 'courses' which allow greater flexibility. E-learning gives a more flexible and focused curriculum. Employees would not have to be away from their desks and could pursue the course between work routines and activities. Electronic courses require that *operational learning* (learning associated with *how to use* the electronic course) be minimised. For the learner/user, what matters is *not* the operational part of the learning process *but* the learning content (i.e. attaining new knowledge, skills and competencies to do the job). In issues of usability, particularly in achieving high usability, it is important to minimise the user's perception of the *operation of learning* (the process that constitutes the formal mechanism of a 'teaching' program). The less time the learner/user spends learning how to operate the learning application, the more efficient is the e-learning application in terms of content learning (e.g. knowledge achievements). We re-emphasise that the focus should be on the learning achievements and not on the operation of the learning process.

Competence, competency, knowledge, ability, skill, human capital, learning organisations are all vogue terms in most public and private organisations. Developments of new subsystems in these areas flourish at all levels in organisations. However, there is a great risk that these new concepts will merely be empty words and that core business activities will not benefit from these important new concepts. Insofar as learning and competence development are concerned, it is business as usual.

2. Towards new organisational structures

Fig. 1 shows the basis for our way of looking at personnel development. This figure (developed from Ivergård, 2000a) shows developments in business and industry occurring in parallel and being integrated with personnel development.
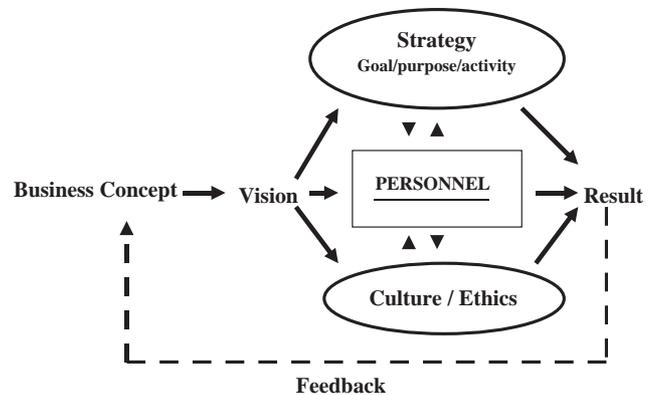

Fig. 1. Business and personnel development integrated into one process (Ivergård, 2000a).

The starting point for this figure and for this development philosophy is that human capital is the absolute determinant for success within the framework of what is known as the 'new economy'. Business development cannot take place without human inputs. However, business development in itself can drive a need for new structures, new patterns of working and the introduction of new technology. In other words, business development creates the need for changes in the form of, among other things, new knowledge, skills and competencies on the part of the employees.

There is a risk, quite apparent in most organisations, of ending up with a development process which is out of phase, giving rise to a form of two-speed development. In this case, the first step is to work out the new business concepts and the needs for new competencies. This may take time and involve only certain members of the organisation; then the needed new competencies are obtained through recruitment, selection of existing employees, skills upgrading through training, etc. This also may take time and involve different members of the organisation. Such a linear process gives a misleading picture of reality, as well as contributing to false hopes. Also, the lags of both time and information between deciding (and perhaps agreeing) concepts and competence needs and fulfilling these needs make the change process cumbersome and unwieldy. These lags and the possibility that the process has involved different constituencies of people increases the uncertainty of success. Arguably, it increases the likelihood of failure. Conducting the two processes in parallel and in an integrated manner (as shown in Fig. 1) creates completely different conditions and is a basis for harmony between the two. The balance and exchange of resources between the two processes narrows any time and information gaps. In addition, organizing in this way stimulates the motivation and inspiration of the personnel. In an ever more competitive world, such inputs are critical to sustained success.