

What are the implications of the virtualisation of organisations and the emergence of knowledge management for management development?

Professor John G. Burgoyne
 Department of Management Learning
 Lancaster University Management School
 Email j.burgoyne@lancaster.ac.uk

Introduction and Summary

The growing concern with knowledge management and the rapid emergence of virtual organisations are two of the main signs of a revolution in the functioning of organisations, which has profound implications for management development.

As firms have become learning organisations knowledge has become the critical resource both as the means of production – state of the art value adding processes, and as the product itself – what firms are selling is knowledge itself or goods and services with a high knowledge value content.

Organisational learning is the process by which organisational knowledge is created, renewed and utilised.

As part of this process organisations are becoming virtual – new e-commerce firms are created as virtual from scratch, surviving traditional firms are rapidly ‘virtualising’ themselves to survive and prosper.

There are three main aspects or organisational virtuality:

- A high proportion of virtual workstyles and workplaces for employees of all kinds.
- A high level of access to all organisational knowledge and resources for all organisational members – a dramatic fall in internal transaction costs if the necessary collaborative culture is achieved.
- The location of the organisation in its virtual context is increasingly critical – e-markets (both purchasing and selling), location in virtually managed just in time supply chains and industrial networks, web branding and imaging.

Organisational knowledge is differentially located – in people, records, culture, archives, technology, patents, expert systems, competency frameworks, training programmes, resource centres. There are new challenges in integrating and harmonising these.

For managers and employees there are fundamental new issues:

- Self-management and development as a knowledge manager and producer.
- Working in mixed generational teams with radically differing work lifestyle orientations – pre-generation X, generation X and post generation X.

- Linking personal knowledge and learning to collective knowledge and learning.
- Finding mutually beneficial understandings and practices over intellectual property ownership.
- Seeking and taking reward as equity as well as remuneration.
- Access to knowledge creating situations as a necessity for maintaining career viability.

These emerging trends set a totally new context both for the ways in which managers learn and may be helped to learn, and the ways in which careers will be shaped for the individual and 'managed' by organisations. Careers will be shaped more than by what people can and are able to learn.

Some of these implications will be explored and discussed.

Management Development in the Knowledge Managing Organisation

Knowledge management is a topic of considerable contemporary interest. It is the hot topic in the professional publications and conferences of the management and management development world.

It is linked to at least four other contemporary organisational phenomena:

organisations for which the main product is knowledge itself or goods and services of which knowledge is the major added value component

organisations in which the main kind of work for employees is knowledge work
organisations learning how to learn

the 'virtualisation' of organisations.

Knowledge management, knowledge intensive firms, knowledge work, organisational learning and virtualisation of organisations may be:

1.) the latest events in the continuously changing world of organisational life

or

2.) the early stages in a quantum transformational change in the nature of business, organisation and management - similar in scale to the industrial revolution of the 19th century.

The argument of this paper is that those of us who are concerned with management development should take possibility 2 seriously. If we are now seeing the initial symptoms of an emergent revolution then this has fundamental implications for management development.

The organisations that thrive and survive in this era may be the ones where management development is based on the clearest vision of what is coming, and achieves the rapid changes in practices that this demands. The landowners, owners of capital and entrepreneurs that were the first to understand the emerging industrial revolution in the 19th century became the ones that lead it, and lead in it.

This paper first explores the nature of the revolution of which knowledge management is a part, then examines the implications for management development.

Knowledge Management

The argument of knowledge management is that organisational knowledge has become the critical resource upon which organisational effectiveness depends.

Arguably organisations have always been dependent on knowledge, but until recently it has been relatively stable, embodied in things like production lines through which it can be managed. In this form knowledge has been relatively easy to protect from exploitation by competitors.

Now the speed of development of new knowledge, the ease with which it can be imitated, mean that careful management of the production and use of knowledge is critical. The argument of knowledge management is that organisational knowledge has become the critical resource upon which organisational effectiveness depends.

Knowledge Management based Corporate Strategies

The knowledge approach is the most useful contemporary way of analysing strategic corporate options. The broad alternatives are:

- Rolling out a standard knowledge based package – McDonalds.
- Optimising the use of rich diversity of organisational knowledge: 'if Hewlett Packard knew what Hewlett Packard knew...' – organisations that have a wealth of experience, designs, patents only some of which are used in current products and services, but which can be accessed and applied to new problems.
- Being fastest at generating and applying new knowledge - R&D lead strategies, or relying on the creative abilities of core staff as in the media, advertising agencies, and design houses.
- Moving from goods/services provision to selling the knowledge underlying them. Organisations that are in leading positions in providing certain goods and services can sell, via consultancy, the ability to do this to other organisations, often as part of a global market strategy.

The Learning Organisation Contribution

Organisational learning is about generating, using and improving organisational knowledge. The learning organisation movement has preceded the knowledge management movement, and arguable led to it, in the sense that organisational learning produces organisational knowledge that then needs managing and utilizing.

The differing strategic options require different organisational learning processes. The 'standard package' approach demands that organisations learn how to roll this out through their own operations and franchises, to manage quality control, achieve local adaptation, and pursue continuous improvement in efficiency. Optimising the use of organisational knowledge means learning how to use the organisations 'memory' and how to identify opportunities for its application. The fast generation of new knowledge approach demands a clear understanding and fostering of the research and creativity abilities of the organisation. The exploiting underlying knowledge approach requires an organisation to learn about its own distinctive knowledge and how to apply it in new situations while retaining ownership of it.

Knowledge Management

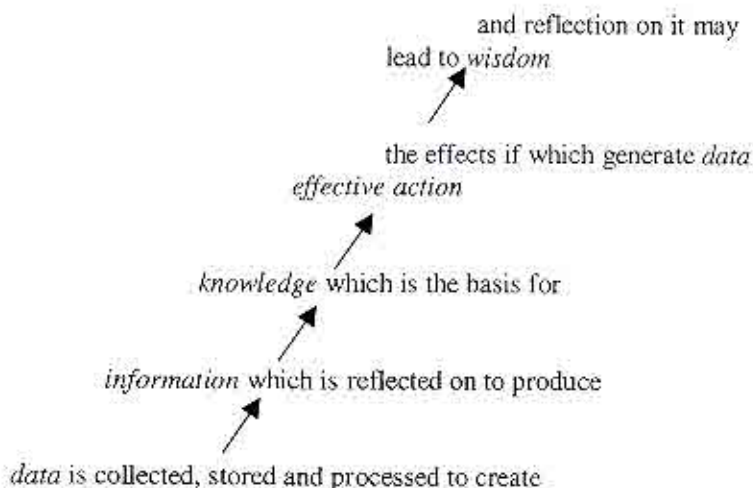
The practice of knowledge management has been largely developed by the IT/IS function, whereas HR has largely championed organisational learning. Because of this the two may not be optimally integrated.

Two things are problematic:

- the knowledge generation and use process
- the diverse form, location and ownership of knowledge.

The knowledge generation and use process

There appears to be some agreement that the key steps in knowledge management and utilization are:



Data gathering and processing is now massively speeded up by IT/IS. Knowledge, application and wisdom are human learning processes - which are massively challenged by these new processes.

There is arguable a change of type occurs between information and knowledge. This is the point at which human understanding, intuition, judgement and sense making comes into play.

The diverse form, location and ownership of knowledge

Organisational knowledge exists in diverse *form*, is diversely *located*, varies in its natural *mode of ownership*, and varies in its *susceptibility to dissemination and control*.

Organisational knowledge is located in:

1. people's heads
2. technology and procedures
3. the tacit abilities of practitioners
4. archives, records, patents, reports
5. organisational culture.

For organisations to make use its collective knowledge it has to relate, integrate and use these differently located and formed types of knowledge. These different kinds of knowledge vary in their accessibility to conscious use and their tendency to naturally belong to individuals or organisations. 1,2 & 4 are relatively accessible to conscious analysis and control, 3 & 5 the reverse. 1 & 3 belong naturally with individual people, whereas 2,4 & 5 are collectively located.

The Virtualisation of Organisations

The internet is catching on three times faster than television did when it was new, and seven times faster than radio when it was new. E-firms are achieving leading positions at unprecedented speed - e.g. Amazon. Traditional firms are adopting e-practices equally fast. E-firm start up is a goldrush phenomenon; E-firms are valued on promise way beyond current revenues. E-workers are keen to work for maximum equity stake and survival salaries. This is the new phenomenon of equity culture, employees wanting material acknowledgement that they are or own the critical means of production - their own knowledge and brainpower.

There are three aspects of virtual organisation:

- 1.) Virtual work process and workplace for a high proportion of employees - workstations and remote working.

- 2.) High levels of accessibility to all organisational information and resource by a high proportion of staff.
- 3.) Firms dealing with customers, suppliers, labour market remotely, and significantly 'located' in virtual reality, e.g. on websites in virtually managed networks and supply chains.

Management Development in the Virtual, Knowledge Managing, Learning Organisation

The significant features of this cluster of changes involving knowledge management, organisational learning and virtualisation are:

- The dramatic speeding up of data collection and information processing, putting massive pressure on the human capacity for sense making and action taking.
- The dispersal of many of the key asset of the organisation away from organisational ownership and control - as this asset becomes knowledge - and a high proportion of the dispersal being towards members/employees.

What are the implications of all this for management development?

Some hunches and inferences:

Working in mixed generational teams with radically differing work lifestyle orientations – pre-generation X, generation X and post generation X. Contemporary organisations have members who, because of the rapid changes in social and organisational life, have very different expectations about work, careers and learning. Employees with conventional ladder climbing career expectations mix with people with a background in the rebellious attitudes to work and institutions from the '60's, the gentle and less aspirational generation X, the self-interested yuppies of the 80's/90's enterprise culture, and less materialistic but game-winning oriented e-entrepreneurs of the new millennium. Management development systems that deal with the facilitation of learning and career development processes for organisations have to accommodate this variety of work and life styles, or, through recruitment and de-recruitment 'specialise' in a limited set of these strata of work/lifestyles.

Linking personal knowledge and learning to collective knowledge and learning. Because of the differing forms and locations of key organisational knowledge, as outlined above, management development systems now have to have strategies built into them to both foster the creativity of individuals and bring the product of this into collective application in organisational settings. This has to be done with an awareness that employees are now becoming increasingly aware that their own knowledge and intellectual abilities are their own main asset, and hence have to be protected, nurtured, and marketed from a personal point of view.

Finding mutually beneficial understandings and practices over intellectual property ownership. In the formal and psychological contract of employment, it is becoming increasingly important that clear understandings about investment in the creation of, ownership of, sharing of

return from the exploitation of, intellectual property, are dealt with explicitly and with perceived fairness.

Seeking and taking reward as equity as well as remuneration. The newer generations of employees, born to the new world of learning, knowledge and virtualisation, are bringing equity culture to the employment, learning and career development equation. The new expectation is to have a formal, contractual share in the ownership of the means of production, and a consequent share in the surplus value created by its utilisation. It is more than likely that this new model will appeal to some of the previous generations, as it becomes more clear-cut.

Access to knowledge creating situations as a necessity for maintaining career viability. The situation for corporate management development is changing rapidly from one in which managers have to be persuaded to learn in order that they can be useful in a different future, to one in which managerial employees are demanding, as a condition of employment, that they are involved in work that is developmental for themselves and their careers, and with reasonable access to qualification and non-qualification bearing formal learning opportunities.

Corporate management development, as part of the human resource strategies of corporations, has to work either to the agenda of making the relatively centralised traditional form of organisation work in the new circumstances, or going over to the newer forms of networked organisational life which, some believe, is the more natural arrangement for the new situation.

The former option requires that the corporation secure its future by getting a significant proportion of the knowledge on which it is dependent into corporate ownership and control. From a management and organisation development point of view, this gives strategic significance to such activities as creating expert systems (so that the corporation can survive the departure of specific experts), establishing competency frameworks (so that the corporation retains the ability to re-create key employees) and establishing corporate data bases (so that the raw material of organisational learning is secured for the organisation).

The alternative to taking the knowledge from the people is keeping the people with the knowledge. Locking people with valuable knowledge into the organisation can be attempted through formal contractual arrangements; reward systems, which include deferred benefits, the fostering of strong culture of loyalty. In making these arrangements the incentive and material support of learning and development have to be maintained.

New forms of network organisation may provide an alternative to these approaches, in which individuals and small groupings network to achieve the same ends as large corporate bodies without the need for complex management development arrangements. However it seems likely that the countervailing forces of the expanded opportunity for the learning/knowledge managing/virtual organisation to achieve economies of scale in the use of knowledge resources, and co-ordinate the delivery of global value chains, will in many cases lead to the creation of even larger and more global corporations (see for example the America On Line, Time Warner, EMI merging). The future is likely to lie with highly dynamic small firms and super-corporations, with the latter having some of the characteristics of network organisation in their internal structures and processes. Both of these are likely to demand a new kind of leadership ability to create and realise visions, and influence events through charisma, the ability to understand complex and dynamic systems and to influence with less use of formal authority and power. A major challenge to corporate management development will be to realise this new leadership lead management style.