PART I

Chapter 1

Networking in Society, Organisations and Education

by
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Abstract. This chapter examines why networking is important and the different forms it takes (“the community of practice”, the “networked organisation”, and “the virtual community”). It describes characteristics of networks: providing links with and among producers and customers, being interactive and with a degree of self-management, sharing a common purpose and reinforcing values and cohesion in certain circumstances, while not being permanent. Some of the examples are taken from education though the main references are to the broader organisational literature. Electronic means are increasingly important to networking, despite it being fundamentally a human activity. The links with knowledge management in particular are drawn out in this chapter, as networking is an important aspect of creating, mediating and using knowledge.
This chapter examines why networking is important, and goes on to address different types and characteristics of networks. Some of the examples are drawn from education but the main references are to the broader organisational literature. Electronic means are increasingly important to networking, despite it being fundamentally a human activity. The links with knowledge management in particular are drawn out in this chapter, as networking is an important aspect of creating, mediating and using knowledge.

1. Networking, its Significance, and Knowledge Management

The term “networking” refers to the systematic establishment and use (management) of internal and external links (communication, interaction, and co-ordination) between people, teams or organisations (“nodes”) in order to improve performance. Key elements of this definition are:

- Systematic management.
- “Nodes”: experts, teams and institutions.
- “Links”: communications, interactions and co-ordination between nodes.
- Performance improvement.

The use of network structures is increasing as sources of knowledge in themselves, as organisational structures to improve effectiveness, and as sources of innovation: “More and more of the innovation process takes place in networking as opposed to hierarchies and markets... only a small minority of firms and organisations innovate alone, and... most innovations involve a multitude of organisations” (Lundvall and Borrás, 1997, p. 104). The reasons are complex, and are rooted in fundamental changes in the world economy, including the increasing importance of knowledge and the global scale of capital, knowledge exchange, and so forth. Inexpensive, powerful electronic communication is becoming widely available and accelerating this process. Butler et al. argue that this factor may mean that the traditional role of intermediaries will disappear or be transformed primarily into support for market operations. In earlier times, organisations needed intermediaries to reduce transaction costs; as transaction costs fall, more consumers do their own searching using the new media and on-line search agents (Butler et al., 1997).

Learning in networks represents a special mode of knowledge production, which cannot easily occur within organisations or in the open
I.1. NETWORKING IN SOCIETY, ORGANISATIONS AND EDUCATION


What are the features that make network learning so attractive? The following list covers some of the main reasons:

- Networks open access to a variety of sources of information.
- They offer a broader range of learning opportunities than is the case with hierarchical organisations.
- They offer a more flexible and, at the same time, more stable base for co-ordinated and interactive learning than does the anonymity of the market.
- They represent mechanisms for creating and accessing tacit knowledge.

We are beginning to understand that part of the knowledge base for policies and innovation cannot easily nor only be captured in written form, whether reports are based on academic research or on best practice and experience. Much knowledge is embedded in social structures, and within or between organisations. It is very difficult and sometimes impossible to make that knowledge explicit.

In education for example, there were high and optimistic expectations thirty years ago that research would provide the knowledge base for policy and practice. These expectations had to be tempered in the light of experience. The reasons for this are not in the first place the poor quality of educational research or its insufficient volume or even lack of transfer mechanisms. A more basic factor is that educational knowledge is for a large part (suggested estimates vary between 70-90%) tacit in nature. Exchange and development of tacit knowledge require different processes and structures than doing and implementing research.

The use made of written reports for innovation is often disappointing. One reason for this is that users need to share a tacit understanding of the process of codification with those who have constructed the report. This condition is often not fulfilled. Those engaged in the process of production have learned to analyse and combine data, to report in a coherent and attractive way, and so forth. Others, who have not been engaged in that work, find it difficult to understand what can be learned because they do not possess the necessary clues. To be able to use codified knowledge “complementary” tacit knowledge is needed (Lundvall, 2000; see also Lundvall and Borrás, 1997). As a document has not only an informative component, but also a social one, people need to develop “interpretative meanings” in order to make sense of it.² If the clients are heterogeneous, even several sets of “interpretative meanings” are needed in order to make a document usable.

Networking may help to mediate codified knowledge by developing the needed complementary knowledge and interpretative meanings. Networks may establish the “social life” of documents. So, networking may complement written, codified information, and it may help to make documents more
effective for action. In this way, it may function in itself as a creator of knowledge. The interactions between tacit and codified knowledge act as generators of knowledge creation. Nonaka and Takeuchi (1995) describe the four basic interactions: between tacit and tacit: socialisation; from tacit to codified: externalisation; between codified and codified: combination; and from codified to tacit: internalisation.

Networking may also replace the production of codified information because it is more cost-effective than producing books or databases. The effort of codifying is often difficult, costly and slow. Networks can facilitate exchange of tacit knowledge in a direct way – avoiding the effort and cost of first codifying it. The emerging networks for in-service training of teachers and school leaders, for example, tend to be very effective compared with courses based on academic evidence. The balance between codification and personalisation has been identified by Hansen, Nohria and Tierney (1999). But, knowledge production and learning do not always occur in networks; there are certain conditions that will enhance or inhibit them.

2. Types of Networks

There are many manifestations of networks. Familiar forms include the informal arrangements such as business clubs, mentorships, joint seminars, e-mail lists and electronic conferencing. More formal co-operation includes outsourcing contracts, joint ventures and network-organisations. Formal structures may often come to replace informal ones with time. Networks may function horizontally – between institutions from the same or different sectors, between firms and research centres, or between competing firms. Or, they may be vertical arrangements between clients and suppliers. Networks may have a regional or a global character. Local and regional networks find much of their strength in the exchange of tacit knowledge and often have a strong informal and social component. Global networks frequently organise interactions between codified and tacit knowledge. It is helpful to distinguish between the following three types of networks though in practice combinations occur.

i) The “Community of Practice”: This type of network is driven by the need of practitioners to find solutions to practical problems. The term was introduced by Xerox, one of the first firms to exploit knowledge embedded in networks for the purpose of improvement of the company's performance. The knowledge exchanged and embedded in such networks is often not codified; exchange is based on the shaping and reshaping of experience, on redundancy and metaphors, on knowing who knows. Some networks of this type combine a well-organised database of codified experience (the “know-what” and the “know-how”) with fast interactive communication
and searching (the “know-who” and “know where”). An example is the Anderson Consulting Network, (Finerty, 1997). Many of the educational networks are simple versions of this type. The virtual team (Lipnack and Stamps, 2000) may come under this heading, as a group with a specific target, not bound by space and time, and relying on ICT to accomplish its task.

ii) The “Networked Organisation”: This type can be described as “an explicit or implicit co-operation between autonomous organisations, by establishing semi-stable relations. Added value for the combined client-groups is generated by using each others’ core-competencies and specific market-positions” (Pullens, 1998). Advantages of the Networked Organisation are that each partner can stay autonomous and strengthen its own core competence, but can deliver a better product to its clients by profiting from the core competence of the partners in the network, and can serve the clients of the partner. An example is the co-operation between petrol stations and a grocery distributor. The petrol stations profit from the logistical competence of the grocery retailer, while the grocery firm profits from the distributed selling points on locations with easy access by cars. Both benefit from each other's client group.

iii) The “Virtual Community” is a term covering a wide variety of communities that make use of ICT to exchange information, build public influence, and achieve a specific result. Or a “virtual community” might just be for fun (e.g. Kim, 2000). It is an increasingly important form of network in the field of public governance.

3. Characteristics of Networks

Networks and networking have a number of general characteristics, which can be more or less evident. The following ones are particularly interesting:

- Links are established not only with producers (in educational circles, these include experts in educational research and innovation as well as teachers) but increasingly with customers (ministerial administrators, schools, teachers, students, parents and, with lifelong learning, other stakeholders such as employers). Networks are used to identify customer needs and to serve them accordingly.

- Links are interactive. Potential customers specify their needs at an early stage of a project or service and evaluate intermediate results. The use of expertise is not through traditional delivery/payment methods, but instead experts expect gain from being involved in a network. Co-operation contracts may well specify the expected mutual gains.
Networks enjoy a degree of self-management. This does not mean that there are no leaders, or that the processes are not managed, as indeed these are even more critical than in traditional organisations. They are different from those practised in hierarchical and “one-place/same-time” organisations and they demand specific skills. Networks operate often with different leaders for different aspects, and leadership may be constantly changing. The group processes of working in a network differ from those in a more conventional team.

The participants – nodes – in networks share a common purpose. This may be a vision, a mission or a more concrete goal. Participants stay active in the network so long as it delivers a benefit for them, which ultimately is also an advantage for the clients of the participants. In networked organisations, the profit is achieved while participants stay autonomous.

Networks come and go: they are dynamic structures, they change – in terms of type and number of participants, roles of participants, etc. – and they come to an end.

Electronic means underpin and enhance networking, but networks are human. Electronic discussions require a high level of agreed codes concerning respect, for example, and trust contributes to their success. Virtual teams are only successful if their electronic communication is backed regularly by face-to-face contacts, contacts that may have more a social than a task-oriented purpose.

Large networks tend to be effective when they create and maintain a sense of belonging, cohesion and reinforcement of values. To be more directly productive, larger groups tend to break into smaller networks, and virtual teams often have a small active core of 5-7 people at the centre, even if there are extended memberships.

Networking may be controversial because of conflicts of values that characterise many Western organisations. It adds to and thus changes traditional management styles, and it reflects a shift in what is perceived as valued knowledge. Nonaka and Takeuchi (1995) describe the Western knowledge tradition in historical terms in contrast with that of Japan, where networking is a traditional feature of most organisations. Alice Lam (1998) explains the problems encountered in collaborative work between British and Japanese engineers in terms of contrasting knowledge systems – the professional and the organisational models. Contrasts are along three dimensions: knowledge base, knowledge organisation, and knowledge transfer (see Box 1.1). Both sources show the difficulties presented by the concept of “knowledge embedded in groups/networks” for professionals in Western societies.
3.1. Risks and benefits

Among the risks and pitfalls of networking are the following:

- A network may inhibit change and be a conservative force in itself. People in a network may get used to the norms and values it expresses, which becomes a blockage to change. This may be a reason to set a deadline for the duration of a network, or for participating in it.

- A network may slowly move away from the interests of the participating partners. This is a common process in the life cycle of networks. Some participants may loosen their involvement and may join together to create a new cycle and network.

- A network may be formed without a common vision or purpose, or else have incompatible missions or which do not correspond to participants’ aspirations.

- Roles are often not clearly identified.

- Certain nodes in the network may come to dominate and disturb a collaborative culture.

Hutt (2000) describes the functional and personal relations in a network, and checklists exist on setting up and managing a network, which can help to minimise these risks if not avoid them altogether.
To understand the benefits and costs of networking, it needs to be practised. In one sense, networking is not new, and all of us have formal and informal contacts that we manage on a daily basis. To reflect on this systematically offers a good start. Instruments for such a systematic reflection can be very useful. Core evaluation categories to help do this are: people involved (selection of partners, leadership roles, levels of participation), purpose (co-operative goals, tasks, results), and links used (choice of media, interactions, relationships of trust). Improvement of established methods through new ways of working is the next step. If both steps become explicitly part of an organisation’s culture, networking can be a powerful tool for improvement.

Networking is not a neutral issue. It is at once about what we judge is useful knowledge, and how we interact with external experts, colleagues, competitors, and with potential clients. It is also about how we interact with each other. It has to be learned, by building on existing experience and trying new ways. Systematic reflection on both is needed. There is much documented information about the functioning of networks in business, and increasingly for the field of education. In most countries networks between schools or teachers are already operating, albeit with different degrees of sophistication. There are also several international networks. Networking as such is an act of innovation. It would be interesting to bring together evaluative information about the functioning of these networks in different educational settings and to understand how they are changing the management and governance landscape. In so doing, the insights offered by other sectors, particularly in relation to knowledge management, can prove extremely valuable.

Notes


2. Brown and Duguid (1996) have suggested that documents contain not just information, but that there are “communities of interpretation” around any document. There is complementarity between the fixed state of the document and the fluid state of interpretative communities.

3. A few of the many international networks in the field of education are:
   - www.esp.uva.nl/ (European Schools Project for schools that use Internet).
   - www.scienceacross.org/ (Science across the World).
   - www.eun.org/eun.org/ (European Schoolnet).
   - www.iecc.org/ (Intercultural Classroom Connections).
   - www.iearn.org/professional/prof_connections.html (professional development).

4. See: www.virtualteams.com/library/lib_fr.asp, for these categories, which offers a rich source of criteria by which to evaluate network effectiveness.