

Effective Virtual Working through Communities of Practice

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INTRODUCTION

Globalization is an issue currently affecting many organizations and is one that has profound consequences for the nature of work (Karimi & Konsynski, 1991; Ives & Jarvenpaa, 1992; Sachs, 1995). In order to work effectively in an international setting, companies are increasingly turning to trans-national teams (Castells, 1996; Lipnack & Stamps, 1997).

In the new, networked economy, knowledge is seen as an asset that needs to be managed and is central to the success of organizations (Boersma & Stegwee, 1996). Since the 1980s, many organizations have taken steps to outsource and downsize in an effort to remain competitive (Davenport & Prusak, 1998; O'Dell, 1998). More recently, international outsourcing, often known as off-shoring, has been happening at a rapid pace in a growing range of activities and sectors. Outsourcing, off-shoring, downsizing and programs of planned redundancy all mean that, as people leave, they take with them a valuable stock of corporate knowledge. This can be knowledge of how the work is done in practice and domain knowledge (Sachs, 1995). Some knowledge is easy to replace, but the knowledge of how a company operates is built over years and is irreplaceable in the short term.

In addition, many organizations now have to cope with the increasing internationalization of business that forces collaboration and knowledge-sharing across geographical boundaries. Working in a more internationalized setting places strains on the way a team operates, as they have to cope not only with geographical distance, but also time, culture and possibly language barriers. For such organizations, there is an urgent need to identify ways to work effectively in such groups.

BACKGROUND

The following sections of the article will introduce four key concepts used in the analysis of such environments: Virtual Workgroups; Distributed Collaborative Working;

the distinction between Physical Space and Electronic Space; and finally, Communities of Practice.

Virtual Workgroups

The concept of virtual working is not clearly defined and can include such overlapping concepts such as the virtual or networked organization, the virtual workplace, virtual communities, electronic commerce, virtual teams and teleworking (e.g., Igarria & Tan, 1997). At the most basic level, any workgroup that has members spread across several different locations could be characterized as virtual.

In this article, we will discuss workgroups that operate in the environment outlined in the introduction. Symon (2000) describes such a setting as an Information and Communication Technology (ICT)-enabled post-bureaucratic network organisation. Such groups can be classified along three dimensions (Kimble, Li, & Barlow, 2000): the organizational level (same organization or different organization), the temporal level (same time zone or different time zone) and physical proximity (same place or different place).

Distributed Collaborative Working

Distributed Collaborative Working (DCW) is a form of social organization facilitated by ICT. The work is distributed either physically (e.g., carried out in different places) or temporally (e.g., carried out at different times). It can involve modes of working that are wholly synchronous, wholly asynchronous or multi-synchronous (where several activities proceed in parallel) (Dourish, 1995). It is also collaborative work, as it involves groups of people working toward a common end.

DCW is sometimes further broken into "Cold" and "Hot" DCW to reflect the different types of work that take place. Cold DCW comes about when the work being done is part of a collective activity, but is performed autonomously. For example, Kindberg, Bryan-Kinns and Makwana (1999) describe how the clinician's work is an example of

ICT-enabled, distributed collaboration, as they mostly work autonomously and at separate sites. In contrast, hot DCW is where the work undertaken is more interactive and requires the active presence of other members of the group (e.g., brainstorming).

Physical Space and Electronic Space

Since the late 1980s, numerous studies have been carried out on the geography of the information economy (e.g., Goddard, 1992; Li, 1995). One of the main conclusions is that the locational patterns of (networked) information cannot truly represent the geographical patterns of its use. For example, Li, Whalley and Williams (2001) argued that with the proliferation of ICTs and the rapid development of the information economy, organizations increasingly have to operate in two spaces simultaneously – the physical space and the electronic space.

It is clear that our notion of time has been significantly affected by the emergence of the electronic space. Global virtual teams can pass work in progress between an organization’s main economic centers (e.g., between the United States [U.S.], Europe and Asia) around the clock. Even in the same time zone, work in progress can be suspended in time (stored), which gives people the opportunity to organize their time more effectively. Similarly, with the emergence of electronic space, the nature and characteristics of place have been radically redefined.

Communities of Practice

The term Community of Practice (CoP) was coined in 1991 by Lave and Wenger (1991), who used it in their exploration of the activities of groups of non-drinking alcoholics, quartermasters, butchers, tailors and midwives. What linked these diverse groups was a mode of learning broadly based on an apprenticeship model, although the concept of CoPs is not restricted to this form of learning. In these communities, newcomers learn from old-timers by being allowed to participate in the practice of the community and, over time, newcomers move from peripheral to full participation in the community.

More recently, the notion of a CoP has been expanded to encompass a far wider range of definitions (e.g., Stewart, 1996; Wenger, 1998; Wenger & Synder, 2000) that were not part of Lave and Wenger’s original idea. For example, Wenger (1998) argues that CoPs arise out of the need to accomplish tasks in an organization and provide learning avenues within, between and outside that organization. In his view, a business is not of a single monolithic community but a constellation of interrelated CoPs that can spread beyond the borders of the “host” organization.

THE CASE STUDIES

Having briefly outlined four key concepts, this paper will now analyse some of the problems faced by virtual working using evidence drawn from two sets of case studies. These case studies illustrate both the variety of forms that virtual work can take and the range of tasks performed.

Study One: The Experiences of Ten Virtual Teams

This study consists of 10 case studies of virtual teams in different organizations. The case studies demonstrate the different forms that virtual teams can take, their applicability across various sectors and the benefits they can afford organizations and individuals. It also highlights some of the potential barriers to virtual working posed by the spatial and temporal separation of team members.

Background of the 10 Virtual Teams

In these examples, virtual working has allowed different organizations to work together in a more flexible and responsive way, for a single organization to share scarce expertise across geographical boundaries, to link together groups that would otherwise have remained isolated and to offer new services to geographically remote locations.

In Company 1, a virtual team operates between a CASE tool (Computer Aided Software Engineering) supplier and their main customers in the United Kingdom (UK). As part

Table 1. Background information on the case studies

	Main Activity	Location	Organization	Time	Place
Company 1	Software support	UK	Different	Same	Both
Company 2	Software development	UK	Both	Both	Different
Company 3	Software development	UK	Different	Both	Different
Company 4	Law firm	Germany	Same	Same	Same
Company 5	Secretarial services	France	Both	Same	Different
Company 6	Research/consultancy	Italy	Same	Both	Same
Company 7	Market research	UK	Different	Both	Different
Company 8	Medical services	UK	Same	Same	Different
Company 9	Medical services	Greece	Same	Same	Different
Company 10	Phone enquiries	Portugal	Different	Same	Different

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