Virtual Communities of Practice

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INTRODUCTION

When knowledge management (KM) began to emerge in the 1990s it was seen as an innovative solution to the problems of managing knowledge in a competitive and increasingly internationalised business environment. However, in practice it was often little more than information management re-badged (Wilson, 2002). More recently, there has been recognition of the importance of more subtle, softer types of knowledge that need to be shared. This raises the question as to how this sort of knowledge might be managed. Communities of practice (CoPs) have been identified as means by which this type of knowledge can be nurtured, shared and sustained (Hildreth & Kimble, 2002). Do CoPs offer a means of managing the softer aspects of knowledge and, if they do, are they applicable to today's increasingly "virtual" world?

BACKGROUND TO COMMUNITIES OF PRACTICE

The term communities of practice (CoPs) was coined in 1991 when Jean Lave and Etienne Wenger used it in their exploration of situated learning (Lave & Wenger, 1991). Although the examples they used (non-drinking alcoholics, Goa tailors, quartermasters, butchers and Yucatan midwives) were all based on what might be broadly termed an apprenticeship model, the concept of a CoP is not restricted to this form of learning.

Lave and Wenger (1991) saw the acquisition of knowledge as a social process in which people participated in communal learning at different levels depending on their authority or seniority in the group, that is, whether they were a newcomer to the group or had been an active member for some time. The process by which a newcomer learns by being situated in the group was central to their notion of a CoP; they termed this process legitimate peripheral participation (LPP).

LPP is both complex and composite; legitimation, peripherality and participation are each indispensable in defining the other. Legitimation is concerned with power and authority relations in the community but is not necessarily formalised. Peripherality is not a physical concept or a measure of acquired knowledge, but concerned with the degree of engagement with the community. Participation is engagement in an activity where the participants have a shared understanding of what it means in their lives.

For Lave and Wenger (1991), the community and participation in it were inseparable from the practice. Being a member of a CoP implied participation in an activity where participants have a common understanding about what was being done and what it meant for their lives and their community. Thus, it would appear that CoPs with their concentration on situated learning and the exchange of understanding might be well suited to the management of the softer aspects of knowledge: but can this idea be applied to the business world?

EXTENSIONS TO THE COMMUNITY OF PRACTICE CONCEPT

Interest in CoPs continued to grow throughout the 1990s and several attempts were made to re-define Lave and Wenger's (1991) original model to encompass new areas such as communities of circumstance, communities of interest and communities of purpose. In particular, several attempts were made to re-define CoPs in a way that was more relevant to the commercial environment (e.g., Seely Brown & Duguid 1991, 1996; Stewart 1996). One of the most popular work related definitions of a CoP was offered by John Seely Brown and Estee Solomon Gray in their 1995 article called "The People Are the Company":

"At the simplest level, they are a small group of people ... who've worked together over a period of time. Not a team not a task force not necessarily an authorised or identified group ... they are peers in the execution of "real work". What holds them together is a common sense of purpose and a real need to know what each other knows" (Brown & Gray, 1995).

In 1998, Wenger (1998) published the results of an ethnographic study of a claims processing unit in a large

insurance company that described how employees exchanged knowledge during meetings and by the passing of handwritten notes. He proposed a view of the company not as a single community, but as a constellation of interrelated CoPs. CoPs arise out of the need to accomplish particular tasks and can provide learning avenues that exist within, between and outside organisations. CoPs are formed through mutual engagement in a joint enterprise and will share a repertoire of common resources (e.g., routines, procedures, artefacts, vocabulary) that members develop over time.

Thus, according to Wenger (1998) a CoP becomes defined in terms of:

• What it is about:

The particular area of activity/body of knowledge around which it has organized itself. It is a joint enterprise in as much as it is understood and continually renegotiated by its members.

• How it functions:

People become members of a CoP through shared practices; they are linked to each other through their involvement in certain common activities. It is this mutual engagement that binds its members together in a single social entity.

• What it produces:

The members of a CoP build up a "shared repertoire" of communal resources over time. Written files are a more explicit aspect of this, although less tangible aspects such as procedures, policies, rituals and idioms can also included.

Wenger (1998) also identified two key processes at work in CoPs: participation and reification. He described participation as:

"... the social experience of living in the world in terms of membership in social communities and active involvement in social enterprises" (Wenger, 1998, p. 55)

and reification as:

"... the process of giving form to our experience by producing objects that congeal this experience into thingness" (Wenger, 1998, p. 58)

Wenger emphasises that like LPP, participation and reification are analytically separable, but are inseparable in reality. Participation is the process through which people become active participants in the practice of a community and reification gives concrete form to the community's experience by producing artefacts. One is meaningless without

the other and vice versa. In day-to-day work, people both negotiate meaning through participation in shared activities and project that meaning onto the external world through the production of artefacts.

Wenger's (1998) work with CoPs shows that the concept can be applied in a business setting. Since then, several other authors have identified the business benefits of CoPs (e.g., Fontaine & Millen, 2004: Lesser & Storck, 2001). However, almost all of the previous work on CoPs has described co-located communities. With the increasing globalisation of business and the heavy reliance on information and communication technology (ICT), the next question is "Can CoPs continue to operate in a modern business environment?"; that is, "Can a CoP be virtual?"

FUTURE TRENDS

Concerning the future of CoPs, and virtual CoPs in particular, two main issues must be considered. The first concerns the relationship between a CoP and its wider (electronic) environment; the second concerns the nature of the "work" that CoPs do; that is, do processes in a virtual CoP differ from one that is co-located?

CoPs in an Electronic Environment

Internet-based networking technologies, which can provide a single platform for groups or networks of groups to form within larger organisations, have led to the development of various forms of virtual groups and communities. Seely Brown and Duguid (2000) coined the phrase "networks of practice" (NoPs) to describe one type of virtual group. NoPs are composed of people who are geographically separate and may never even get to know each other, but who share similar work or interests. Thus, NoPs are organised more at the individual level and based on personal social networks than CoPs with their notions of mutuality and the collective social will of the community.

In a study of job seeking activity, Granovetter (1973) introduced the notion of strong and weak social ties. In terms of the previous description, CoPs are characterised by strong social ties, whereas NoPs are characterised by weak social ties. Within a wider network consisting of weak ties, an individual may act as a "local bridge" or broker that enables the network to react more quickly and provide a coordinated response. Nevertheless, within a network there is also a need for strong ties to encourage local cohesion and avoid fragmentation that would make knowledge sharing and the adoption of innovation more difficult.

CoPs can be seen in the role of hub for the wider network, providing a more tightly knit sub-network that serves as knowledge generating centres for the larger NoPs. CoPs can act as bridges drawing together different groups and

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