

Sharing Knowledge in Virtual Communities

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INTRODUCTION

The ongoing expansion of organizations' international activities has led to a search for solutions to assist in the creation and transfer of knowledge among them, in an attempt to increase their profits (Laurie, 2002).

Knowledge sharing solutions describe three frameworks where knowledge sharing occurs: virtual communities, knowledge communities, and virtual knowledge communities.

A *virtual community* is defined as "a group of people with common interests who communicate via the Internet and perceive themselves as a defined group" (Jarvenpaa, Knoll, & Leidner, 1998). Knowledge sharing solutions focus on the concentrated approach, which involves the creation of a central information base for storing information. However, this has been found to be ineffective for knowledge sharing among virtual organizations (Fahey & Prusak, 1998; Markus, 2001), mostly as a result of the fact that information is oftentimes inaccurate and frequently contains errors. A possible explanation for this phenomenon relates to the employees' tacit knowledge, known to be necessary in order to achieve effective knowledge transfer (Grover & Davenport, 2001). Global organizations often utilize a decentralized network supported by "peer-to-peer" (P2P) technology, which is a computer network that relies on the computing power of and the participants in the network. Such networks are useful for sharing audio and video data or anything in digital format. P2P technology serves as an infrastructure for virtual knowledge communities, where interactive relationships are established among users in order to transfer both explicit and tacit knowledge (Kwok & Gao, 2004).

Establishing a virtual community is perceived as a knowledge management strategy, the goal of which is to assist an organization's knowledge management processes regarding human capital via technological

tools that enable interaction among employees in real time (Cortada & Woods, 2000).

Despite the ever-increasing expansion of the establishment of virtual knowledge communities, thus far very little is known about the factors that lead individuals who participate in virtual communities to share their knowledge and, as a result, enhance the success of the community (Ardichvili, Page, & Wentling, 2003). Concurrently, the expanded activities of virtual organizations create an interest and an added challenge when it comes to examining the factors that motivate employees to participate in virtual communities (McLure & Faraj, 2000).

The current article is an attempt to minimize the gap in the existing literature and industry regarding the factors that motivate knowledge sharing among employees in virtual communities/organizations. The second part of the article will define the term *knowledge community* and will focus on virtual knowledge communities. The third part of the work will present a review of the knowledge sharing factors implemented in virtual communities. In the fourth part, we present a theoretical model that identifies the factors that motivate employees' knowledge sharing in virtual communities. The fifth part of the work presents future research directions. Finally, in the sixth part, we present a summary and major conclusions.

KNOWLEDGE COMMUNITIES

Lave and Wenger (1991) were among the first to present the concept of "knowledge communities". They focused on the fact that most human learning centers on specific events (Boeckaerts & Simons, 1993). This type of learning involves people with common interests who have come together because of a specific subject, which is managed within a group framework (Wenger, 2001, p. 2). *Knowledge communities* and their skills are

defined as “learning groups where new knowledge is created based on a mutual commitment among group members to assist other group members in solving problems” (Wenger, 1998, p. 214). These groups differ from other groups in the organization in their informal capacity to engage in a long-term commitment toward developing the abilities of all group members by utilizing processes involving the transfer, acquisition, and creation of knowledge (Wenger & Snyder, 2000).

There is a growing interest to try and implement knowledge communities as a solution to the ever-increasing need to bridge the gap between large numbers of individuals dispersed among different organizations, who are interested in sharing knowledge (Soekijad, Mirjam, Veld, Enserink, & Enserink, 2004).

VIRTUAL KNOWLEDGE COMMUNITIES

Organizations today are actively trying to create a technological infrastructure in order to provide a means of dialog among employees who cannot meet face-to-face because of communication limitations stemming from global business operations. This is an attempt to increase knowledge transfer among participants who wish to share their experiences and problems within the context of a virtual community. A *virtual knowledge community* is defined as “business partners and members of work teams dispersed throughout the world who communicate via information technologies.” Virtual knowledge communities have been categorized into three groups (Soekijad et al., 2004):

- A group of professionals who belong to the same organization and communicate via computer, telephone, fax, conference calls, video conference, and so forth.
- A conglomeration of work teams whose members belong to different organizations, but share common professional interests. Each of these groups is characterized by a different field of expertise, that is, a group of marketing professionals who communicate with a group of production professionals.
- A large organization that utilizes external resources procured from sub-contractors via various technological systems; after which the organization then transfers the necessary information to sub-contractors.

Employee Motivation to Contribute to the Virtual Community

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The motivating factors that affect employee knowledge sharing in virtual communities have been examined by various disciplines such as psychology, economics, and technology (Hummel & Lechner, 2001). Since an employee’s behavior is mostly based on his decision to either share—or not share—knowledge, we will begin with a review of the psychological factors, which explain an individual’s tendency to share—or not share—his knowledge with other members of the virtual community. Next, we will discuss the *individual* and *interpersonal* factors.

Internal and External Psychological Factors

The differentiation between internal and external psychological factors, which explain an individual’s behavior within the community framework was first presented by Deci (1975) and further investigated by Kollock (1999). An examination of internal factors emphasizes the factors that motivate individual behavior (i.e., the desire to acquire certain capabilities, independent decision-making, etc.) and is termed “intrinsic motivation”. An examination of external factors focuses on material rewards received by the employee as a result of his behavior.

Both internal and external motivational factors have an affect on employees’ willingness to participate in virtual knowledge communities, internal motivation being the stronger of the two influences (Osterloh & Frey, 2000).

Individual Characteristics

Findings show that an employee’s motivation to participate in a virtual community stems from a high level of self-worth, concern for others and various conformist considerations (McLure & Faraj, 2000).

The differentiation between *individual factors* and *interpersonal factors* was first discussed by James and Gao (2004):

- *Individual factors* are comprised of two categories: *internal* and *external* motivational factors.
 - *Internal motivational factors* relate to altruism and reputation.

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