Chapter 2.31
IS Design for Community of Practice's Knowledge Challenge

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INTRODUCTION

The last decade of the 20th century saw explosive growth in discussions about knowledge—knowledge work, knowledge management, knowledge-based organizations, and the knowledge economy (Cortada & Woods, 2000). Against this backdrop, enterprises including educational institutes are challenged to do things faster, better, and more cost-effectively in order to remain competitive in an increasingly global environment (Stalk, Evans & Shulman, 1992). There is a strong need to share knowledge in a way that makes it easier for individuals, teams, and enterprises to work together to effectively contribute to an organization's success.

This idea of knowledge sharing has well been exemplified in the notion of a learning organization (LO) (Senge, 1990; Garvin, 1993; King, 1996; Levine, 2001). Essentially, a learning organization could be considered as an organization that focuses on developing and using its information and knowledge capabilities in order to create higher-value information and knowledge, to modify behaviors to reflect new knowledge and insights, and to improve bottom-line results. Consequently, there are many possible instances of information system (IS) design and realization that could be incorporated into a learning organization. The acronym "LOIS" (Learning Organization Information System) (Williamson & Lliopoulos, 2001) as applied to an organization is often used as a collective term representing the conglomeration of various information systems, each of which, being a functionally defined subsystem of the enterprise LOIS, is distinguished through the services it renders. For example, if a LOIS could support structured and unstructured dialogue and negotiation among the organizational members, then the LOIS subsystems might need to support reflection and creative synthesis of information and knowledge, and thus integrate working and learning. Also, if each member of an organization is believed to possess his or her own knowledge space, which is subject to some level of description, and thus may be integrated into an organization's communal knowledge space (Wiig, 1993; Davenport & Prusak, 1998; Levine,

2001), the LOIS subsystems should help document information and knowledge as it builds up, say, by electronic journals. Or, they have to make recorded information and knowledge retrievable, and individuals with information and knowledge accessible. Collectively, a LOIS can be considered as a scheme to improve the organization's chances for success and survival by continuously adapting to the external environment. That way, we stand a better chance of increasing social participation and shared understanding within the enterprise, and thus foster better learning. More importantly, the philosophy underlying the LOIS design should recognize that our knowledge is the amassed thought and experience of innumerable minds, and LOIS helps capture and reuse those experiences and insights in the enterprise. Indeed, the cultivation of an organization's communal knowledge space—one that develops new forms of knowledge from that which exists among its members, based on seeing knowledge as a social phenomenon, and not merely as a 'thing'—is fundamental to enterprises that intend to establish, grow, and nurture a learning organization, be it physical or digital (Hackbarth & Groven, 1999), where individuals grow intellectually and expand their knowledge by unlearning inaccurate information and relearning new information.

The theme of this article is to examine the knowledge processes required of the learning organization viewed from the community of practice viewpoint, to develop and sustain the communal knowledge space through the elaboration of suitable LOIS support so as to expand an organization's capacity to adapt to future challenges.

THE BACKGROUND OF COMMUNITIES OF PRACTICE

According to Wenger, McDermott, and Snyder (2002, p. 4), communities of practice are groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise by interacting on an ongoing basis. As they spend time together, they typically share information, insight, and advice. They help one another solve problems; they ponder common issues, explore ideas, and accumulate knowledge. Oftentimes, they become informally bound by the value that they find in learning together. This value is not merely instrumental for their work. It also accrues in the personal satisfaction of knowing colleagues who understand each other's perspectives and of belonging to an interesting group of people. Over time, they develop a unique perspective on their topic, as well as a body of common knowledge, practices, and approaches. They also develop personal relationships, a common sense of identity, and established ways of interacting.

Indeed, communities of practice are not a new idea (Wenger, 1998). They were our first knowledge-based social structures, back when we lived in caves and gathered around the fire to discuss strategies for cornering prey, the shape of arrowheads, or which roots were edible. They have captured our focus today because organizations have come to realize that knowledge has become the key to success (OECD, 1996), and their competitive edge is mostly the intellectual capital of their employees (Stewart, 1997), and they need to be more intentional and systematic about managing knowledge through harnessing their human resources in order to stay ahead of the pack. Undeniably, in today's knowledge-intensive economy, organizations are increasingly expecting their employees to continually improvise and invent new methods to deal with unexpected difficulties and to solve immediate problems, and to share these innovations with other employees through some effective channels.

In this regard, the idea of the community of practice has inspired many an organization to initiate their collective learning based not so much on delineated learning paths, but rather on experience sharing, the identification of best practices, and