Chapter 5.3
The Critical Role of Information Processing in Creating an Effective Knowledge Organization

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ABSTRACT

This article provides a conceptual framework and an architecture for an effective knowledge organization (EKO) that emphasizes the important role of information processing in facilitating the creation of a dynamic knowledge capability, which is the essence of an EKO. The architecture links core knowledge management, intellectual property management, organizational learning, and innovation modules with information processing as the hub, or linchpin. The organization's need to distinguish among these components of an EKO is argued by comparing and contrasting the conceptual bases, objectives, processes, systems, performance measures, and culture of each module. This EKO viewpoint integrates many concepts and applications from various literatures, but it is somewhat contrary to the conventional wisdom that has tended to de-emphasize the significance of information technology in knowledge management.

INTRODUCTION

Effective knowledge transfer and sharing and the consequent improved business performance that can result require the creation of a dynamic knowledge capability for which information processing is a critically important facilitator and enabler.

While knowledge management (KM) has become known as an important area of practical and research interest (Gilmour, 2003), it is, in fact, viewed by different people in quite different ways. The overall KM question is, "How can the myriad intellectual resources of an organization be most effectively leveraged to produce improved organizational performance?"

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Most knowledge is initially tacit in nature (Nonaka, 1994; Polanyi, 1966); it is laboriously developed over a long period of time through trial and error (Kogut & Zander, 1992), and it is underutilized because "the organization does not know what it knows" (O'Dell & Grayson, 1998, p. 154). Thus, the knowledge possessed by one expert professional may be unrecognized by others in the organization. Other similar knowledge is embedded in business processes, activities, and relationships that have been created over time through the implementation of a continuing series of improvements.

The KM concepts and systems that are described in journals and magazines have a wide variety of intellectual foundations and manifestations. This level of variety suggests that there is a need for a framework and an architecture that can be used to understand the relationship among various knowledge-related activities and how those activities can be organized to create positive organizational results. Such a framework should clarify the similarities and differences among various knowledge and learning activities and allow for the synergistic design of the architecture for an effective knowledge organization (EKO). The creation of such a framework is the goal of this article.

AN EKO CONCEPTUAL FRAMEWORK

There are so many buzzwords that relate to the role of knowledge in organizations that it would not appear to be necessary to create a new term — effective knowledge organization.

However, the common modifiers that are applied to organization in this context (e.g., knowledge-creating, learning, knowledge-based, etc.) are inadequate in that they either emphasize only one of the knowledge objectives that organizations pursue (e.g., knowledge-creating) (Nonaka, 1994), they emphasize only some of the knowledge-related processes that organizations use (e.g., learning) (Senge, 1990), or they are so innocuous as to have little meaning (e.g., knowledge-based) (Grant, 1996).

There are three elements that make up an EKO conceptual framework: (1) understanding the organization's need for a dynamic knowledge capability; (2) understanding the EKO's multilevel objectives; and (3) understanding the precise objectives, goals, foci, and cultures of various critical knowledge-related activities.

The Organization's Need for a Dynamic Knowledge Capability

Dynamic capabilities reflect the firm's ability to "integrate, build, and reconfigure competencies to address rapidly changing environments" (Teece, Pisano, & Shuen, 1997, p. 516). The concept of an EKO is based on that of a dynamic knowledge capability, which emanates from the resource-based theory of the firm (Conner & Prahalad, 1996; Wernerfelt, 1984). A dynamic knowledge capability is a complex, integrated, and internally consistent set of capacities to acquire/create, store, and share knowledge effectively and efficiently, to continuously improve the application of knowledge to business processes, practices, products, and relationships, and to enable higher-impact behaviors by organizational participants that result in improved levels of organizational performance (Zollo & Winter, 2002).

An EKO is thus an organization that creates a broad, complex, and internally consistent dynamic knowledge capability and integrates it with other strategic business capabilities and with other organizations in an overall organizational strategic capabilities architecture (King, 1995). For instance, an EKO might integrate a knowledge capability with a capability to develop and market a continuing stream of product enhancements and new products. It also might pursue similar ends by collaborating with other organizations through joint ventures or strategic alliances. This strategic

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