Chapter XV

Toward the Multidimensional Conceptualization of Knowledge

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Abstract

Many taxonomies and definitions of knowledge have been published in the KM literature. This chapter defines knowledge as something that is multidimensional and existent on a continuum. Four dimensions describing knowledge are proposed—explicitness, reach, life cycle, and flow time—and a modeling method is discussed. The chapter concludes with a call for research in the dimensionality of knowledge.
Introduction

Knowledge management (KM) practice continues to mature, and KM research continues to improve in both depth and applicability. Managers and professionals in practice are moving away from near-sole reliance upon technological artifacts, such as databases, document repositories and Web portals, and recognizing the importance of people, organization, communication, trust, and motivation. Edwards, Handzic, Carlsson, and Nissen (2003) contrast this in terms of hard vs. soft KM issues. Researchers in industry and academe finally are distinguishing between knowledge and information, examining the context of KM, and considering dynamic aspects of knowledge as it flows. This maturation of practice and improvement in research reflects the healthy progress of KM as it struggles to separate from information systems research—which has tried vigilantly to usurp the management of knowledge as some variation on managing information—and for concomitant emergence as a stable and fruitful field of its own (Jennex & Croasdell, 2005).

But the KM field as a whole continues to struggle in terms of how it treats the concept knowledge. In particular, researchers and practitioners alike refer broadly to knowledge as a single, monolithic concept. For instance, many otherwise sophisticated and technologically savvy knowledge managers still mistake knowledge as the information technologies used for support (e.g., “it’s in the database”); many well-compensated KM consultants still fail to distinguish between tacit and explicit knowledge (e.g., “capture the experience”); many otherwise informed KM researchers still conflate individual and organizational-level knowledge (e.g., “the team learned a lesson”); and even the most thoughtful KM scholars still struggle to characterize knowledge beyond simple, binary contrasts (e.g., explicit/tacit, declarative/procedural, know-what/know-how). As a contrasting instance, it makes little sense to assert that tacit knowledge created by a specific individual, for instance, will be anything like explicit knowledge shared among organizations. Yet such assertions are widespread and implicit in the bulk of both KM research and practice today. Moreover, in very practical terms, failure to differentiate knowledge is analogous to treating all forms of transportation (e.g., pedestrian, automobile, boat, airplane, teleportation) singly. Clearly, walking, sailing, or flying to China from the U.S. represent qualitatively different behaviors with very different performance characteristics (i.e., in terms of cost and time), but each is part of the concept transportation.

We have begun to call for increased sensitivity and attention to the multidimensional nature of knowledge (Nissen & Jennex 2005), and we draw upon such call here to elaborate our primary points. This call is not new, however. For instance, the ancient Greeks maintained differentiated knowledge concepts (Kane, 2003); 20th century economists measured more than a dozen different kinds of knowledge (Machlup, 1980); and some contemporary researchers are beginning to utilize two-dimensional conceptualizations to characterize knowledge flows and contingency effects (Inkpen & Dinur, 1998; Nonaka, 1994). Nonetheless, this call is timely as KM emerges from fad to necessity in practice and as it transitions from conceptualization to application in research. This call also underpins our ever-clearer realization that KM research and practice face a very real and dangerous risk of stagnation if the many different kinds and behaviors of knowledge cannot be separated out and accounted for.

To overcome such risk, KM practice needs to learn how to manage appropriately—and differently—the many different kinds of knowledge, and which of numerous alternate tech-
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