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KNOWLEDGE MANAGEMENT WITHIN THE FRAMEWORK OF INFORMING SCIENCE

1. Introduction

The purpose of this paper is to argue that the discipline of Informing Science (IS) can offer a framework to fully identify with the field of Knowledge Management (KM). This paper demonstrates the value of the IS framework in understanding KM. The IS framework is found to offer a means to effectively transform KM and its place in any organizations. Given the KM's rich intellectual heritage and within the Framework of IS, this paper argues that KM theory and praxis is not limited to any epistemological tradition. The IS framework offers a means to help lead inquiry and dialog regarding KM in environments without limiting any specific fields of study.

In harmony with its purpose, this paper is organized in the following manner: The introductory remarks thrash out the concept of knowledge, management, and KM. The panacea paradox follows the introductory remarks. The paper will then put KM into perspective and discusses how KM panacea paradox can be avoided. This follows by an introduction of the field of IS and its framework as it relates to KM. Conclusion and final remarks round out the paper.

2. Knowledge, Management and Knowledge Management

Statements by leading theorists in business and management reflect a dramatic paradigm shift in our assumptions about management, knowledge, and knowledge management. Drucker [1999, p. 135] has asserted, “The most valuable assets of a 20th-century company were its *production assets*. The most valuable asset of a 21st-century institution, whether business or non-business, will be its *knowledge workers* and their *productivity*” Senge [1990] coined the term “learning organization” to describe companies that foster practices such as “team learning,” “mental models” of company processes, and “recontextualized rationality”. Christensen [1997] has presented compelling evidence that there are times when a firm can know and can do all the “right things” and still fail when confronted with radical, disruptive changes in technology and market structure. Futurists Barker and Erickson [2005] have presented “five regions of the future” – five distinct technological “ecosystems” that companies must understand and master if they are to successfully adapt to new breakthroughs.

There is also a dramatic paradigm shift in assumptions about the nature of knowledge. Post-modernism eschews the notion of fundamental truth or Platonic Essence and instead assumes that knowledge is highly contextual and personal. This assumption is reflected in ideographic approaches to research as opposed to traditional, nomothetic approaches [Burns 2000, pp. 1-15].

An ideographic approach fits ideally with KM because of KM’s focus upon the tacit and the implicit knowledge that individual employees and that groups of employees must manage; knowledge which the organization as a whole must ultimately manage. Organizations of course manage knowledge to meet their objectives and a key objective is to manage risk, i.e. uncertainty [c.f. Bernstein 1998]. Consequently, organizations seek the type of knowledge that nomothetic approaches to research are intended to produce: broad-based “laws” or principles that may be applied across a wide variety of situations. Organizations want “answers.”

The need for “answers” drives the development of theory and praxis in organizational life. While organizations have varying rates with which they adopt new ideas and practices there is little doubt that managers are essentially seeking new and better ways to meet organizational objectives. Budgets, strategic plans, scenario analysis, business plans, and mission statements reflect a general penchant for forward-thinking and problem-solving. This is “good” but it also creates some problems, especially the “panacea paradox”.

3. The Panacea Paradox

Gates [1996, p. 316] has wisely suggested, “People often overestimate what will happen in the next two years and underestimate what will happen in ten”.

KM is a dramatic case in point. Our understanding of KM as a tool for decision making and management has exploded in the past decade [Serenko & Bontis 2004].

KM is rapidly becoming a standard business tool [McInerney 2002]. KM's versatility makes it difficult to identify any limits to its application.

This presents scholars and practitioners with a paradox. KM is so versatile that it may be "oversold" as a panacea. It may join other useful paradigms and decision making tools like MBO (Management by Objectives) that were oversold and then deemed "management fads" because they could not provide easy solutions to every problem facing an organization [c.f. Bainbridge 2003; Shapiro 1995].

4. Putting KM into Perspective

If KM is to avoid the "panacea paradox" it must be put into context. An excellent case in point is a discussion of KM in a recent text on business research methods. In that text, Zikmund [2003, pp. 20-51] makes a clear connection between KM as a means to build firms' intellectual capital and the use of business research methods to accomplish that objective. Similarly, Prusak [2001, as cited in Harman & Koohang, 2005] places KM into perspective vis-à-vis larger social trends and its "disciplinary roots": "...the actual reaction to existing social and economic trends such as the rapid pace of globalization; ubiquitous computing that has affected the view of knowledge components, i.e., design, innovation, leadership, etc. to be much more valuable; and the knowledge-centric view of the firm. He further states that disciplines such as economics, sociology, philosophy and psychology have helped define KM. Prusak suggests that information management, the quality movement, and the human factors/human capital movement are the three practices that have shaped KM."

KM – An Interdisciplinary Field

KM is a fairly new academic concept but it has been practiced for a long time. It is natural for people to share knowledge with one another and apply it amongst others in an economic and social context. Due to the development and the introduction of the knowledge economy, KM has become an important concept in the context of organization and management within many fields of studies.

Currently, KM is comprised of a theoretical discourse and a practical activity. As such it focuses both on a business practice and a theoretical field of study [McInerney 2002, 1009]. However, as an emerging interdisciplinary science, both the theory and practical applications of KM are in developing stage.

There are many different descriptions and working definitions in the literature for KM. One working definition reflecting the interdisciplinary nature of KM is provided by McInerney [2002] who define it as follows: "Knowledge management is an effort to increase useful knowledge within the organization. Ways to do this

include encouraging communication, offer opportunities to learn, and promoting the sharing of appropriate knowledge artifacts.” (p. 1014)

Based on this working definition it is possible to demarcate the following main variables:

- The creation of knowledge;
- The distribution and sharing thereof;
- The use of knowledge within a business environment;
- The application of knowledge to gain advantages;
- The importance of creating and sharing knowledge to enable an organization to gain economic and other advantages.

The rich intellectual heritage that KM draws upon offers distinct, important, advantages and disadvantages. A full discussion of them is beyond the scope of this paper. So this paper will focus upon the most critical factor: the search for unifying constructs or principles.

KM’s rich intellectual heritage means that KM theory and praxis will not be limited to any epistemological tradition. However this may translate into a cacophony of disciplinary jargon that prevents the identification of any unifying constructs or principles. The IS framework offers a means to help guide inquiry and dialog regarding KM without forcing theorists and practitioners to adhere to any particular disciplinary epistemology or conceptual “orthodoxy.”

5. The Informing Sciences Framework

Cohen [1999] defined Informing Science (IS) as, “...a number of disparate fields that share some common goals. We will call these fields collectively the discipline of Informing Science” Cohen (1999) further stated, “The fields that comprise the discipline of Informing Science provide their clientele with information in a form, format, and schedule that maximizes its effectiveness”.

Additionally, Cohen [1999] argued, “The term Informing Science applies to disparate fields that share the common goal of providing a client with information in a form, format, and schedule that maximizes its effectiveness. The definition points to three interrelated components: the client (who has a task to perform that requires information for its completion), the delivery system (for providing information), and the informing environment that creates information to aid the clients complete their tasks”.

6. KM within the IS framework

The clientele/client component in KM

The term “knowledge management” tacitly assumes that knowledge is something to be developed, applied and communicated in the most effective and efficient

manner possible. The term also tacitly assumes that someone wants and needs the knowledge that is managed otherwise there would be no reason to manage it. That “someone” may be a person, a group of persons, a unit or part of an organization, or a set of organizations. Regardless of the numbers of persons involved or their affiliation, they are the clientele/client component of KM.

The delivery system component in KM

Cohen [1999] states, “The delivery system refers to the use of information technologies (computing, communications, and so on) that support the implementation of informing environments. This corresponds to the transmission or media component of the communications model”. Cohen [1999] adds, “Information technologies are not limited to computing. Data communication includes video and voice, and even personal contact when it is augmented through planned communication”.

The delivery component of KM is critical. Knowledge cannot be considered to be effectively managed if it does not reach the intended client/clientele in a manner and format best suited to the intended client/clientele.

The informing environment component in KM

Cohen [1999] notes, “The informing environment is analogous to the sender and encoder in the communication model. Unlike the communication model, the Informing Science Framework considers the informing environment at three levels of abstraction. These three levels are (1) the instance (using a system that is in place), (2) the creation of new instances of informing (to the organization or any of its components), and, at the highest level, (3) the creation of new designs for informing. An academic example of these three levels is as follows: (1) teaching a course someone else has designed, (2) designing a course that will be taught by others, and (3) creating a new curriculum”.

A key task of KM is to determine the appropriate level of abstraction. This will entail significant interaction with the client/clientele. KM therefore takes a systems perspective which assumes that adroit KM occurs in a coherent and communicable fashion.

The task-completion component in KM

According to Cohen [1999], “The driving force behind the creation of informing environments and delivery systems is that a task needs to be accomplished. The task defines what information is needed. This task completion component typically involves a person who has a job at hand. It corresponds to the decoder – receiver components in the communications model... While the task may be different for students, readers or viewers of journalism, or business decision-makers, all share the need to be informed so as to be able to complete their task at hand”.

KM tacitly assumes that the client/clientele is provided relevant knowledge, not mere data. Adroit KM occurs when the same information is relevant to different recipients or users (client/clientele). KM represents an opportunity to provide knowledge that is as ubiquitous as a television, a cell phone, or a computer. When

that level of efficacy is achieved KM becomes a pathway to the power of networking and archiving on a “real time” and essentially “all time” (infinite) basis.

7. Conclusion

This paper has made a clear link between KM and the field of Informing Science. Its purpose was to demonstrate the value of the IS framework in understanding and effectively using KM within organizations. The IS framework's interrelated components of the client, the delivery system, and the informing environment were discussed and linked to KM. Using the IS framework within the KM offer a means to effectively transform KM and its place in any organizations without constraining theorists and practitioners to cling to any specific disciplinary epistemology or conceptual “orthodoxy”.

Mathematics, poetry, and music share a common beauty: they are able to express complexity in a compressed or quintessential manner. Additionally, each of them is algorithmic in nature because each of them can be further distilled or further amplified.

In a fairly similar manner, adroit KM acts as a filter and a prism. It is a filter because it helps the client/clientele distill knowledge from a vast, competing, and often contradictory set of stimuli. It is a prism because it helps the client/clientele gain knowledge by revealing a spectrum of normally unseen challenges and opportunities.

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ZARZĄDZANIE WIEDZĄ W RAMACH DYSCYPLINY NAUK INFORMACYJNYCH

Streszczenie

W artykule dowodzi się, że dyscyplina nauk informacyjnych (IS) stanowi ramy, które łatwo połączyć z dziedziną zarządzania wiedzą (KM). Artykuł stanowi próbę wykazania znaczenia ram IS dla zrozumienia zarządzania wiedzą oraz pokazania, w jaki sposób IS mogą stać się kanałem skutecznego przekształcania KM i jego pozycji w organizacjach.