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Developing a Preliminary Framework for Knowledge Management in Organizations

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Abstract

More and more organizations are now trying to attain competitive superiority through better management and use of their knowledge assets. While some initial success stories on knowledge management initiatives have been reported, no coherent framework on knowledge management has yet been proposed. Using the grounded theory approach, we carried out a field study on the knowledge management initiative of a multi-national financial institution and, based on an initial analysis of our data, propose a preliminary framework that incorporates several critical success factors for knowledge management.

Introduction

In a dynamic and competitive business environment characterized by unpredictable changes, organizations need to be able to continually adapt or adjust their structures, processes, domains, and goals to remain viable (Huber, 1991). This quest for competitive superiority also implies that organizations need to become increasingly effective in using their existing knowledge base for strategic benefit, and in creating and acquiring new knowledge to broaden their knowledge base (Sanchez and Heene, 1997). In a volatile environment, this creation and acquisition of new knowledge must outpace the rate at which current organizational knowledge is becoming obsolete. As we move from an information era into a knowledge era, competitive superiority is increasingly being derived from intellectual assets. To obtain greater value from their intellectual assets, organizations need to manage knowledge generation, transfer, and use among their various functional or business units.

Organizational Learning and Knowledge Management

Organizational learning literature provides us with a basis for studying knowledge management. Duncan and Weiss (1991) argue that organizational knowledge is critical for the effective operation and adaptation of organizations and it is through learning that organizations develop this knowledge. The current body of organization learning studies focuses specifically on the processes through which organizational knowledge grows and changes. However, little research has been done on how organizational units possessing knowledge and organizational units needing knowledge can seek each other out quickly and with a high likelihood (Huber, 1991). Toward this direction, we need to investigate how organizational memory can serve as a repository of organizational knowledge so as to facilitate the internal search for knowledge by organizational units.

Knowledge management has emerged as a key theme among recent research efforts aimed at understanding how to better use organizational memory. At present, such research efforts are still in an infancy stage where the literature comprises mainly articles in magazines, articles on websites, or internal articles produced by consultancy firms. These articles provide some insights, based on anecdotal evidence, that suggest how we may be able to obtain more value from organizational knowledge bases. There have also been several descriptive case studies that describe knowledge management initiatives at prominent organizations, such as British Petroleum, Dow Chemical, Hewlett Packard, Skandia Assurance, and Texas Instruments.

These success stories have prompted scholars to recognize the need for knowledge management in organizations. As a result, scholars began to identify key challenges and issues involved in knowledge management and to seek out critical success factors for effective knowledge management. For example, a critical challenge confronting most knowledge management is how to transform the deep-rooted organizational culture and individual belief of "knowledge is power" into "knowledge sharing is power". To overcome such challenges, all knowledge management initiatives need to be undertaken with a long-term perspective, with the support from top management and the cooperation of organizational units.

Two interesting observations are apparent from the few success stories on knowledge management. First, successful knowledge management initiatives typically begin with the recognition of a need to accelerate knowledge transfer and access. In the case of British Petroleum, the use of virtual teamwork through video-conferences to solve critical operational problems had led to faster knowledge transfer, which results in significant time and cost savings. Secondly, to facilitate knowledge management, organizations have begun to create new roles such as Chief Knowledge Officer or Director of Intellectual Capital (see Table 1).

Table 1. New Roles for Knowledge Management

Organization	New roles
Anderson Consulting	Chief Knowledge Officer
Arthur Andersen	Global Knowledge Manager
Booz, Allen, and Hamilton	Chief Knowledge Officer
Buckman Laboratories	Vice-President of Knowledge Transfer
Coopers and Lybrand	Chief Knowledge Officer
Dow Chemical	Director of Intellectual Asset and Capital Management
Ernst and Young	Chief Knowledge Officer
McKinsey and Company	Chief Knowledge Officer
Monsanto Chemical	Director of Knowledge Management
Price Waterhouse	Chief Knowledge Officer
Skandia Afs	Director of Intellectual Capital

While scholars and practitioners generally agree on the potential value of knowledge management, there has been little agreement on what constitutes knowledge management activities. At present, many definitions for knowledge management have been proposed (see Table 2). The focus of these definitions has changed from data (lower-level issues) in the early-1990s to knowledge (high-level issues) in the mid-1990s. Even among the later definitions, scholars do not agree on how strongly knowledge management should be linked to business strategies and on whether knowledge management is a purely an internal exercise. Besides the lack of agreement on definition, case studies have revealed that different organizations tend to adopt different strategies and approaches for their knowledge management initiatives. Until coherent theoretical frameworks for knowledge management emerge, research conducted using a multitude of frameworks or paradigms can only lead to more confusion instead of cumulative insights (Huber, 1991). The main objective of this study is to develop a theoretical framework to guide research efforts on knowledge management in organizations.

Table 2. Definitions of Knowledge Management

Source	Definition
Strapko (1990)	Understand the relationships of data; identify and document rules for managing data; ensure that data is accurate and has integrity
Anthes (1991)	Policies, procedures, and technologies employed for operating a continuously updated linked pair of networked databases
Davenport (1994)	Capture, distribute, and effectively use knowledge
Garvin (1994)	Create, acquire, and transfer knowledge and modify organizational behavior to reflect new knowledge and insights
Birkett (1995)	Bring tacit knowledge to the surface, consolidate it in more widely accessible forms, and promote its continuing creation
Gopal and Gagnon (1995)	Identify categories of knowledge needed to support overall business strategy, assess current state of organizational knowledge, and transform current knowledge base into a new and more powerful knowledge base by filling knowledge gaps
Maglitta (1995)	Map knowledge and information resources both on-line and off-line; train, guide, and equip users with knowledge access tools; monitor outside news and information
Myers (1996)	Identify and manage organizational knowledge only to the extent that it has been captured by organizational systems, processes, products, rules, and culture
Malhotra (1997)	Caters to the critical issues of organizational adaption, survival, and competence in face of increasingly discontinuous environmental change; embodies organizational processes that seek synergistic combination of data and information processing capacity of information technologies, and the creative and innovative capacity of human beings

Research Methodology

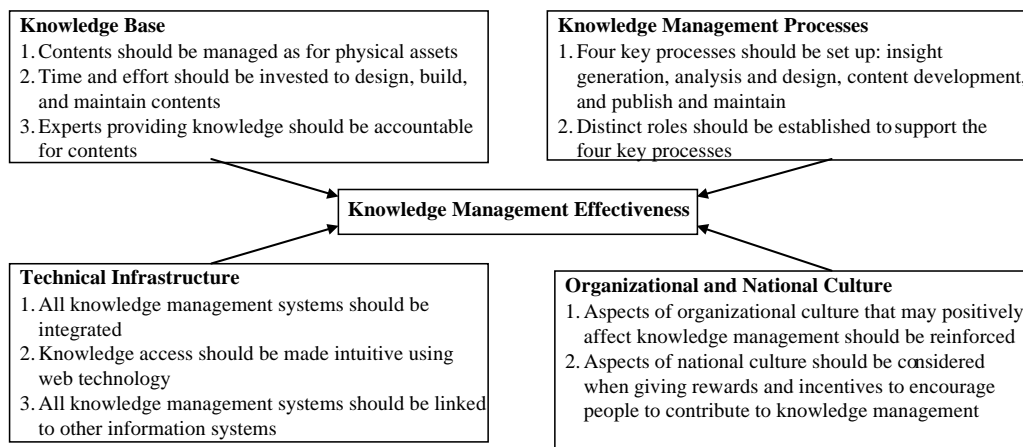
The grounded theory approach is “an inductive, theory discovery methodology that allows the researcher to develop a theoretical account of the general features of a topic while simultaneously grounding the account in empirical observations or data” (Glaser and Strauss, 1967). This research approach allows researchers to understand interesting phenomenon within

organizational contexts and helps researchers to develop theories based on data that has been gathered in the field systematically analyzed (Martin and Turner, 1986).

The grounded theory approach is useful for this study for a few reasons. First, no theory on knowledge management has yet been established. Second, existing literature suggests that organizational contexts do affect the success of knowledge management initiatives so any useful theory on knowledge management must incorporate contextual variables. Third, investigating the social interaction processes through which knowledge created by individuals is transformed and legitimized in organizations helps us to better understand the ontological dimension of knowledge creation. Our data collection efforts are guided by existing concepts and theories on organization learning. Nevertheless, we do not rule out new variables or relationships among variables if these should emerge during data collection.

Preliminary Results

Our research site is a multi-national financial institution with operations in more than 70 countries throughout the world and more than 73,000 employees. Our focus is on a newly formed organization in the financial institution that handles Global Trade Services (GTS). A knowledge team for GTS, comprising five external consultants and nine internal experts, has been set up in the head office in Amsterdam to undertake knowledge management initiatives. To facilitate coordination with their other GTS units around the world, all GTS units were grouped under four major regions, each headed by a Regional Contact. In addition, the GTS unit for each country was headed by a Country Manager.



Data collection is carried out using a variety of methods such as semi-structured and unstructured interviews, document reviews, and on-site observations. Both face-to-face and tele-conferencing interviews have been conducted. All interviews were tape-recorded and later transcribed onto paper. Documents reviewed included systems documentation, process documentation, progress reports, and presentation materials. Systems (including

Figure 1. Critical Success Factors for Effective Knowledge Management

prototypes) that facilitate knowledge management are surveyed and notes about their contents, functions, and usability were taken. Through formal and informal interaction with employees, observation of their working environment and interaction patterns, and participation in their meetings or discussions, we attain a better understanding of their organizational culture.

Based on an initial analysis of data collected from our field study, we propose a preliminary framework for knowledge management (see Figure 1). In this framework, four sets of factors affecting the effectiveness of knowledge management initiatives have been identified. Measures of effectiveness are system quality, information quality, perceived usefulness and user satisfaction (Seddon, 1997). We intend to further develop this preliminary framework through a more thorough analysis of our data and by incorporating important results of other knowledge management studies into this framework. The objective is to produce a framework on knowledge management that can be tested using survey research methods.

References

References available upon request from first author.