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The Effect of Organizational Culture on the Implementation of Knowledge Management

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Introduction

The focus of the majority of knowledge management (KM) research to date has been on advanced technology and techniques used to facilitate knowledge sharing (Davenport and Prusak, 1998). A knowledge organization has been defined as "…an entity that realizes the importance of its knowledge, internal and external, to the organization, and applies techniques to maximize the use of this knowledge to its employees, shareholders and customers" (Liebowitz and Beckman, 1998). However, any firm interested in making the transition to becoming a knowledge organization has to ensure that its culture is aligned with the requirements for KM success. Not to do so risks KM being underutilized, ignored, or abandoned by the firm's employees.

As attractive as KM is for enhancing an organization's operations, many commonly agree that there is an important precondition. Davenport (1997) says that two-thirds of a firm's KM efforts should focus upon organizational and cultural issues. Rifkin (1996) quotes Bob Buckman as saying "What's happened here [successful use of KM at Buckman Laboratories] is 90% culture change. You have to change the way you relate to one another. If you can't do that, you won't succeed." Mizumori (1998) reports "The greatest challenge to implementing effective Knowledge Management is to transition Knowledge Hoarders into Knowledge Sharers." Thus, one needs to understand what the culture of the firm is, and one needs to understand whether or not this culture will enable KM or hinder KM.

Schein (1992) defines corporate culture as "A pattern of shared basic beliefs that the group learned as it solves its problems of external adaptation and internal integration, that has worked well enough to be considered valid, and therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems". Schein argues that "leaders create and change cultures, while managers and administrators live within them". Schein goes on to lay out how culture should be uncovered and described: he views it as a three-layer system in which each level mutually supports and reinforces the others. From top to bottom, the three levels are Artifacts, Espoused Values, and Basic Underlying Beliefs. Artifacts constitute the superficial level of what one sees, hears, and feels when one encounters a new organization with an unfamiliar culture. The Espoused Values are the strategies, goals, and philosophies espoused to justify statements and actions taken by the organization. Basic Underlying Beliefs are the unconscious, taken-for-granted assumptions, perceptions, thoughts and feelings that ultimately are the source of all values and actions.

Over the past several years, the authors have closely examined several organizations that were in the process of adopting KM techniques and technologies. While several of these organizations were successful in their endeavors, there were always a few that never quite made it, no matter how motivated upper management was, or how much money they dedicated to the project. In an attempt to try to understand why some organizations were successful and some were not, the authors began to examine a variety of cultural aspects of these organizations in order to determine if there were any specific cultural factors that helped or hindered the acceptance of KM. Based on a combination of organizational culture literature and extensive case studies conducted by the authors, this paper presents a model of change, culture, and KM. The model rests upon an understanding of a prototypical employee's activities, set of meetings, and attitude cluster. The acceptance or rejection of KM practices depends upon their impact upon each employee's activities, meetings, and attitudes, and whether or not that person's work style is conducive to this type of change. Data gathered from several on-going case studies have been used to identify a

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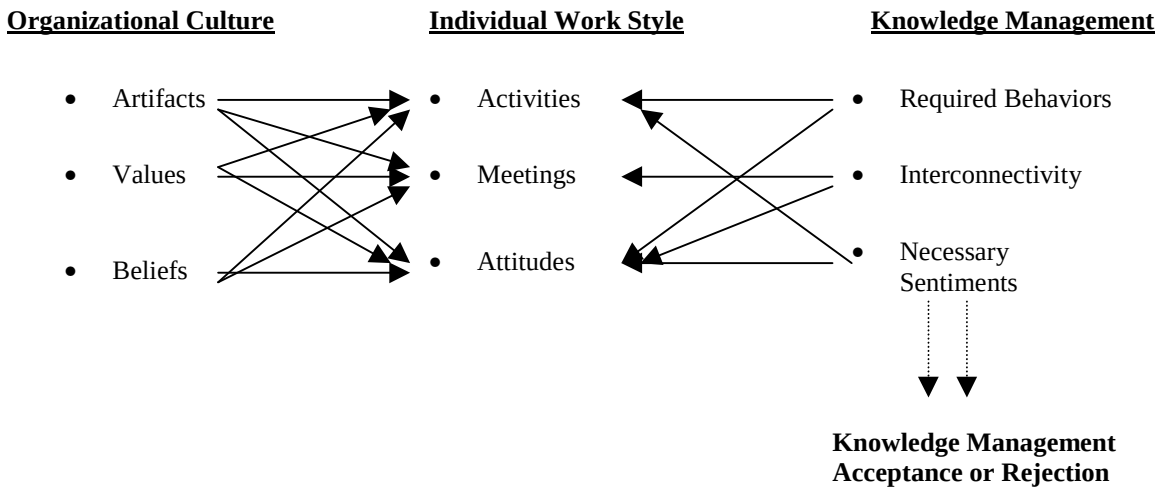

Figure 1. A Model of Change, Culture and Knowledge Management

list of cultural facilitators and inhibitors to KM. Firms can use this model to assess their ability to make the transition to a knowledge organization, and to identify elements in their cultures needing change before a transition can be successfully undertaken. Unless the organization's culture supports changes to the worker's daily activities, meeting patterns and attitudes, KM will not succeed in the organization.

In contrast with market/industry factors and organizational factors, there is little in the published literature that is helpful in specifically assessing cultural dimensions of organizations for their suitability for supporting or inhibiting progress towards KM. Thus, the factors we identify in this paper are largely based upon our, and others', empirical observations about the adoption and use of knowledge management in organizations, and cases where KM has proven troublesome to implement.

A Model of Change, Culture and Knowledge Management

For an organization to adopt KM successfully, the practice of KM must be integrated into the day-to-day routines of the organization's employees. To derive the specific factors in the culture that serve as facilitators and barriers, it is first necessary to examine a model of an employee's daily work routines so as to determine whether technological changes will be assimilated or resisted.

When one introduces any KM technology into the firm, all facets of an employee's daily routines get altered. Whether KM is readily adopted as a practice in the organization or is rejected by the organization is dependent upon whether or not the affected workers are able to assimilate changes to their daily routines that the use of KM necessitates. A worker's daily routines may be summarized as consisting of a set of Activities (what the worker does alone—writes reports, gives directions, prepares budgets, analyzes data, etc.), a set of Meetings (what the worker does in conjunction with other people—exchanges information, receives direction, learns new facts and concepts, coordinates schedules, collaborates on group tasks, etc.), and supported by a set of Attitudes (concerning the work performed, the people interacted with, the technology used to get things done, the goals of the group and organization, the pace of work, etc.). According to Homans (1950), these three factors (Activities, Meetings, and Attitudes) form a tightly bonded system for an individual who has reached a stable position within a group (e. g., an employee who has worked for the firm long enough to establish a routine work pattern). According to Homans, to change any one of these three is to cause changes in the other two.

The particular form these three work routine factors take is heavily conditioned by the culture of the organization. Thus, the Artifacts of the firm (the visible tools that embody the culture) affect how Activities get performed (networked personal computers or automobile production line?), how Meetings get conducted (around a water cooler or in a conference room with a clearly designated leader?), and which particular set of Attitudes are held (disappointment in being consigned to a cubicle or pride in using the latest equipment?). The Values of the firm affect which Activities get performed and how they are carried out, the subject matter of Meetings and the goals of the group, and the set of supporting Attitudes that provide the level of enthusiasm for carrying out the Activities and Meetings. The Beliefs that underlie the firm dictate why

the particular set of Activities is the only set that "makes sense" for the firm to undertake, why the particular set of Meetings is the "correct" set for the firm to engage in, and why the particular set of Attitudes is the "proper" mindset for people in the firm to hold. That is, the culture of the firm establishes the range of viable possibilities for people's Activities, Meetings, and Attitudes.

With that framework in place, consider now the situation of introducing KM as a new practice in the firm. To practice KM, it is necessary to engage in a different set of behaviors. That is, there is a set of Required Behaviors to execute KM (e. g., data warehouses to be built, data mining routines to be run, and lessons learned databases to be posted and referred to). These entail changes to the worker's Activities (what steps the worker carries out each day) and the worker's Attitudes (to use KM successfully, the worker must adopt a set of Necessary Sentiments—that KM is a valuable activity, that it benefits the organization, that it is a useful tool to learn, etc.). Unless the culture supports changes to the worker's Activities and Attitudes, KM will not succeed in the organization.

Likewise, introducing KM involves changes to the worker's Interconnectivity—the worker's set of Meetings is altered (how the meetings are conducted, which information gets exchanged, the range of information that gets exchanged, the frequency of information exchange, etc.) and the worker's set of Attitudes is also affected (that sharing information is a good thing to happen, that different meeting formats are acceptable, that work in group settings is desirable, etc.). Again, to use KM successfully, there are Necessary Sentiments regarding the propriety of relying upon computer technology, having sufficient skills that this technology is not threatening, information sharing, teamwork, and informational egalitarianism—if these are not acceptable to the organizational culture, the culture will need to be changed to allow KM to function as intended.

To summarize, a firm that introduces KM in the workplace will be successful in that endeavor to the extent that the workers accept the new work system. In turn, the workers will accept KM to the extent that the culture of the firm that they work in allows changes to their individual daily routines of Activities, Meeting patterns, and Attitudes.

Cultural Facilitators and Barriers for Adopting Knowledge Management

Applying our model to several different organizations that were undergoing the transition to a KM company over the past few years has elicited a set of cultural facilitators and barriers for adopting KM. One of our findings is that there are no facilitators or barriers per se. A facilitator that is absent or appears in the reverse serves as a barrier, and vice versa. Another finding is that there are, in general, two sets of cultural factors—general ones that apply to any organization undertaking technological change and ones specific to adopting KM. We found 12 of the first type and 5 of the second.

Factors Relevant to General Technological Change

- Is the culture strong or weak?
- Is the culture positive or negative?
- Is the culture adaptive or rigid?
- Is there information sharing (both on the demand side and the supply side) or information hoarding?
- Is there trust or distrust in the organization?
- Is the organization technologically advanced or technologically innocent?
- Does the reward and recognition system promote Initiative and Innovation, or Stability and the Status Quo?
- Are people in the organization intellectually curious or incapable of learning; are they given the freedom to explore or is their discretion curtailed; is knowledge production valued or discouraged by the organization?
- Is there a "not-invented-here" syndrome?
- Is there an intolerance of well-intentioned errors; is there an intolerance of people who seek assistance?
- Does the organization overemphasize the value of creativity and originality?
- Does the organization stress individualism or teamwork?

Factors Specific to Knowledge Management

- Do present organizational practices support the adoption of KM?
- Do the organization's compensation, recognition, and reward systems support the adoption of KM?
- Do the organization's control, decision making, and communications systems support the adoption of KM?
- Do the employees' work styles and patterns support the adoption of KM?
- Do the employees' attitudes and skills support the adoption of KM?

Each of these 17 factors can be examined for its impact on an employee's activities, meetings, and attitudes. For example, to the extent that employees already work in a team environment, the adoption of KM will be eased. Workers will be comfortable getting skill concerns resolved through co-workers (as opposed to asking the boss questions possibly labeled as "dumb"). The individual's attitudes will be calibrated to the group's norms, which may or may not be supportive of change and high technology. By reference to our model of individual daily routines, teamwork impacts all three dimensions (activities, meetings, and attitudes) positively.

Conversely, a firm wherein employees do not trust the firm, superiors, or coworkers is a firm in which people feel

that their job is safe only till the end of the day. In this type of firm, people feel that they must "look out for number one." This makes all meetings occasions in which one tries to score points with superiors and avoid losing to internal competitors, as opposed to occasions to share. The attitude cluster focuses around issues of personal success and protecting one's image.

One could perform the same set of reasoning with each of the other 16 factors.

Conclusion

The introduction of KM to an organization can be enabled or hindered by that organization's culture. One way to assess an organization's cultural readiness to adopt KM would be to examine the impact of KM on an employee's set of activities, meetings and attitudes. If the organization's culture facilitates changes to the individual's daily work routines, the employee is more likely to accept the new work system. We have offered a model to help organizations assess whether or not their present culture is suitable for the successful implementation of KM. This model has been grounded in a set of case studies of successful KM adoption and cases studies where KM failed to take hold.

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