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# Effects of Culture on Preferred Individual Learning Systems: Consequences for Knowledge Management System Use

## *Work-in-Progress*

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### Abstract

Global enterprises increasingly deploy Knowledge Management Systems (KMSs) to raise productivity and remain competitive. KMSs, by prescribing ways of capturing and disseminating information, mediate the learning processes in organizations. Because of this mediating effect, individuals from distinct national cultures may react differently to KMSs. This research examines how cultural characteristics (e.g., those identified by Hofstede, Trompenaars, and Hall and Hall) may be related to the individual use of KMSs for learning. The first phase of the study examines individual cultural characteristics and learning preferences (degree of structure and extent of direct social interactions). The second phase examines the relationships between cultural measures and actual KMS use.

### Introduction

The dynamic environment and the ever-increasing innovative capabilities of companies in the previous decades gave rise to the recognition that learning and knowledge management are critical for a sustainable competitive advantages (Stata, 1989; Senge, 1990). Competitiveness and learning require communication among members of the organization (Barker and Camarata, 1998), a focus on the intellectual capacity of the firm and improved dissemination of knowledge among its members (Kogut & Zander, 1992), and knowledge integration (Grant, 1996). In other words, the individual and organization engage in learning. The learning process is the recursive set of activities by which an individual (and an organization) transforms its experiences into knowledge (Kolb, 1984; Dixon, 1994). Learning and the attendant competitive gain involves not only the sharing and integration of knowledge from organizational members in one tangible setting, such as an office building, but also the exchange and integration of knowledge from members across departments, business units, and national boundaries.

Organizations increasingly focus on computerized knowledge management systems (KMSs) to capture knowledge gained by individuals and to dispense this knowledge to others in the organization. KMSs, by structuring and even automating information collection and flexible access, are used as instruments for organizational learning (Huber, 1991). These computer-based systems thus structure the learning process by requiring individuals to record their experiences and judgments in digital formats and making this information (along with meta-information about how to contact individuals who have specific knowledge and expertise) in electronic databases.

Nonaka argues that the use of computer databases is unsuitable for knowledge creation because such systems neglect the importance of direct interaction among individuals. Such systems seem to ignore the perspective of knowledge creation as a social activity and seem to be based on North American and European thought (Takeuchi, 1998). Evidence of this is that while in the US and Europe new job titles such as "Chief Knowledge Manager" and "Chief Learning Officer" are gaining acceptance (Lank, 1997), in Japan these titles remain unlisted (Takeuchi, 1998).

These observations suggest that KMSs, because they mediate the learning process in organizations by increasing the structure of the process and by reducing the emphasis on social activity in knowledge creation, may work differently in different cultures. This possibility increases the need to understand how specific cultures may respond to systems for knowledge gathering and knowledge exchange.

This research examines how cultural characteristics may affect individual use of KMSs for learning. The focus is on understanding the relative preferences of individuals from different cultures for the degree of structure and direct social interaction in the learning process.

We define the *structure* of organizational learning as the extent to which learning activities are preprogrammed and explicitly subdivided. In other words, we conceive of organizational learning activities as being on a continuum ranging from unplanned, impulsive, and serendipitous to systems that call for preprogrammed, explicitly subdivided tasks conducted according to a fixed time schedule.

The *direct social interaction* dimension is defined as the degree to which organizational learning activities involve face-to-face meetings and direct relationships between and among individuals in the organization. Similar to Daft and Lengel's (1986) dimension of richness of media, we conceive of organizational learning activities as being on a continuum ranging from no direct social interaction (e.g., only impersonal contributions and retrievals of information from a shared database) to numerous and frequent social exchanges in which the personal relationships are important.

The first phase of the study examines the relationships among individual cultural characteristics and learning references. The second phase of the study examines the relationships between cultural measures and learning preferences and actual KMS use. This phase measures the degree to which contributions and use of a particular KMS is associated with learning preferences and cultural characteristics.

## **Cultural influence on Structure and Social Interaction**

Hall (1959) indicated that "once people have learned to learn in a given way it is extremely difficult to learn in any other way [...C]ulture reflects the way one learns." Therefore we argue that individual preferences for the degree of structure and social interaction in organizational learning depend, at least partly, on their cultural heritage.

Culture is the collective programming of the mind that characterizes one group of people from another (Hofstede, 1980). In this study of the effects of national culture on organizational learning and the use of computerized KMSs, we draw from three main contributors in the field of cultural analysis: Hofstede (1980), Hall and Hall (1990), and Trompenaars (1994). Specifically, we seek an understanding of the extent to which people from different national cultures prefer structure and social interaction in learning activities. Our conceptual model is presented in Figure 1.

Hall and Hall (1990) discuss the difference between low and high context cultures. In "low-context countries, such as the United States, Germany, and Switzerland, information is highly focused, compartmentalized, and controlled, and therefore, not apt to flow freely. In high-

context cultures, such as the French, the Japanese, and the Spanish, information spreads rapidly and moves almost as if it had a life of its own." Hall and Hall (1990) describe that in high-context cultures, interpersonal contacts take priority over everything else. This suggests hypothesis 1:

H1: Compared with individuals from low-context cultures, individuals from high-context cultures will prefer less structure and more social interaction in learning systems.

The power distance dimension depicts that different societies have different solutions for human inequality (Hofstede, 1980). Hall and Hall (1990) also suggest that in certain cultures, people use information more as an instrument of "command and control." This suggests that in large power distance cultures, learning will be more structured towards the people in power. This is the foundation for the second hypothesis:

H2: Compared with individuals from low power distance cultures, individuals from high power distance cultures will prefer more structure in learning systems.

Organizations exhibiting national cultures that are high on Hofstede's uncertainty avoidance dimension will have company rules that should not be broken, even if the employee thinks it is in the company's best interest (Hofstede, 1980). Building on Daft and Lengel's (1986) richness theory we suggest that people in these cultures also will prefer more direct social interactions in order to reduce equivocality. Thus

H3: Compared with individuals from cultures low on the uncertainty avoidance scale, individuals from high uncertainty avoidance cultures will prefer more structure and more social interaction in learning systems.

Hofstede's third dimension describes the relationship between the individual and the group in a given society (Hofstede, 1980). Western managers tend to put more emphasis on explicit knowledge, while Japanese managers tend to put more emphasis on tacit knowledge (Nonaka, 1994). In order to integrate and create knowledge, direct interaction among employee members is more important in collectivist cultures than merely exchanging information. The subjective and intuitive nature of tacit knowledge makes it difficult to process the acquired knowledge in a systematic or logical manner (Takeuchi, 1998). We suggest that a fourth hypothesis:

H4: Compared with individuals from individualist cultures, individuals from collectivist cultures will prefer more social interaction in learning systems.

Trompenaars (1994) proposes a universalism-particularism dimension of cultures that may be related to the Hall and Hall *context* dimension. For example, someone from a universalist culture tends to believe that knowledge is reusable and applicable across a broad range of situations. A particularist, on the other hand, believes that the value of knowledge is highly specific to a given situation. Particularists therefore might prefer the

richness of direct social interaction in order to get the details (context) of a specific situation, and universalists might feel more comfortable in using knowledge that is accessible in a structured database. Consequently, we suggest a fifth hypothesis:

H5: Compared with individuals from universalistic cultures, individuals from particularistic cultures will prefer learning systems that provide more social interactions and less structure.

## Method

In the first phase, we ask students from the US, Cyprus, France, and the Netherlands to choose from a set of learning scenarios that differ along the level of structure and social interaction. [We are seeking one or more collaborators who can collect similar data from an oriental culture.]

Consulting firms arguably are leading in the building of knowledge databases to improve knowledge management (e.g. Andersen Consulting's *Knowledge Xchange*, Ernst & Young's *Center for Business Knowledge*, Garvin and March, 1997). The second phase is a field study that examines the relationships among cultural measures, learning system preferences, and actual KMS use by members of a particular consulting firm.

## Contributions

The conceptual model (see Figure 1) helps clarify relationships among distinct cultural dimensions and learning system preferences. The model illustrates relationships first, among these dimensions and learning system preferences, and second, among the cultural dimensions, preferences, and the actual use of KMSs. The empirical studies test the model and provide a basis for additional studies that can help design more effective KMSs, ones that incorporate an understanding of cultural preferences.

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Figure 1: Conceptual Model

