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The Influence of Organizational Learning Culture on IT Decision Practices and Acquisition Decisions

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Abstract

Information technology has been described as a facilitator of organizational learning, especially through its use in managing and disseminating organizational knowledge. This research seeks to demonstrate an empirical relationship between organizations that have a continuous learning culture and the technologies they have acquired. Furthermore, it is proposed that the processes by which technology acquisition decisions are made significantly differ in organizations with a strong learning culture from those organizations without such a culture. The hypotheses proposed by this research will be tested from data collected by a national sample survey.

Continuous Learning Culture

A learning organization is “an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights” (Garvin, 1993, p. 80). Lipshitz, Popper and Oz (1996) suggest that the learning organization consists of two aspects: structural and cultural. The structural aspect consists of what they term Organizational Learning Mechanisms (OLMs). OLMs are established structures and procedures by which the organization “systematically collects, analyzes, stores, disseminates and uses information” that is pertinent to organizational effectiveness. The structural aspect of organizational learning is accomplished through the intentional actions and plans of an organization, not by random chance (Garvin, 1993; Henderson and Lentz, 1995). Often, the organization is structured so that information can flow quickly throughout the organization (Wick and Leon, 1995). This information allows the organization to adapt or innovate in a rapid manner.

The second aspect of a learning organization is cultural (Lipshitz et al., 1996). Organizational learning is the result of shared values and experiences, which aggregates individual experiences into a corporate awareness (Henderson and Lentz, 1995). Tracey, Tannenbaum, and Kavanagh (1995) highlight four aspects of a continuous learning culture. First, a continuous learning culture is an environment in which the acquisition of skills and knowledge is viewed as a key responsibility of each employee. Second, skill and knowledge acquisition are supported by the interaction and encouragement of organizational members. Third, employees are provided with opportunities for personal development and are encouraged to apply job-related knowledge. Finally, there is a shared belief that innovative ideas are a valuable aspect of staying competitive in the market place.

One would expect that the structural and cultural aspects of a learning organization are interrelated. Therefore, it is probable that organizations with a continuous learning culture also have OLMs established. Knowledge management technologies, such as intranets, groupware products, and data warehouses, can be classified as types of OLMs because they assist with the systematic collection, storage, and dissemination of organizational knowledge. Therefore, it is likely that firms with a continuous learning culture are more apt to have acquired knowledge management technologies than firms without this type of culture.

One striking aspect of a continuous learning culture is the importance placed on organizational members in terms of their knowledge acquisition and utilization. Because of this emphasis, it is logical to conjecture that, in a learning culture setting, decision processes for information technologies will be thorough in investigating the impacts of the technology on organizational members. In doing so, the sources of input into the decision processes are likely to be broader, not solely relying on the IT department, but encompassing also the functional areas of the organization.

Hypotheses

Several hypotheses were formulated about the decision practices and acquisition decisions of continuous learning culture organizations. The hypotheses and a brief synopsis of the supporting literature are discussed below.

IT is often used by learning organizations to rapidly disseminate knowledge and overcome “the learning curve” when introducing employees to new procedures or products (Quinn, Baruch, and Zien, 1996). Knowledge from past experts can be codified and stored via IT, so that other organizational members can access this knowledge as required. The notion of retaining past and present organizational knowledge and behaviors has been termed organizational memory (Huber, 1991). IT is thought to facilitate organizational learning by allowing the rapid dissemination of knowledge, making codified knowledge retrievable, and providing access to individuals with specialized knowledge (Stein and Zwass, 1995). “Knowledge management
technologies”, such as intranets, data warehouses, and groupware products, provide organizations with mechanisms to accomplish these activities.

Hypothesis 1: Firms with a continuous learning culture are more likely to have an install base of knowledge management technologies than those firms that do not have a continuous learning culture.

Organizations with a continuous learning culture place value on the skills, ability and knowledge of their organizational members. They support the acquisition of skills by providing opportunities for employees to learn new skills and support their use through social norms and organizational incentives (Dubin, 1990; Tracey et al. 1995). As decisions about information technologies are considered, it is hypothesized that those with a continuous learning culture will spend more effort or resources attempting to determine the probable impact of the technology on end-users.

Hypothesis 2: Organizations with a continuous learning culture are more likely to take into account the impacts of technology on end-users in their IT decision processes than organizations without a continuous learning culture.

Innovations, in continuous learning cultures, are sought throughout all levels of the organization (Wick and Leon, 1995). An innovative learning culture is most likely to occur in organizations characterized by empowering leaders and employees involved in information sharing (Slater, 1995). It is therefore hypothesized that firms with a learning culture will be less likely to concentrate the decision authority for technologies that can influence employee daily work solely within the IT organization and will be more likely to involve functional managers in the decision process.

Hypothesis 3: Organizations with a continuous learning culture are more likely to involve functional managers in IT decisions which impact end-users than organizations that do not have a continuous learning culture.

Research Method

The research method chosen to test the above hypotheses was a national sample survey. A previously validated scale created by Tracey, Tannenbaum, and Kavanagh (1995) was used to measure the dependent variable continuous learning culture. Scales measuring the independent variables were formulated and validated through three iterations of pilot testing. First, the survey was reviewed by several experts in the research field. Modifications were made based on expert comments. Next, seven IT executives from the Society of Information Management (SIM) organization completed the pilot survey and provided comments as to the appropriateness and clarify of the questions. After modifications, a third iteration of the questionnaire was given to eight graduate students pursuing a masters in Information Systems degree and four experts in the research field. Reliability and validity were also assessed through Cronbach’s a and factor analysis, respectively.

1,515 surveys were mailed to a national sample of information technology executives who had IT decision making authority at the organizational or division level. 200 surveys were returned yielding a 14% response rate. The responding organizations were geographically dispersed, residing in 37 states. They also ranged in size and represented 13 different industries. Data analysis is currently underway using multiple linear regression.

Conclusion

The relationship between the structural and the cultural aspects of learning organizations will be empirically tested using data obtained from a broad and varied sample of organizations. While causal direction between the structural and cultural aspects can not be inferred from this cross-sectional research, this study highlights the need for such future investigation.

An interesting implication of the present research is that firms with a continuous learning culture may choose different types of technologies to support their organizational goals than do firms without such a culture. While there may be many reasons for this, one possible explanation is that the processes by which learning organizations make IT acquisition decisions significantly differ from decision processes of “non-learning” organizations. This, in turn, impacts the learning organization’s acquisition choices.

One proposed difference in acquisition processes is that organizations with a continuous learning culture spend more effort and resources investigating the impact a technology decision will have on organizational members. Another proposed difference is that their decision processes are likely to encompass the functional managers of the organization rather than concentrating decision making authority within the IT organization.

The goal of this research is descriptive rather than normative. The findings will provide empirically based information about learning organizations and the technologies they acquire. Hopefully, this will serve as a catalyst for future research on the relationship between the structural and cultural aspects of learning organizations.

References