THE INTERACTION OF INFORMATION TECHNOLOGY AND ORGANIZATIONAL LEARNING: THE IMPLICATIONS OF ACHIEVING IT COMPETENCY ON LEARNING PROCESSES

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ABSTRACT

The ability to manage information for the purpose of learning about markets and customers has received a great deal of attention in the past few years (e.g., Hult and Ferrell 1997; Sinkula 1994; Slater and Narver 1995). As competition continues to intensify, organizational leaders are finding that they can no longer rely on past success models, but must continually invest in new methods and tools for managing market and customer information. By developing the ability to learn from channel customers, suppliers stand a better chance of developing more effective marketing strategies. However, while organizational learning is getting more attention within the marketing literature (e.g., Day 1991), no one has adequately addressed the implications of information technology (IT) on the learning process. It is important to do so since the acquisition and dissemination of information, two central dimensions of the learning process, have been significantly impacted by IT. Although advancing our general theoretical understanding of learning within the organization, past researchers have neglected important managerial implications by ignoring the IT component. As more firms continue to turn to IT in search of competitive advantage, the importance of understanding how IT effects the management of information and learning, both within and between firms, becomes more important. Therefore, this paper attempts to extend current organizational learning research by exploring the effects of IT on organizational learning processes and mechanisms.

However, in a departure from the object-oriented approaches used in previous studies (e.g., Reardon, Hasty, and Coe 1996), this research seeks a more fully developed conceptualization of IT "mastery" to examine the impact of IT on organizational learning capabilities. As with core competencies related to specific manufacturing processes or distribution expertise (Prahalad and Hamel 1990), *IT competency* is viewed as another foundation for achieving competitive advantage. Drawing from scarce marketing (e.g., Anselmi 1996; Glazer 1991),

information sciences (e.g., Gasset 1983; Mitcham and Mackey 1983), and technology (e.g., Taylor 1971) streams of research, IT competency emerges as a useful concept that represents not only a firm's ownership of IT artifacts (e.g., computer terminals, databases), but also the firm's understanding and utilization of IT to manage information assets. As with the object-oriented approach, IT artifacts continue to play a role; however, added to the IT artifacts (technics) are technical knowledge and technical operations (techniques). Cumulatively these three components give an indication of an organization's ability to understand and utilize IT tools and processes in order to manage market and customer information.

A central proposition of this paper suggests that organizations that achieve higher relative levels of IT competency will have superior information management capabilities which will result in more effective organizational learning processes and superior memory mechanisms. That is, by relying more heavily on IT (which acts as an amplifier and accelerator), organizations are not only able to acquire and distribute information more quickly, but are also able to store relevant customer information more effectively and economically for future use. Further, just as specific cultural and climatic characteristics contribute to the development of learning processes within the firm, it is also assumed that the development of IT competency is impacted by the same organizational characteristics.

In summary, this paper attempts to provide a linkage between organizational learning and IT competency. After exploring various firm characteristics that are thought to contribute to the development of both organizational learning processes and IT competency, the relationship between learning and IT is examined. Given that both concepts deal mainly with the management and utilization of information, it seems likely that the two are closely related. Further, it seems reasonable to expect that as new generations of IT evolve, learning processes within the firm will also evolve.

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