ABSTRACT

Many organizations are striving to survive and remain competitive in the current uncertain and rapidly changing economic environment. Businesses must innovate to face this volatility and maintain their competitiveness. Organizational learning is a complex process with many interrelated elements linking knowledge management with organizational innovation. In this paper we use several theories (i.e., organizational learning, knowledge management, organizational innovation, complexity theory, and systems theory) to discover and study the interrelationships among the organizational learning elements. The purpose of this paper is threefold: (1) We identify organizational learning as a mediating variable between knowledge management and organizational innovation; (2) We further present a paradox where decisions that are expected to improve organizational learning, surprisingly do not work; and (3) We show this paradox is not the result of overlooking organizational learning elements, but rather, caused by neglecting to consider the complex interrelationships and interdependencies among them.

Keywords: Complexity Theory, Knowledge Management, Organizational Innovation, Organizational Learning, Systems Theory

INTRODUCTION

Organizational learning has attracted considerable attention from both academia and industry during the last three decades (Crossan et al., 1999; Dodgson, 1993; Duncan & Weiss, 1979; Easterby-Smith et al., 2000; Fiol & Lyles, 1985; Huber & Daft, 1987; Hung et al., 2010). Yeh et al. (2006) argues that “knowledge management and organizational learning are the keys to the success of an organization”. Other researchers argue that these concepts are the determining factors...
of innovation in organizations (Johannessen & Dolva, 1997; MacDonald, 1998; Nonaka and Takeuchi, 1995). Organizational learning is of crucial importance since it is the mediating variable between knowledge management and organizational innovation. To put it differently, using systems terminology, knowledge management is an important input, organizational learning is a key process, and organizational innovation is a critical output. In this study, we use the definition of organizational knowledge proposed by De Holand and Philips (2004) and define organizational knowledge as the collection of assets, rules, routines, standard operating procedures, and other organizational attributes that shape member behavior; and the dominant logics, mental models, culture, sense-making devices, and other organizational attributes that shape cognition; that, when combined, allow an organization to perform collective actions.

There have been many theoretical and empirical studies which have substantially contributed to the expansion of the literature on organizational learning (Boreham & Morgan, 2004; Lopez et al., 2005; Levitt & March, 1988; Lyles et al., 1996). Recently, several scholars and researchers have discussed some overlooked aspects of organizational learning and proposed new and novel theoretical dimensions in the field (Engelhard & Nägele, 2003; Nutley & Davies, 2001; Sadler-Smith, 2008; Uhlenbruck et al., 2003; Vince, 2002).

In this paper, we propose a complex systems paradox of organizational learning and knowledge management. We show that in addition to the overlooked aspects of organizational learning, a holistic and systems view must be espoused to understand the complex interrelationships among these aspects and elements. The use of the term “systems” in analyzing organizational learning issues is not new and has been studied in the literature (Beddoe, 2009; Daft & Weick, 1984; Dibella et al., 1996; Filstad & Gottschalk, 2010; Lee et al., 1992; Shrivastava, 1983). What is missing is the lack of adequate attention to the concept of “complexity” - which goes hand in hand with the concept of “systems thinking” - and the interrelationships between the organizational learning elements and components.

Complex systems theory describes how many natural phenomena occur. Whenever there is an emergent property in nature - that is, a property of a system as a whole that the elements of the system do not exhibit - then that system is considered a complex system. Any human system is, in fact, a complex system including organizational learning systems. As Forrester (1991, 1994, and 1964) suggests, human systems are as complex in nature as engineering systems and should be engineered with the same level of intensity. Senge (1990) highlights the difference between detailed complexity (“arises when there are many variables”) and dynamics complexities (“arises when cause and effect are distant in time and space, and when the consequences over time of interventions are subtle and not obvious to many participants in the system.”). Moreover he argues that the leverage in most management problems lies in understanding dynamic complexities. We will discuss the dynamic complexities associated with the organizational learning systems from two perspectives: complexities associated with the consequences of organizational learning (i.e., the effect of learning on performance) as well as those associated with its antecedents.

This paper is organized as follows. We begin by suggesting a three-dimensional definition of organizational learning extracted from the existing definitions in the literature. We then discuss the relationship between learning and organizational performance and follow this discussion with an examination of the interrelationships between different organizational learning dimensions. Next we develop an integrated model of organizational learning and identify some barriers to learning through various case studies. We then argue the need for “organizational learning systems engineers” and end the paper with our conclusions and future research directions.
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