

A Review of Organizational Learning:

How Can We Overcome the Knowledge Inertia?

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Abstract—Organizational learning, as a continuous process of generating and applying new knowledge, has been an important topic for the field and for the business leaders. It is able to overcome individual's inertia of using past successful experience and knowledge to handle the confronting problem without consideration and make individual's knowledge update constantly. This study attempts to combine the existing researches systematically from three aspects: the connotation of organizational learning, structural dimensions and measurement of organizational learning and related researches in the area of organizational learning.

Keywords—learning; organizational learning; knowledge; performance

I. INTRODUCTION

Organizational learning, which is able to overcome individual's knowledge inertia—based on past successful experience and existing knowledge, has increasingly been favored by many academics and business leaders of all ages as a process of continuously generating and applying new knowledge. It was in 1958 when organizational learning was firstly proposed by March and Simon, while Argyris and Schön formally put forward and studied further of organizational learning's connotation in 1978. Subsequently, the idea of organizational learning achieved continuous growth. Especially in recent years, it has been widely studied in the western country (Chen & Ma, 2000), and has been extended to other aspects such as psychology, politics, economics, sociology and culture, gradually forming a trend of interdisciplinary research.

II. CONNOTATION OF ORGANIZATIONAL LEARNING

A. Concept of Organizational Learning

Organizational learning is a process of generating and applying new knowledge so as to continuously update the organizational behavior through interaction between people. It is a circularly ascending process of knowledge generating, knowledge spreading, knowledge applying and a social phenomenon of collective learning and collective practice involved by organization staff. According to different perspectives of research, the definition of organizational learning can be summarized as the following three categories:

1) *System and Behavior Perspective*: This view regards the organization as a system and takes the organization's response

to the environment as the organization's learning behavior. It focuses on the interaction between the whole organization and the environment (Yu & Fang & Ling, 2004). Representative scholars: Argyris & Schön (1978), Miller (1996) and so on.

2) *Information Processing Perspective*: This view studies organizational learning from the perspective of organization's process to information. It clarifies the information and knowledge processing on three levels: individual level, team level and organization level, which can help us gain insight into the organization's information processing. Representative scholars: Huber (1991), Slater and Narver (1995) and so on.

3) *Social Interaction Perspective*: This view considers organizational learning from people's interaction in organization. It takes organizational learning as a collective exploration process among organization's all levels (Yu & Fang & Ling, 2004). Representative scholars: Senge (1990), Brown & Duguid (1991), Lahteenmaki & Toivonen & Mattila (2001).

Yu & Fang & Ling (2007) considers organizational learning as a circularly ascending and social interaction process which occurs in individual, team, organization and inter-organization levels, performing as organization's continuous generation and acquisition of new knowledge and behavior, with interpretation, integration and institutionalization of them afterwards in order to achieve organization's vision or adapt to environment's changes. This concept encompasses above three perspectives and summarizes a more comprehensive overview of organizational learning's connotation. Therefore, this article prefers this definition.

B. Type of Organizational Learning

Organizational learning's diversified definitions directly lead to the differences of the classification of the organizational learning. The research of organizational learning's type can be divided into three angles: organizational learning's depth, organizational learning's purpose and organizational learning's stage.

1) *Divided by Organizational Learning's Depth*: Argyris & Schön (1978) firstly divided organizational learning into single-loop learning and double-loop learning, the latter is deeper. Afterwards, Snell & Chak (1998) proposed triple-loop learning based on Argyris & Schön's research which refers to organization members identify the hindered and contributive

factors to organizational learning from past organizational learning's process and then put forward new strategies to help organization learn so as to improve the efficiency of organizational learning.

2) *Divided by Organizational Learning's Purpose*: There are two main categories in this perspective. The first one divide organizational learning into two types: one category is called maintaining learning (Bennis & Nanus, 1985) or adaptive learning (Senge, 1990) or linear learning (Meyers, 1990). This type of learning commits to addressing current problems, adapting to current environment and maintaining organization's stability in changing environments. Another one is called creative learning (Bennis & Nanus, 1985; Senge, 1990) or non-linear learning ((Meyers, 1990). This type of learning is to question existing assumptions and then correct them in order to adapt to the environment. Compared with the first type of learning, the second type of learning involves the modification of organization's norms and aims which is more difficulty to implement. The second type divides organizational learning into exploratory learning and exploitative learning (March, 1996). Exploratory learning refers to those learning behaviors which can be described with terms such as "explore, change, risk taking, try, discovery and innovate". Exploitative learning refers to those learning behaviors which can be described with terms such as "refine, screen, produce, select, implement and enforcement". The essence of exploratory learning is testing new areas while exploitative learning's essence is improving and extending prior capability, technology and paradigm (Zhu, 2008).

3) *Divided by Organizational Learning's Stage*: Sinkula (1994) divides organizational learning into two types from the point of organizational learning stage: pre-learning and post-learning. And Lyles (1985) divides it into lower-level learning and higher-order learning. Although there are differences in the definition, the essence of these two classifications is similar. Pre-learning or lower-level learning is limited to learn what it is, rather than make some consideration. Post-level learning or higher-order learning refers to knowledge expanding learning, not only to understand what it is, but also need to learn how to deal with it.

III. STRUCTURAL DIMENSION AND MEASUREMENT

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A. Structural Dimension

Organizational learning's structure refers to that the whole concept of organizational learning can be decomposed into several dimensions, namely, the contents involved by organizational learning. Owing to domestic and overseas scholars' various research perspective, there are still a lot of controversies in this research field and finally come to different conclusions about the structure of organizational learning (Baker & Sinkula, 1999; Yu & Fang & Ling, 2007). The most representative structure model is "three-factors structure model", put forward by Baker and Sinkula (1999), namely: commitment to learning, shared vision and open-mindedness. Commitment to learning means that organization regards learning as its most important basic value; shared vision means that organization chiefs share future vision with its members; open-mindedness means that organization does not stick to its old way of thinking but embrace innovative ideas.

As the rising importance of knowledge and learning, there are more and more studies exploring various aspects of organizational learning at home and abroad. Considering diverse research backgrounds and objects between domestic and overseas researchers, the empirical research conclusions about learning structure have large differences (Yu & Fang & Ling, 2007). For example, Yu & Fang & Ling (2007) work out a six-factors model about learning structure, including inter-organizational learning, exploitative learning, exploratory learning, organization learning, collective learning and individual learning.

B. Measurement

Sinkula & Baker & Noordewier (1997) are the first persons who develop a comprehensive and widely accepted measurement scale. Prior to this, there are only some sporadic indicators judging the development degree of organizational learning though a few scholars attempt to establish specific measurement standard. They try to measure organizational learning with indicator "change of CEO" or "overseas experience". Obviously, such indicators are far to reflect the full meaning of organizational learning because of their one-sidedness and superficiality (Yang & Liu & Wan, 2004).

In overseas literatures, Hult & Ferrell (1997) propose four dimensions (team-orientation, system-orientation, learning-orientation, memory-orientation) to measure the learning degree and learning capabilities based on the characteristics of organizational learning. This measurement scale study organizational learning from the market intelligence perspective and can fully reflect organization's business activities. However, there are certain restrictions in its application because many indicators are related to the company's specific marketing activities. Sinkula & Baker & Noordewier (1997) develop a measurement scale to judge organization's learning degree from three following dimensions: commitment to learning, shared vision and open-mindedness. In 1999, Baker & Sinkula add several new indicators with respect to specific marketing activities on the basis of previous measurement scale and finally form a likert5 scale with three dimensions and each dimension six indicators. But this scale has no consideration of information sharing and organization memory (Yang & Liu & Wan, 2004). Edmonson (2007) put

forward a comprehensive measurement model about organizational learning from learning environment, learning process and learning task. Organizational learning environment includes four factors: psychological safety, value diversity, acceptance of new ideas and reflection time. Organizational learning process includes five factors: attempts, information collection, analysis, education and training, information migration. Organizational learning task includes three factors: performance orientation, learning orientation and leadership.

In domestic researches, Zhang & Jiang & Gao (2008) adopt four measurement indicators: learning intentions, knowledge about developing new products, manufacturing processes and marketing skills to study the relationship between organizational learning, knowledge creating and innovation performance in strategic alliances. Mao & Wu & Gao (2008) obtain a measurement scale with seven capacity elements of organizational learning and thirty-five question items after fixing previous learning capacity scale designed by Goh & Richards. Zhu & Wang & Wang & Zhang (2010) take Atuahene-Gim and Jiang's (2006) scale as reference to measure exploratory learning and exploitation learning. The measurement scale involves six indexes: constantly seeking new product/market intelligence, seeking information which can make business out of current product/market, emphasis of accumulation of effective solutions to current product/market problems, emphasis of searching company's existing products/current market information.

This paper argues that organizational learning is a dynamic and circulatory system. The measurement of organizational learning should take learning environment, learning process and learning task into consideration and comprehensively reflect the learning atmosphere and facing situation around organization members. This connotation is similar with Edmonson's (2007) empirical research. Therefore, this article relatively identify his questionnaire..

IV. RELATED RESEARCHES OF ORGANIZATIONAL LEARNING

A. Antecedent Variables or Organizational Learning

Yu & Zheng & Fang & Ling & Liu (2008) conducted a survey to understand the relationship between paternalistic leadership and organizational learning. The results showed that benevolence leadership was positively correlated with six factors of organizational learning. However, authoritarianism leadership was negatively correlated with group learning, inter-organizational learning, exploitation learning and exploration learning. Shu-hsien Liao & Wu-Chen Fei & Chih-Tang Liu (2008) research results revealed that when a firm's members have either less learning inertia or more experience inertia, the performance of the organizational learning will be better.

B. Outcome Variables of Organizational Learning

1) *Employees as research object*: So far, studies taking staff as object are not much among organizational learning researches. Wang & Feng (2009) constructed research model about organizational learning, organizational inertia and strategic change based on the literature review. Furthermore, they established the utility models of organizational learning,

inertia evolution and strategic change and analyzed organizational learning's positive effects on inertia evolution and strategic change. Yet this research only has theoretical reasoning and deduction and it is lack of empirical test and typical case study.

2) *Organizations as Research Object*: Researches about organizational learning on organization level mostly focus on the relationship between organizational learning and organization performance (Xie & Han, 2005; Zhu, 2008; Mao & Wu & Gao, 2008; Zeng & Lan, 2009). There are also some scholars associate organizational learning with innovation to investigate the relationship between organizational learning, organizational ability and innovation mode selection (Zhou & Li, 2005). Besides, a few scholars study the relationship between organizational learning, organizational inertia and strategic change (Wang & Feng, 2009).

C. Organizational Learning as Variable and Mediating Variable

1) Organizational Learning as Mediating Variable

a) *Employees as research object*: Shu-hsien Liao & Wu-Chen Fei & Chih-Tang Liu (2008) investigated the relationships between knowledge inertia, organizational learning and organization innovation through a questionnaire survey conducted to 485 government organizations as well as state-run and private enterprises. The results revealed that (1) knowledge inertia exerts a mediating effect on organizational innovation through organizational learning; (2) when a firm's members have either less learning inertia or more experience inertia, the performance of the organizational learning will be better.

b) *Organization as research object*: Xie & Liu & Chen(2006) made a case study of the enterprises in the Pearl River Delta Region and other enterprises on whether and how following the market through organizational study and creation effects organizational achievement. Their study indicates that organizational study indirectly acts on organizational performance through effecting organizational creation; by impacting on organizational study, BMO plays on organizational creation and ultimately affect organizational performance.

2) Organizational Learning as Moderating Variable

Tan(2011) made an overview of the relationship between knowledge search and innovation performance upon on the knowledge-based theory and organizational learning theory. The research's results showed that exploratory learning has positive moderating effect on the relationship between search depth/novelty and innovation performance, and has negative moderating effect on the relationship between search breadth and innovation performance, exploitative learning is just the opposite.

V. CONCLUSION

Since organizational learning officially put forward 30 years ago, organizational learning has gradually become the focus of researches with people's growing emphasis on

knowledge. Although there has not been fully unified representation of organizational learning's concept, its core content is similar. In previous studies, organizational learning is usually taken as antecedent variable and intermediary variable instead of moderating variable or outcome variable. Organizational learning' research object includes both the whole organization and organization members, but organization level study is in the majority. Before the year of 2008, researches about organizational learning mostly concentrate on the relationship between organizational learning and organizational performance. Researches put other variables like enterprise culture, leadership style, knowledge search into the research of organizational learning after the year of 2008. In the future study of organizational learning, perhaps we can investigate the relationship between organizational learning and other variables from the angle of organization members combined with elements like self-knowledge, self-perception and individual thinking; and furthermore, to explore their combined impact on organization performance or organization development.

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