An empirical investigation of the relationship between the learning organization and transformational leadership in civil industries in Iran

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ABSTRACT: The external environment for many companies nowadays is characterized by turbulence associated with globalization, changing customers and investor demands, increasing product market competition, technology growth, considering knowledge and learning as the main assets of organizations and rapid increasing change and chaos. Some management sages advocated new "generative transformational" forms of learning to deal with an external reality in which everything is constantly evolving or "becoming". These assumptions rise to the notion of learning organization. However, examining the relationship between learning organization dimensions and other organizational elements makes it possible to draw on suitable strategies in order to improve learning. The population of the research consists of 950 people of managers of the companies of civil industries in Iran. A sample of 295 subjects was selected as statistical sampling. The findings of the present research illustrate that there is a significant relationship between transformational leadership and learning organization dimensions. In addition, this research shows a significant relationship between transformational leadership and three dimensions (among 7 dimensions) of learning organization (LO), which consist of "continuous learning", "team learning", and "embedded system". In considering the triple levels of learning organization, the results illustrate a significant relationship between transformational leadership and two levels (group and organizational).

INTRODUCTION

Organizations face an unprecedented range of challenges and opportunities in the social, economic, political and business environment. This external environment is characterized by uncertainty, surprise, turbulence and discontinuity (Coulson, 1991). In order to succeed and survive, firms must continuously monitor, respond and adapt to the influences of the external environment (Florence, 2007; Rowden, 2001). To serve these aims in 21th century, the organizations' leaders are searching for the ways of improving the capacity of organizations to quickly overcome the challenges. A large number of organization researchers have recognized that an organization's capacity to learn may be the only true source of competitive advantage and the sole way of surviving in future (Yeo., 2005; Kiedrowski, 2006; Marquardt, 2002; Hill, 1996). According to Senge (1990), in present world which is a complicated world of rapid changes, For an organization to survive, its rate of learning must be equal to, or greater than, the rate of change. To generate learning capacity, Senge et al., (1994) advocated the idea of developing organizations into learning organizations. After the introduction of learning organization theory by Senge (1990), There were numerous normative books on what people believed would occur when a LO was implemented and how to implement it. There also were many qualitative case studies of LO interventions and, some qualitative case studies that included some quantitative measures (Kiedrowski, 2006). However, the shortage of empirical investigations concerning with learning organization rings warning bell (Kiedrowski, 2006; Tashapara, 2003).

THEORITICAL FRAMEWORK

Although there are various definitions and different perspectives to LO such as "system thinking" of Senge (1990), "learning perspective" proposed by Pedler et al. (1991) and "strategic perspective" of Garvin (1993) , some common characteristics can be identified. First, all perspectives to the construct of a learning

organization assume that organizations are organic entities like individuals and have the capacity to learn. Central to this approach and implicit in the organization-as-organism metaphor (Morgan, 1997; Schein, 1994; Kiedrowski, 2006) is the need to achieve "a balancing inside-out focus of development and transformation of what is already there" (Yeo, 2005). More and more organizational researchers realize that an organization's learning capability will be the only sustainable competitive advantage in the future. Second, there is a difference between two related yet distinct constructs—the learning organization and organizational learning (Tsang, 1997; Argris and Schon, 1978; Easterby – Smith, 1997; Easterby – Smith and Argaujo, 1999; Örtenblad, 2001). These distinctions have not been totally accepted (Örtenblad, 2001). Third, the characteristics of a learning organization should be reflected at different organizational levels—generally, individual, team or group, and structural or system levels (Örtenblad, 2001; Marquardt, 2002; Dixon, 1994; Watkins and Marsick, 1993, 1996; Yang. 2007). As Garavan (1997) discusses, the learning pyramid begins with individual learning, which includes the learning of every individual, goes through group learning and finally ends up with learning organization. In his opinion, learning organization is the pyramid's peak.

Measurement of Learning Organization Dimensions: Watkins and Marsick's framework of learning organization (1993, 1996) served as the theoretical foundation for the current study. This theoretical framework has several distinctive characteristics. First, it has a clear and inclusive definition of the construct of the learning organization. It defines the construct from an organizational culture perspective and thus provides adequate measurement domains for scale construction. Second, it includes dimensions of a learning organization at all levels (Yang et. al., 2004). This framework was among the few that covered all learning levels (that is, individual, team, and organizational) and system areas (Redding, 1997; Yeo, 2005). Third, this model not only identifies main dimensions of the learning organization in the literature but also integrates them in a theoretical framework by specifying their relationships. Such a theoretical framework not only provides useful guidelines for instrument development and validation but also suggests further organizational studies. Last, it defines the proposed seven dimensions of a learning organization from the perspective of action imperatives and thus has practical implications. This action perspective of the learning organization both provides a consistent cultural

perspective on the construct and suggests several observable actions that can be taken to build a learning organization. In the process of instrument development, it is essential to construct a set of observable variables to form measures for latent variables or theoretical constructs. In a comprehensive review of literature on learning organizations, Örtenblad (2001) developed a typology of the idea of a learning organization. Among the twelve perspectives of the learning organization evaluated by Örtenblad (2001) Watkins and Marsick's (1993) approach is the only theoretical framework that covers all four perspectives of the idea of a learning organization in the literature (Yang et. al., 2004). However, those should be called aspects of LO instead of perspectives (Örtenblad, 2001). According to Watkins and Marsick (1993, 1996), there are three levels of organizational learning. The first is the individual level, which is composed by two dimensions of organizational learning: continuous learning, dialogue, and inquiry. The second is the team or group level, which is reflected by team learning and collaboration. The third is the organizational level, which has four dimensions of organizational learning: embedded system, system connection, empowerment, and provide leadership for learning. These three levels can be further considered to belong to one of the two components of Watkins and Marsick's (1993) model of a learning organization. The first component represents the people who make up an organization, and the second component represents the structures and culture created by the organization's social institution (Yang et. al., 2004).

Measurement of Transformational Leadership: In this study, we are supposed to measure transformational leadership dimensions proposed by Rafferty and Griffin 2004). The studied dimensions are:

I) Vision: We identify vision as an important leadership dimension encompassed by the more general construct of charisma. Bass (1997) argued that the most general and important component of transformational leadership is charisma (Rafferty and Griffin (2004, 2004).

II) Inspirational communication: Transformational leadership goes beyond the cost-benefit exchange of transactional leadership by motivating and inspiring followers to perform beyond expectations (Bass, 1985) and inspirational motivation has

been identified as an important component of transformational leadership.

III)   Supportive   Leadership: individual cares happen when leadership shows developing tendencies toward his/her employees, paying personal attention to his/her employees and appropriately meeting their needs Rafferty and Griffin 2004).

IV)   Intellectual   stimulation: This leadership factor encompasses behaviors that increase followers' interest in and awareness of problems, and that develop their ability and propensity to think about problems in new ways (Bass, 1985).

V)   Personal Recognition: In such a system of rewarding, in response to achievement of visions, which is agreed upon, various types of rewards, are given. In this study, "personal recognition" is chosen because, among contingency rewards, it is more compatible with the transformational leadership. We define personal recognition as, "The provision of rewards such as praise and acknowledgement of effort for achievement of specified goals" (Rafferty and Griffin, 2004).

RELATIONSHIP   BETWEEN TRANSFORMATIONAL   LEADERSHIP   AND ORGANIZATIONAL LEARNING

Many authors have asserted relationships between leadership and organizational learning (Senge, 1990; Senge et al., 1994; Tushman & Nadler, 1986; Brown & Posner, 2001). According to Arago´n-Correa (1997), transformational leadership shows a very high and significant influence on organizational learning. The responsibility of leaders, argues Senge, is to ensure that a shared vision does exist. That vision can come from anywhere in the organization. Top leadership is concerned with building shared vision; empowering people and inspiring commitment; enabling good decisions to be made through designing-learning processes (Senge, 1991). First three questions of transformational leadership questionnaire, which explain exact definition of vision, are related to this issue. According to Senge (1990), the idea, which inspires organization in terms of leadership, is the capacity of creating shared vision of the future we are searching for. Garvin (1993) regards leadership as one of the building block of learning organization. He says that leadership, in learning organization, appreciates empowered employees, praises experimental culture. This issue indicates the strong commitment existing in organization. These characteristics are questioned in questions related to supportive leadership and intellectual   stimulation.   Regarding   supportive leadership, Bass (1999) states that individual cares take place when leadership has developing tendencies towards its employees and pays attention to individual

care as well. According to Senge (1990), organizing and designing the structure is one of the modern leadership duties in learning organization. In learning organization, leader is not the only smart decision maker but he is teacher, designer and mentor of change. Marquardt (2002) also pointed out new roles of learning organization leadership such as teacher, instructor, supervisor and knowledge manager, a pattern for learning, architect, designer, coordinator and supporter of learning projects. He considers some skills necessary for learning organization leaders. These skills are the creation of common vision, coordination of task-oriented and crossfunctional teams, experiment and feedback to mental models, cooperation in systematic thinking, creativity awards, innovation and risk, conceptualization, learning inspiring and action. Most of these characteristics (such as experiment and feedback to mental models, cooperation in systematic thinking and creativity praising, innovation and risk, and inspiring) are parts of transformational leadership dimensions, which are especially measured in intellectual stimulation, and inspirational communication dimension measured in present study.

METHODOLOGY AND DATA ANALYSIS

This study is an investigation and correlational research. The population of the research consists of 950 people of managers of the companies of civil industries in Iran. A sample of 295 subjects was selected as statistical sampling. The reliability of every part is confirmed in the tables (1) and (2). Additionally, transformational leadership questionnaire's validity has been studied by the use of theoretical bases of selecting appropriate measurement indices and taking experts suggestions in stage of elementary studies. According to the company type, the gathered data describes indices of learning organization dimensions in companies of civil industries and table (3) shows descriptive statistics dimensions and levels of LO in those companies. This table indicates that descriptive statistics of dimensions and learning levels of these companies for learning is at average level. Based on table (2), in these companies, most of the indices, which are related to indices of LO dimensions, have a below-average score. In other words, except for six indices (listening to others, continual looking for opportunities to learn by leader, spending time building trust, helping each other learn, treating each other with respect, getting answers from across the organization), the rest is below average. The weakest index is "creating systems to measure gaps between current and expected performance". The other factors such as "maintaining an up-to-date data base of employee skills", "rewarding for learning", "recognizing people for taking initiative", "giving people choices in their work assignments", "encouraging people to think from

a global perspective", "measuring the results of the time and resources spent on training" respectively. On base of this hypothesis that there is a significant relationship between transformational leadership and achievement degree of learning organization and according to Pearson correlation test, correlation is significant at the 0.05 level (2-tailed) which are indicated in tables (4) and (5). Thus, null hypothesis can be rejected. It means that the existence of a significant relationship between transformational leadership and organizational learning in companies is at 0.95 degree of confidence. As it illustrated in table

(5), the relationship between transformational leadership and every dimension of learning organization is significant for "continuous learning", "team learning" and "embedded system". According to table (6), the result shows that there is a significant relationship between transformational leadership and learning at both group and organizational levels. The reason is that Sig. (2-tailed) is lower than 0.05 (0.044 < 0.05). Therefore, at 0.95 degree of confidence, the relationship can be supported. For the Individual level, findings cannot reject null hypothesis and the significant relationship is not supported.

Table (1). Variables' reliability statistics

Variables	Cronbach's Alpha
Transformational Leadership	0.971
Learning organization	0.978

Table (2). Dimensions' Reliability Statistics

learning organization Dimensions	Cronbach's Alpha	transformational leadership dimensions	Cronbach's Alpha
Continuous Learning	0.955	Vision	0.916
Dialogue and query	0.906	Inspirational communication	0.805
Team Learning	0.833	Intellectual stimulation	0.826
empowerment	0.807	Supportive leadership	0.924
Embedded System	0.895	Personal recognition	0.918
System connection	0.815		
Strategic Leadership	0.907		

Table (3). Descriptive statistics of dimensions and levels of LO in companies of civil industries

LO Dimensions	Mean	LO Levels	Mean
Empowerment	2.65	Organizational level	2.97
Embedded sys	2.85	Team or Group level	3.07
Team learning	3.07	Individual level	3.28
Continues learning	3.08		
Strategic leadership	3.16		
System connection	3.21		
Dialog and query	3.48		

Table (4). Pearson Correlation between Transformational Leadership and LOD

Transformational Leader	LOD	
	0.561	Pearson correlation
	0.046	Sig. (2-tailed)

Table (5). Pearson correlation between transformational leadership and each dimension of LO

Transformational Leadership		Continues learning	Dialog and query	Team learning	empowerment	Embedded system	System connection	Strategic leadership
	Pearson Correlation	0.585	0.437	0.576	0.352	0.589	0.483	0.464
	Sig. (2-tailed)	0.029	0.116	0.032	0.221	0.027	0.082	0.096
	H$_0$	Rejected	Not Rejected	Rejected	Not Rejected	Rejected	Not Rejected	Not Rejected
	significant relationship	♂		♂		♂		

Table (6). Pearson correlation between transformational leadership and each level of LO

Transformational Leadership	LO levels	Individual	Team and Group	Organizational
	Pearson Correlation	0.517	0.574	0.545
	Sig. (2-tailed)	0.058	0.032	0.044
	H0	Not Rejected	Rejected	Rejected
	significant relationship		♂	♂

CONLUSION

Regarding the support of the direct relationship between leadership and learning, the leaders of organizations can improve the growth and development of learning with the help of transformational leadership indices. This idea is important in relation with the development of "continuous learning", "team learning" and "embedded system". According to a significant relationship between transformational leadership and "learning in organizational level", the transformational leadership can be used as a means of achieving more learning at organizational level. According to the results, company should pay more attention to "performance appraisal system" as an influential index. In addition, it takes notice of "maintaining an up-to-date data base of employee skills", "rewarding for learning", "recognizing people for taking initiative", " giving people choices in their work assignments", " encouraging people to think from a global perspective" and "measuring the results of the time and resources spent on training" in companies. Moreover, to reach a successful learning organization in competition with others, these companies can take help of their strong indices such as "encouraging people to get answers from across the organization when solving problems", "treating each other with respect" and "helping each other learn". It is suggested that employees' information system be implemented to improve weak indices such as up-to-date database of employee skills, the better use of employees in organization development, recognition of creative people and rewarding them, delegation authority to employee

considering their maturity, programming for development of expert work force to increase their abilities. Indices such as "treating each other with respect", "helping each other learn", "Teams/groups focusing both on the group's task", "leaders mentoring and coaching those they lead" and "leaders' supporting of learning opportunities and training" are positive in terms of learning. These groups can both improve and take use of them.

1.
here is a significant relationship between transformational leadership and organizational learning. With regard to organizational learning dimensions, this relationship is significant for "continuous learning", "team learning" and "embedded system".

2.
ransformational leadership has a significant relationship with learning at both group and organizational learning. Marquardt's system model of learning organization (2002) verifies the relationship of "organizational learning" with "organizational leadership" which belongs to individual aspect of his model. The recent research's results confirm this part of Marquardt's model.

3.
aft's model (2001) indicates the relationship between learning and leadership, strategy, information transfer, structure, culture and delegation of authority. In this, research the significant relationship between leadership and learning accords with Daft's model.

4.

Embedded system" and "empowerment" are the weakest dimensions in these companies and it is interesting that "dialogue and query" is the strongest dimension in them. Concerning levels, team and organizational levels are the weakest and individual level is the strongest.

5.

he results show that most of transformational leadership indices are placed in a lower position than that of average companies. From the weakest to the strongest, these indices are "acknowledging improvement in individuals' quality of work", "commending individual when he/she do a better than average job", "behaving in a manner which is thoughtful of individual's personal needs", "having idea where the organization is going", "Seeing that the interests of employees are given due consideration".

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