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Exploring relationship between learning organizations dimensions and organizational performance

Learning
organizations
dimensions

593

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Abstract

Purpose – The purpose of this paper is to study the validity of the concept of learning organization through the use of the Dimensions of Learning Organization Questionnaire (DLOQ) in an Indian public sector organization. Literature on learning organizations was reviewed to ascertain the sample organization's progress toward becoming a learning organization. The current research also tries to explore the relationship (if any) between learning organization dimensions and organizational performance.

Design/methodology/approach – The study employed a survey method for collecting data from 204 respondents from the sample organization. The data were statistically analyzed and interpretations were made.

Findings – The study reveals that the sample organization scores high on the various learning organization dimensions (seven dimensions of DLOQ), which in turn impact knowledge performance and financial performance. Learning organization practices and processes are prevalent in the sample organization and it is progressing well toward its vision of becoming a learning organization (mentioned in its HR vision).

Research limitations/implications – The data for the study were collected from a single sample organization. Hence, any sweeping generalization of the results needs to be made with caution.

Originality/value – This research demonstrates the impact of the four levels of specific learning organization dimensions on its knowledge and financial performance in the context of an emerging country like India.

Keywords Energy, Learning organization, Financial performance, Dimension of learning organization questionnaire, Knowledge performance

Paper type Research paper

Introduction

The competitive landscape for the organizations is continuously changing, forcing organizations to change, adapt, unlearn and learn to survive and grow. This constant process of change and renewal is imperative to sustain competitive advantage. The mechanism which makes it possible is learning throughout the organization. The emergent organization was termed “the learning organization” by Senge (1990). A learning organization develops both endurance and resilience in order to cope with changes both internal and external. To foster better agility to a changing environment, organizations need to be designed where learning is embedded (McGill and Slocum, 1993). This requires learning at all levels of the organizations such as the individual level, team level, organizational learning and global level (GL). The level “global” was given by Jamali *et al.* (2009). Organizational learning or learning organization is interchangeably used (Fulmer *et al.*, 1998; Klimecki and Lassleben, 1998) and is a product of the learning at the individual level (Liao *et al.*, 2010). Learning organization should promote and sustain individual and team learning, a consolidation of individual and team learning results in an organizational learning approach (Ortenblad, 2001; Antonacopoulou and Chiva, 2007).

Emerging markets like India are playing a critical role as producers and consumers of goods and services. The global focus is shifting toward India because it is the second largest



democracy with a population of approximately 1.2 billion people and a sizeable percentage of English speaking people (Singh, 2010). Since, knowledge is the critical driver of competitiveness, the ability of individuals and organizations to learn becomes a primary source of success (Ulrich, 1998). Number of studies have examined the impact of the learning organization practices and processes on firm performance and found a positive correlation between them. The studies were conducted mostly in the private sector where enhancing shareholder value and profitability for the entrepreneurs are the main drivers. The Indian public sector firms were established by the Government of India (GOI) with a different purpose and objective to achieve self-reliant economic growth. Public sector in India is considered a powerful engine of economic development and an important instrument of self-reliance. Public firms compared to their private counterparts are far more bureaucratic and need to follow and adhere with stringent legal guidelines (Voet, 2014). The hierarchical structure in the bureaucracy restricts individual learning confining to specific job responsibly of the given position compared to private ones where employees collaborate in different tasks and projects with an in-built mechanism to acquire different skills and competencies (Bennet, 2006). A public firm is characterized by a plethora of control procedures, timelines and routine activities with an objective of reducing risk of failures (Merad *et al.*, 2014). Palos and Stancovici (2016) conducted a study aimed at identifying the presence of dimensions of learning capabilities and characteristics of a learning organization comparing a public with a private firm. The findings revealed that the private firm scored better on the organizational learning capability (OLC) and on all the dimensions of learning organization than the public firm. It is worthwhile to explore whether the findings hold true for Indian public firms also. Hence, the research was designed to explore this aspect of the learning organization.

There is no single learning organization model “one size fits all” and every organization has to create its own, unique, customized learning organization model (Ortenblad, 2015). The contingency model of learning organization developed should depend on an inventory of situations and it may not be recommended to adopt all the aspects of the learning organization (Ortenblad, 2015). Some studies conducted in the past suggested that public firms (which are more bureaucratic) could not fully adopt the idea of the learning organization (Jamali *et al.*, 2006). Additionally, this research also tries to investigate the relevance of the concepts of learning organizations based on the theoretical framework proposed by Watkins and Marsick (1993, 1996, 1997). This research aims at examining the relationship between the learning organization’s dimensions and its impact on financial and knowledge performance. Nine dimensions of the Learning Organization Questionnaire that was developed by Watkins and Marsick (1996) were adopted. The current research aims to study the relationship between organizational learning at different levels (individual, group/team, organizational and global) with performance (knowledge and financial) outcomes of the firm.

The study also looks at organizational learning at the four different levels, namely, individual, group/team, organizational and global and the performance outcomes of the organization as a consequence of this learning. Therefore, the research tries to explore to what extent the sample organization can be described as a learning organization, the relationship between learning organization dimensions and performance outcomes, and how organizational learning at different levels impacts its performance outcomes. The findings suggest the current organization is on the road to becoming a learning organization and the results have indicated the link between learning culture and organizational performance. The study highlighted the importance of individual and GL learning on financial outcomes in the case of knowledge performance, it is only the learning at the GL that mattered most. The findings lent support to the salience of a systems theory perspective and analysis in research on learning organizations.

Research questions

The following research questions guided the study:

- RQ1. To what extent can the sample organization be described as a learning organization?
- RQ2. Does a relationship exist between learning organization dimensions and organizational performance?
- RQ3. To what extent does organizational learning at various levels (individual, team, organizational and global) impact performance outcomes?

Review of literature

In order to address the research questions, literature relating to the following has been reviewed: features of a learning organization; and a learning organization and its performance outcomes.

The review revolves around the features of learning organizations, learning organization practices being adopted in developing countries, with specific reference to the Indian sub-continent. The concept of the learning organization has been in existence for quite some time but it gained currency after the work of Peter Senge (1990) with his book, *The Fifth Discipline: The Art and Practice of the Learning Organization*.

Features of a learning organization

The concept of a learning organization has been defined in many ways by various authors using different terms. Some of the terms used are: building blocks (Senge, 1990), characteristics/components/attributes (Pedler *et al.*, 1991; Garvin, 1993; Slater and Narver, 1995; Goh, 2001; Watkins and Marsick, 1998; Griego *et al.*, 2000; Thomsen and Hoest, 2001), creation, acquisition and transfer of knowledge (Garvin, 1993; Marquardt, 1996; Lewis, 2002; Jensen, 2005), and individual, team and organizational learning (Senge, 1990; Moilanen, 2005). A learning organization creates a culture of adaptation to change (Senge, 1990; Watkins and Marsick, 1993, 1996; Jamali and Sidani, 2008). On the basis of a thorough review of papers published after 1995, Jamali and Sidani (2008), in their paper, summarized the frequently cited qualities of the learning organization in terms of leadership, strategy, participative policy making, teamwork, self-development opportunities, information flow, structural considerations, a learning climate, experimentation opportunities as well as learning reward availability. They quoted from the following papers: Hong and Kuo (1999), Rowden (2001), Reichart (1998), Garvin (1994), Holt *et al.* (2000), Griego *et al.* (2000), Thomsen and Hoest (2001), Goh (2003), Porth *et al.* (1999), Gardiner and Whiting (1997), Watkins and Marsick (1998).

The concept of the learning organization has more relevance for developing countries because it helps in the up gradation of its people's knowledge, skills and their capacities for decision making (Awasthy and Gupta, 2012), Awasthy and Gupta stressed the need to study the concept of the learning organization *vis-à-vis* the competitive advantage it would give Indian organizations because in the post-liberalization period, reforms got institutionalized and the first and second phases of economic reforms were successful. Hence, there is a need to examine learning organization concepts in the Indian scenario and in the subsequent paragraphs, we try to look at the links between learning organization and performance outcomes.

Exploring "learning organization" theoretically probes the loci of behavior change (Huber, 1991), new patterns of interaction, thinking and action (Antonacopoulou and Chiva, 2007) and institutional memory systems (Walsh and Ungson, 1991) to identify a few. A number of public agencies, global institutions and private firms employ a large number of outsource and indigenous processes, architecture and frameworks to shake institutional memory and stimulate thought to imagine fresh ideas and develop future best practices.

It is established through research the importance of organizational learning toward effectively implementing change, bringing in transformation, heightened innovation, execution skill and problem solving skills with organizational renewal revival, gaining competitive advantage and performance outcomes (Adams *et al.*, 1998; Attewell, 1992; Bass and Avolio, 1993; Bierly *et al.*, 2000; Edmondson and Bertrand, 1998; Goh *et al.*, 2012). Organizational learning also ensures sustainability in technology intensive industries (Imran *et al.*, 2016).

Learning organization and performance outcomes

Only a few studies have empirically tested the relationship between learning organization and performance outcomes (Awasthy and Gupta, 2012). Significant relationships have been reported between the different aspects of learning organization and overall performance outcomes, with respect to a few financial indicators, as well as innovation, new product success, market share, employee job satisfaction, motivation to transfer learning, organizational commitment and minimal turnover (Ellinger *et al.*, 2003; Farrell and Oczkowski, 2002; Yang, 2003; Egan *et al.*, 2004; Sta. Maria and Watkins, 2003; Davis and Daley, 2008; Noubar *et al.*, 2011). In fact, all the papers cited here have tried to establish the relationship between learning organization and performance outcome measures by taking into consideration the various dimensions of the learning organization. However, hardly any research seems to have been carried out to study the impact of learning at different levels (individual, team/group, organizational, global) on performance outcomes. Empirical research remains very scanty in developing countries, especially in South Asia (Awasthy and Gupta, 2012). This fact is corroborated by Nevis *et al.* (1995), Jamali and Sidani (2008), Walczak (2007) and Lien *et al.* (2006).

Results of research by Ramnarayan (1996) found that in Indian organizations various obstacles existed in the path of learning, in the form of functional myopia, command and control, preoccupation with daily routine, excessive formalization, insufficient external orientation and lack of urge for change. In another study of an Indian industry, Bhatnagar (2006) tried to measure the OLC perception of managers and establish the link between OLC and firm performance outcomes. Results indicate that the firm's financial turnover predicts OLC. Awasthy and Gupta (2012) examined the relationship between people-level learning dimensions, structural-level learning dimensions and performance outcomes. The results showed that the relationship between people-level learning dimensions and performance outcomes is mediated by structural-level learning dimensions in different Indian organizations. Patnaik *et al.* (2013) studied organizational learning in technical educational settings. Their research revealed that the extent of organizational learning is below the expected level in both public and private sectors.

A number of studies have tried to see the link between learning organization characteristics/attributes/dimensions and different performance outcome measures while ignoring the level (individual, team, organizational and global) specific learning. Awasthy and Gupta (2012) have tried to focus on this aspect only to some extent, as the study was centered on people-level learning and structural-level learning. The role of individual, team and organizational and GL learning in learning organization literature carries importance since enhanced learning leads to enhanced performance outcomes (Bhatnagar, 2006). The major focus of this research is to look at the four different levels of learning in terms of individual, team/group, organizational and global learning and its impact on performance outcomes (in terms of knowledge performance and financial performance). The studies prior to this research somehow could not focus specifically on the impact of the four levels of organizational learning on organizational performance outcomes. This research, thus, was designed to address this existing gap in literature. In a study combining the notions of POST Model of Economic Geography

and Learning Theory in international business, it was found that firms could enhance their responsiveness to institutional processes and changes through different forms of international learning (Dau, 2016).

Theoretical framework and hypotheses development

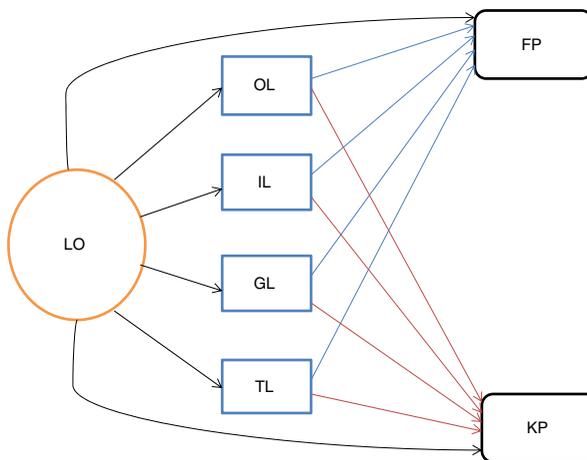
This study adopts the learning organization framework given by Watkins and Marsick (1996). Jamali *et al.* (2009) is the other framework which the current study draws from. Taking a cue from these two frameworks, the authors went on to develop their own model of learning organization showing relationships between the different variables and test that model empirically collecting data from the sample organization (Figure 1). Watkins and Marsick (1996, p. 4) proposed an integrated model for a learning organization and defined a learning organization as “one that learns continuously and transforms itself [...] Learning is a continuous, strategically used process – integrated with and running parallel to work.” They proposed seven action imperatives or dimensions and two dimensions relating to performance outcomes (knowledge performance and financial performance) that characterize organizations in their journey toward becoming learning organizations. They also proposed that learning activities should occur at three organizational levels, i.e., individual, team and/or group, organizational. Each of the three levels has their dimensions (seven in total). The different levels showing their respective dimensions are depicted in Table I. However, Jamali *et al.* (2009, p. 111) grouped these seven dimensions into rather four levels, adding GL into the three existing levels proposed by Watkins and Marsick.

Based on the model shown in Figure 1, three research hypotheses were formulated to empirically test the relationships between the variables. These are as follows.

Based on the model shown in Figure 1, three research hypotheses were developed to empirically examine the relationships between the two research constructs. These are as follows:

Hypotheses

- H1. The higher the score of the seven learning organization dimensions, the higher will be the organization’s performance outcomes (financial and knowledge).



Note: OL, organizational learning; IL, individual learning; GL, global learning; TL, team learning; LO, learning organization; FP, financial performance; KP, knowledge performance

Figure 1. Theoretical framework of the study

Table I.
Definitions of
constructs for the
dimensions of the
learning organization
questionnaire

Dimension	Definition
Create continuous learning opportunities Promote inquiry and dialogue	Learning is designed into work so that people can learn on the job; opportunities are provided for ongoing education and growth People gain productive reasoning skills to express their views and the capacity to listen and inquire into the views of others; the culture is changed to support questioning, feedback and experimentation
Encourage collaboration and team learning	Work is designed to use groups to access different modes of thinking; groups are expected to learn together and work together; collaboration is valued by the culture and rewarded
Create systems to capture and share learning Empower people toward a collective vision	Both high- and low-technology systems to share learning are created and integrated with work; access is provided; systems are maintained People are involved in setting, owning and implementing a joint vision; responsibility is distributed close to decision making so that people are motivated to learn toward what they are held accountable to do
Connect the organization to its environment	People are helped to see the effect of their work on the entire enterprise; people scan the environment and use information to adjust work practices; the organization is linked to its communities
Provide strategic leadership for learning	Leaders model, champion and support learning; leadership uses learning strategically for business results
Financial performance	State of financial health and resources available for growth
Knowledge performance	Enhancement of products and services because of learning and knowledge capacity (lead indicators of intellectual capital)

Source: Watkins and Marsick (2003)

H2a. Individual, team, organizational and global learning dimensions will emerge as significant predictors of financial performance.

H2b. Individual, team, organizational and global learning dimensions will emerge as significant predictors of knowledge performance.

Research method

Instrument – dimensions of learning organization questionnaire (DLOQ)

This study used the DLOQ developed by Watkins and Marsick (1996). The DLOQ is being considered a valid measure to assess a learning organization through numerous studies, in both the Western (Ellinger *et al.*, 2002; Watkins and Marsick, 2003; Yang *et al.*, 2004) and non-Western cultures (Lien *et al.*, 2006; Song and Chermack, 2008; Zhang *et al.*, 2004; Weldy and Gillis, 2010; Song *et al.*, 2009, 2011; Sharifirad, 2011; Awasthy and Gupta, 2011). These studies have established the relevance of the DLOQ in different cultures by examining internal consistency of each item. The results of these studies have verified the validity and reliability of DLOQ in different cultures by investigating into the internal consistency of each item reliability (α coefficients range between 0.71 and 0.91) and a reliable factor structure (Lien *et al.*, 2006).

The full version of the DLOQ consisting of 43 items excluding the seven items on the profile of the respondent and the sample organization was used to gather data. Sample items include, “In my organization, people help each other learn” and “In my organization, teams/groups have the freedom to adapt their goals as needed.”

The DLOQ is suitable to assess how the Indian firm scored on the seven learning organization dimensions and two measures of performance (knowledge performance and financial performance) at different levels, and whether the sample organization could be treated as a learning organization. There are seven dimensions in a learning organization

that are clubbed into four levels shown below (Watkins and Marsick, 1996). The definitions of the seven constructs of the DLOQ are given in Table I:

- (1) individual learning – IL (continuous learning, inquiry and dialogue);
- (2) team learning (team learning) – TL;
- (3) organization learning – OL (empowerment, systems that capture and share learning); and
- (4) global learning – GL (strategic leadership and connection to environment) (Table II).

The reliability of the instrument for this study was assessed by computing Cronbach's coefficient α ranges from 0.76 (financial performance) to 0.89 (strategic leadership) which is well above the acceptable value of 0.70 for demonstrating internal consistency of the established scale (Nunnally, 1978).

Sample firm

The sample firm selected for this research is a large Indian public sector firm in the field of energy generation. It has been conferred a "Maharatna status" by the GOI. A Maharatna public sector firm is one which has a greater operational and financial autonomy and it can develop its own strategy. This coveted status entitles the Board of the Maharatna firm to take major investment decisions without seeking government approval up to a certain investment limit. Its core business is engineering, construction and operation of power generating plants and providing consultancy to power utilities in India and abroad. Part of the vision of this organization is to be a "Learning Organization." Therefore, one of the objectives of the study is to ascertain whether the sample organization be treated as a learning organization?

Data collection

Responses were obtained on a six-point Likert scale that ranged from "almost never true" to "almost always true." The data for this study were collected from two operating units, namely, the corporate office and a coal based power station. The corporate office had a headcount of around 357 executives while the number of executives at the power station was around 403 (together, both units constituted around 760 executives). The study approached 360 executives, which constituted 48 percent of the total population. Convenience sampling technique was employed to collect data and the authors had to use their contacts with the human resource (HR) managers in both units. The questionnaires were administered personally by the researchers in the workplace during office hours. Care was taken to include respondents from different hierarchies and functional areas. Further, the respondents referred the researchers to other colleagues in their department and also in other departments. A total of 204 filled-in usable responses were obtained yielding a response rate of 56.6 percent. The authors visited the sample unit several times during the period of data collection and all the responses were obtained

Individual level	Promote inquiry and dialogue Create continuous learning opportunities
Team level	Encourage collaboration and team learning
Organization level	Create Systems to capture and share learning Empower people toward a collective vision
Global level	Connect the organization to its environment Provide strategic leadership for learning

Source: Marsick and Watkins (1999, p. 11)

Table II.
Four levels of learning with their corresponding dimensions

physically by visiting the premises of the sample units. All the respondents belonged to the managerial cadre and this cadre was deliberately chosen because it was felt that they would understand and comprehend the learning organization concept clearly and their responses would be valid. The average age of respondents was 39.46 years (Standard Deviation (SD) of 9.79 years) and the average experience was 14.73 years (SD of 9.16 years). Out of the 204 respondents, 153 were males and 51 were females. The respondents were asked not to mention their names and were assured confidentiality of the data.

Data analysis

The data collected were first analyzed using descriptive statistics. The mean scores, SD and correlations among study variables are given in Tables III and IV. In the next stage, as followed in most empirical studies, reliability of the scales in the Indian context was assessed computing reliability coefficients. To test the hypotheses, the Pearson product moment correlation coefficient and step-wise regression analysis were conducted. Step-wise regression is a semi-automated process of building a model by successively adding or removing variables based solely on the *t*-statistics of their estimated coefficients. Step-wise regression is a modification of the forward selection so that after each step in which a variable was added, all candidate variables in the model are checked to see if their significance has been reduced below the specified tolerance level. If a nonsignificant variable is found, it is removed from the model. Hence, this method is thought to be the most suitable for analysis.

Results and findings

Testing RQ1

To test the first research question, we computed the mean scores and the SDs of the all seven dimensions (mentioned in Table III) and benchmarked the scores with the scores of

Table III.
Mean scores and standard deviations and LO dimensions

Learning organization dimensions	Mean scores	SD	Cronbach α
CL	4.04	0.179	0.809
ID	3.87	0.248	0.806
CTL	4.09	0.121	0.868
SCL	4.06	0.196	0.748
EMP	4.10	0.108	0.854
CE	4.08	0.182	0.834
SL	4.11	0.059	0.894

Notes: CL, continuous learning; ID, inquiry and dialogue; CTL, collaboration and team learning; SCL, systems to capture learning; EMP, empower people; CE, connect the environment; SL, strategic leadership for learning

Table IV.
Correlation between dimensions of DLOQ and outcome variables (financial performance and knowledge performance)

Dimensions	FP	KP
CL	0.49**	0.48**
ID	0.45**	0.34**
CTL	0.36**	0.45**
SCL	0.50**	0.54**
EMP	0.40**	0.45**
CE	0.45**	0.53**
SL	0.47**	0.58**

Notes: CL, continuous learning; ID, inquiry and dialogue; CTL, collaboration and team learning; SCL, systems to capture learning; EMP, empower people; CE, connect the environment; SL, strategic leadership for learning. **Significant at 0.01 level

other studies published in the existing literature and found that as per the prescribed range in literature, the scores obtained in this study are on the higher side. Therefore, it is established that the scales were suitable to the Indian context and culture which is different from western culture. To compute the scores of the each learning organization dimension, in a study of the Lebanese information technology sector and the banking sector, Jamali *et al.*, (2009) considered the average range between 3.35 and 3.96 for all the seven learning organization dimensions as being “above average.” Averages between 1 and 2.33 represent a “weak average response.” Averages between 2.34 and 3.67 represent a “medium mean response,” while a mean of more than 3.68 is considered to be a “high average response” as per Al-Jawazneh and Al-Awawdeh (2011). The highest mean in this study was for strategic learning (4.11) and lowest was for inquiry and dialogue (3.87).

The high mean values of the seven learning organization dimensions indicate that the sample organization consistently scores higher on all the features of a learning organization, as mentioned in the literature.

Testing RQ2 and RQ3

H1 was formulated as – the higher the scores on learning organization dimensions, the higher will be the organization’s knowledge and financial performance outcomes. Testing H1 would answer RQ2 and RQ3. In order to test whether high learning organization dimension scores lead to higher financial and knowledge performance outcomes, we conducted the correlation analysis between the seven learning organization dimensions and financial and knowledge performance outcomes. The results are reported in Table IV.

The results indicate that the study variables are significantly related. This implies that there is a positive relationship between learning organization dimensions and performance outcomes. It may be inferred from the findings that the employees in this organization perceived that the existence of effective and suitable learning organization characteristics resulted in better organizational performance outcomes (both financial and knowledge). Thus, H1 is supported by the results obtained. The results obtained from H1 is also supported by the existing literature (Davis and Daley, 2008; Marsick and Watkins, 2003; Goh *et al.*, 2012; Awasthy and Gupta, 2011; Ellinger *et al.*, 2002; Yang, 2003).

H2a

In order to test H2a, the four level specific learning dimensions were entered into the model as independent variables, while the organization’s financial performance outcome was the dependent variable and step-wise regression analysis was conducted on the data. The results are presented in Table V.

Table V reveals the result of regression analysis. Independent variables explained 30.3 percent of the variance in the organization’s financial performance outcome. The result indicates that there are two dimensions, namely, individual level learning ($\hat{a} = 0.334, p < 0.05$) and GL learning ($\hat{a} = 0.268, p < 0.05$), which emerge as predictors of financial performance outcome. It may be inferred that these two dimensions are directly linked to the financial

Criterion	Predictors	Standardized β	Significance
FP	IL	0.334*	0.000
	TL	-0.167	0.073
	OL	0.090	0.445
	GL	0.268*	0.001

Notes: $R^2 = 0.303$. FP, financial performance; IL, individual learning; OL, organizational learning; GL, global learning. * $p < 0.05$

Table V.
Regression results:
level specific learning
dimensions as a
predictor of financial
performance

performance outcome of a learning organization. However, the other two dimensions – team level learning and organization level learning are not contributing to the financial performance outcome in the sample organization. Thus, *H2a* is partially supported by the data. To some extent, similar results were reported by Jamali *et al.*, (2009) and Awasthy and Gupta (2011).

This can be explained from the nature of the organization and contextual realities. The sample organization, where GOI holds the majority stake, is subjected to lot of bureaucracy from the ministry. CFO Connect (2012) has reported that India's 220-odd Central Public Sector Enterprises suffer from major problems like fall in share prices, low profitability, etc. "Over-governance" is one of the causes of weak performance. Most of these organizations are governed by rigid hierarchy, strict rules and standard procedures which curtail employee participation in decision making. Decision making and policy formulation is restricted to the top management, whereas implementation is carried out by the middle management and the junior management. This restrains managers from being proactive and stalls initiative taking, which in turn stifles organizational learning. A similar finding was reported from a study conducted by Mishra and Bhaskar (2010) in ten Indian organizations and no significant relationship between organizational learning and empowerment was found. They attributed this to the Indian cultural context, which has a high degree of dependence-proneness (Sinha, 1973).

Lalnunmawia (2010) has written that though the Indian public sector has contributed enormously to the Indian economy, these public enterprises suffer from several problems like ineffective and inefficient leadership, too much of centralization, frequent transfers of officials and lack of personal stakes. Civil servants, who lack proper management skills or have no exposure in running a business, are often deputed to manage these enterprises. Political interference in day-to-day affairs, rigid bureaucracy and ineffective delegation of authority hampers initiative, flexibility and quick decision making. The net result is lack of shared learning. Organization-wide learning can thus take place in a fragmented manner and only in bits and pieces (Stata, 1989).

The results of the study do not indicate the impact of team learning on performance outcomes. The nature of the structure of these public sector firms is mechanistic, which may undermine opportunities for collaboration (Jamali *et al.*, 2009). In a study conducted by Mishra and Bhaskar (2010), in a semi government power distribution organization, team work and group problem solving were not significant predictors of performance.

Organizational learning, both at the individual level and at the GL, impacted financial performance outcomes. With regard to IL, it could be attributed to the fact that though the sample organization is in its journey toward becoming a "learning organization" (Ghosh *et al.*, 2009), it does not seem to have imbibed the principles of organizational learning as yet. Hence, the learning is predominantly at the individual-level learning and not at the shared or team-level learning. This could explain the results.

The other predictor of financial performance outcomes is GL learning. In the Indian cultural context, subordinates feel comfortable in being guided and directed by their superiors. Sinha's (1973) research has shown the dependence-proneness of the Indian personality. Employees were found to be very receptive to the expectations of others, particularly of those who served as their role models. The other reason is the high power distance society (India's score is 77) in which subordinates are highly dependent on their leaders for directions and guidance. This impacts performance. According to CFO Connect (2012), positive changes have started taking place in the Indian PSUs. As compared to earlier times, the Central PSUs have started thinking strategically giving more importance to talent management while strengthening their governance structures. The current sample organization is in the same space and has a Maharatna status. It has adopted a multi-pronged strategy like: greenfield projects, brownfield projects, joint ventures and acquisitions routes with national and international partners resulting in improvement in performance outcomes.

H2b

In order to identify the predictors of knowledge performance, a step-wise regression was conducted with the four level-specific learning as the predictors and knowledge performance outcomes as the criterion variable. The results are reported in Table VI.

Table VI shows that the independent variables explained 35.1 percent of the variance in knowledge performance outcomes. As the result indicates, out of the four dimensions, only one, i.e., global learning ($\hat{a} = 0.593$, $p < 0.01$) emerged as a significant predictor of knowledge performance outcome. Thus, *H* only gets partial support from the data.

A comparison of the results of *H2a* and *H2b* shows a similar trend. The impact of organizational and team level learning on organization performance (financial and knowledge) outcomes is insignificant. The difference is that while both individual level learning and GL learning impact financial performance outcomes, knowledge performance outcomes are only impacted by GL learning and the effect of individual level learning is hardly there. It is only GL learning which holds the key to knowledge performance outcomes of the sample organization. Whatever macro-level learning takes place is on account of strategic planning and environmental scanning. In 2009, five profit-making PSUs were given the status of Maharatna by GOI and the sample organization happens to be one among the five. The Maharatna status confers greater operational and financial autonomy on the PSUs. This helped the Maharatna PSUs in making strategic acquisitions abroad and forging partnerships with world class organizations. After being conferred the Maharatna status, the organization started developing its own strategy and business development committees at the board level and this has had an impact on its performance outcomes (CFO Connect, 2012). The Maharatna PSUs have started revamping their R&D operations which was the Achilles heel of the public sector (CFO Connect, 2012). These changes, which are taking place at the macro level, may have impacted the macro level learning (GL learning) but not the micro level learning (organizational and team level learning). The sample organization could well be on its way to becoming a learning organization.

Conclusion

This paper tries to examine the concept of learning organization and the relationship between the learning organization dimension and performance. The learning organization dimensions used in the study were analyzed as a whole across one Indian public sector firm. The impact of the various levels of DLOQ on performance outcomes was explored. Our findings suggest that the current organization is on the path to become a “learning organization.” This finding is supported by Ghosh *et al.* (2009) in their research that was carried in the same sample organization and they went on to report that all HR initiatives in the organization were carried out to actualize the company’s vision of “enabling the employees to be a family of committed world class professionals making the firm ‘a learning organization.’”

Once the presence of learning organization concept has been established in the sample organization, the researchers moved to explore if there is a link between learning culture concept and organizational performance. At some point, it was felt that understanding this

Criterion	Predictors	Standardized β	Significance
KP	IL	0.145	0.058
	TL	0.082	0.298
	OL	0.139	0.175
	GL	0.593**	0.000

Notes: $R^2 = 0.351$. KP, knowledge performance; IL, individual learning; OL, organizational learning; GL, global learning. ** $p < 0.01$

Table VI.
Regression results:
level specific learning
as a predictor of
knowledge
performance

relationship may “generate realizable action plans in recognizing performance gaps and capitalizing on strengths in learning” (Yang 2003). The results of the study have established this linkage and have strengthened the existing body of literature.

The paper further tries to test the contribution of four levels toward organizational performance. This interest was generated from Jamali *et al.* (2006) study where they tried to link systems theory to the learning organization concept. As per systems theory, LO comprises of “inter-dependent building blocks at the individual, group, organizational and global levels,” where the dimensions and propensities detected at various levels necessarily combine, interact and co-evolve to shape the disciplines of an advanced learning organization. In other words, obtaining higher order learning performance is necessarily contingent on making progress in each of the respective dimensions, addressing gaps, and enhancing multiple value adding interactions and synergistic relationships. The present study results indicate the importance of individual and GL learning on financial outcomes. In the case of knowledge performance, it is only the learning at the GL that matters and counts.

As indicated earlier, the current research started with inputs from Watkins and Marsick (1996) and Jamali *et al.* (2009) work. This research has extended Jamali *et al.* (2009) study by linking level-specific learning to organizational performance. This research is consistent with the idea of systems level continuous learning advanced by Marsick and Watkins (1999). The findings also lend support to the salience of a systems theory perspective and analysis in research on learning organizations.

Key findings and implications for theory

The sample organization has scored consistently high on all the seven dimensions and may well be termed as a “Learning Organization.” This is despite the fact that Indian public sectors are plagued by bureaucracy and red tape and experience a far more constrained environment because of the interference of the bureaucracy and the Ministry compared to the private sector. The finding contributes to the existing literature by establishing the validity and applicability of the concept of learning organization to a public sector firm. But the emergence of only two levels of learning, namely, individual and global as predictors of performance is a revelation of the fact that the proper institutionalization of various processes like team work, collaboration, promotion inquiry and dialogue, etc., are imperative for an organization to realize the full benefits of being a learning organization. The findings of the study also postulate that all the four levels of learning are important for an organization’s enhanced knowledge and financial performance outcomes. These two levels of learning in effect would lower the performance outcomes of the sample organization. Future research needs to investigate deeply into the impact of team level learning and organization level learning on performance outcomes and what the triggers and inhibitors of such learning are?

Implications for practice

The study helps management to develop strategies that would foster organization-wide learning fostering a spirit of learning organization. The results imply that managers should facilitate platforms where knowledge sharing takes place among groups of employees to enable them to get a feeling of being empowered in the organizational decision-making process. Strategies should be formulated where there is appreciation for good ideas and formal and informal rewards are instituted for any breakthrough idea or innovation. The management needs to inspire the people through its vision and share it across the board. Once the vision is strongly embedded in the minds of managers, it will be pursued through appropriate practices and processes. In the Indian context, empowerment of employees is the primary driver behind employee initiative taking and having a sense of ownership toward the results. Indians possess certain socio-cultural attributes like

submissiveness and fear of independent decision making (Sinha, 2008) and making them feel empowered will drive better performance outcomes. Further, results from this study can help firms establish a business case for learning orientation initiatives at different levels as well as help assess the impact these initiatives have on business performance.

Limitations and future research

The findings from the research demonstrated that learning organization processes and practices do exist and prevail in publicly owned firms. Given the sample for the study, which was one such firm, caution needs to be exercised while generalizing the results. Future researchers may take findings from a large number of organizations to make the findings of the study more generalizable. The instrument, DLOQ gathers self-reported data on financial and knowledge performance outcomes, which is subject to biases at the behest of the respondents. Subsequent researchers could collect data on learning organization dimensions and financial and knowledge performance outcomes from different respondents to eliminate common source bias. Alternate research design like a mixed method would help to explore the issues deeper for richer findings.

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