

THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES

The Mediating Role of Learning Orientation on the Relationship Between Organizational Structure and Firm Innovativeness: A Study on Turkish Smes

Özge Mehtap

Kocaeli University, The Faculty of Economics and Administrative Sciences
Department of Business Administration
Management and Organization Sciences, Umuttepe Yerleskesi, Kocaeli, Turkey

Abstract:

The purpose of this study is to analyze the relationship between learning orientation, organizational structural factors of formalization and centralization levels, and firm innovativeness. The hypothesis of the study based on the assumptions that informalization and decentralization will effect firm innovativeness positively while learning orientation will mediate those relationships. 101 middle and top managers from 33 SMEs (small and medium sized companies) in total are subjected to survey. Data taken by the questionnaires were analyzed using SPSS program. Hierarchical regression analysis has been implemented to test the hypothesis. Hypothesis of the study has been partially accepted. The results of the study show that informalization effects firm innovativeness positively while two of the learning orientation subdimensions also mediates this relationship.

Keywords: Learning Orientation, firm Innovativeness, Informalization, Decentralization

1. Introduction

The global competition, state-of-the-art technology and scarce resources have brought organizations to a competitive situation to grow and survive so innovation has become an incumbency (Damanpour, 2006). We know that only the firms with the ability to adapt to the changing environment may survive. Therefore the paramount challenge of the todays' managers is to enhance innovation. Innovation is usually defined as the process "whereby new and improved products, processes, materials and services are developed and transferred to the market" (Rubenstein, 1989). Innovation and organizational learning are closely interrelated subjects. Organizational learning is simply defined as a process whereby new knowledge, skills and behaviors are created (Saki, 2013). Therefore generally organizational learning is accepted as a precessor of innovation.

The concepts of organizational learning and innovation have received a great deal of interest in the management literature since many years. Since new economy is build upon knowledge and innovation, learning has become an integral part of the people and organizations which also rendered them responsible and obligated for learning (Tapscott,1998: 182-183; Khandekar, Sharma, 2006: 683).

Firm innovativeness may be effected by many variables like learning orientation of the company, various structural characteristics, leadership styles, employees' characteristics, environmental factors etc. In order to make this study simplistic only three variables are taken as antecedents of firm innovativeness. Those are structural variables; decentralization and informalization; and learning orientation. In this study degree of centralization and formalization are named and measured as informalization and decentralization for both facilitation in naming the variables and also commenting the results. Learning orientation has been examined with three of its subdimensions which are commitment to learning, shared vision and open mindedness.

Although there are numerous studies examining the relationship between organizational learning and innovativeness and organizational structures and innovativeness; there are a limited number of studies which combine those variables in the same context. This paper focuses on the contributions of decentralization and informalization on firm innovativeness while controlling the effect of learning orientation of the organization.

In this context, the study begins with a literature review of the variables and their relationships and then will go on to development of hypotheses. Methodology, analyses and results will take place in the next section. Finally, results of the analyses will be discussed and recommendations will be provided for researchers and academicians.

2. Learning Orientation

Learning is expressed as the biggest competitive advantage in the new business paradigm (Ahmadi&Pishdari, 2010). It is also defined as "the process of acquisition of knowledge, competency, and understanding through working and experience" in various

resources (Himberg et al., 2003; Bassi & Polifroni, 2005; Tippins, Sohi, 2003). A learning organization denotes to the companies that; continuously keeps deducing from the experienced events and using those deductions in adapting to the changing environment. According to Garvin (1993) a learning organization is "an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights".

"Organizational learning occurs when members of the organization act as learning agents for the organization, responding to changes in the internal and external environments of the organization by detecting and correcting errors in organizational theory in use, and embedding the results of their inquiry in private images and shared maps of organization" (Argyris and Schön 1978).

Learning orientation refers to "organization-wide activity of creating and using knowledge to enhance competitive advantage" (Calantone et al., 2002). Learning orientation rises the organizational values that influence the firm's creation and use of knowledge potential, which in turn will effect the innovativeness (Sinkula et al., 1997). So we may deduce that while organizational learning is a general statement of the process, learning orientation refers to the intention and genuine activity of the organization related to learning.

Learning orientation is defined in three values which are commitment to learning, open-mindedness, and shared vision (Day 1991, 1994; Senge 1990; Tobin 1993). "Commitment to learning", is related to the firm's appreciation, paying attention, and giving value to learning (Sinkula et al., 1997). It is about generating a learning culture in the organization which is the center of learning orientation (Norman, 1985). A "culture amenable to learning" is a must to improve its understanding of its environment (Galer & Van der Heijden's 1992).

"Shared vision" focuses on organization-wide learning. Beyond motivation, knowing what to learn is also a must. Whether diversity of ideas is preferred, if there is no direction even excellent ideas may fail (Calantone et al., 2002). Shared vision influences the direction of learning, while the other subdimensions of learning influence the intensity of learning. Vision sharing is usually accepted as a significant component for proactive learning because it provides direction and defines the purpose for the organizational members (Day 1994). So it fosters motivation for learning, people should agree on what and why they are learning (Norman 1985; Senge 1990).

And finally "open-mindedness" is an ability to judge the organizational works and being able to welcome new and different ideas (Calantone et al., 2002). Open-mindedness is also a core value for being flexible for the necessary changes. In the organizational learning process "unlearning" is at the heart of organizational change. People and organizations should also learn to unlearn in order to adapt the changing environmental circumstances (Sinkula et al., 1997).

3. Firm Innovativeness and Learning

In today's world of globalization and competitive and unstable environment innovation is agreed as a substantial factor for sustaining competitive advantage. Innovative organizations which are proactive in nature are more successful and have better performances compared to their counterparts beyond controversy (Bromand & Ranjbar, 2009).

There are many definitions of innovation by researchers. According to Thompson (1965) "innovation is the generation, acceptance, and implementation of new ideas, processes, products, or services". It is an idea, practice, or material artifact perceived as new by the relevant unit of adoption (Zaltman et al., 1973; Rogers, 1995). Amabile et al. (1996) define innovation as "the successful implementation of creative ideas within an organization". Innovation is proactive and encourages creativity and risk taking. "Innovation is the management of all the activities involved in the process of idea generation, technology development, manufacturing and marketing of a new or improved product or manufacturing process or equipment" (Trott, 2008). Creativity and innovation are the key elements in the survival and success of an organization (Saki, 2013)

A firm's innovative capability is dependent on its incremental and cumulative historical activities (Nelson & Winter, 1982; Pavitt, 1990; Hamel & Prahalad, 1990). So a firm's organizational knowledge plays a significant role in its ability to innovate and survive in the long term. What another significant point in emphasizing innovative firms is their ability of accumulation of knowledge and the effective assimilation and application of this knowledge.

There are many studies conducted upon the relation between innovativeness and organizational learning and which have put forth positive results (e.g. Samad Saki et al., 2013, Hurley and Hult, 1998; Damanpour, 1991; Goes and Park, 1997; Sinkula et al., 1997).

Calantone et al. (2002) have also stated that learning orientation effects innovation capability positively. According to Calantone et al. (2002), an organization committed to learning can increase its innovation capability in three ways. First of all those organizations are more likely to be committed to innovation; since they usually have the technology, don't hesitate to use it in innovations. Second of all they don't want to miss the opportunities in the market because they have the knowledge and ability to understand and anticipate customer needs (Cahill, 1996). And finally those organizations which are committed to learning have greater innovation capability than competitors (Damanpour, 1991).

4. Centralization, Formalization, Learning and Innovation

It is stated by many previous studies that organizational structural characteristics such as degree of centralization, degree of formalization, degree of specialization, degree of delegation etc. influence organizational innovativeness (Lucas, 1996; Dixon, 1992). Centralization and decentralization pertain to the hierarchical level at which decisions are made. Centralization means that decision authority is located at the top of the organization. With decentralization, decision authority is pushed downward to lower organization levels (Daft, 2007). Uncertain environmental conditions makes decentralized organizations more successful since they can usually have better change management practices (Subramanian et al., 1996).

Formalization is the written documentation used to direct and control employees like formal job descriptions, policies and procedures, rulebooks, and regulations for an organization's personnel (Daft, 2007). The more these documentation takes place in

the organization the more it is said to be formalized. The level of formalization is related to the level of employees' freedom of act. Informalization is the process whereby the organization allows its employees to make their own decisions in work related issues (Subramanian et al., 1996).

The usual belief is that decentralized and informal organizational structures positively effects innovativeness. Those flexible and open structures are thought to increase innovativeness by encouraging new ideas. Burns and Stalker (1961) had supported the view that flexible organisational forms will sustain innovation but bureaucratic firms will not. On the other hand there are many different types of innovations and some of them may also be in congruence with different organizational characteristics (Subramanian et al., 1996). According to Daft (2007) for example, high formalization and centralization facilitates the adoption of administrative innovations; while low formalization and centralization facilitates the adoption of technical innovations (Subramanian et al., 1996).

There are many studies which have analyzed the relations between various structural factors and learning or innovation. For example Ettl et al. (1984) found that radical innovations are more likely to occur in organizations with centralized and informal structures, while incremental innovations are more likely in those with complex and decentralized structures. Mohammad Esmaeil et al. (2009) concluded that there is a negative and significant relationship among vertical separation, formalization and centralization with organizational learning.

5. Method

5.1. Model and Hypothesis

The purpose of this study is analyzing the mediating effect of learning orientation on the relationship of informalization and decentralization with firm innovativeness. In order to test the hypotheses, a field research was conducted by using the survey methodology. The research model is shown in Figure 1.

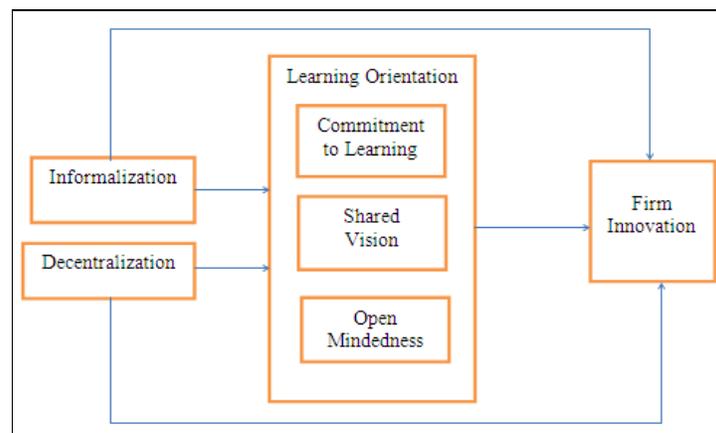


Figure 1: The Research Model

The hypothesis of the study are as follows:

- H1: Informalization will effect firm innovativeness positively.
- H2: Decentralization will effect firm innovativeness positively.
- H3: Learning Orientation will mediate the relationship between informalization and firm innovativeness.
- H3a: Commitment to learning will mediate the relationship between informalization and firm innovativeness.
- H1b: Shared vision will mediate the relationship between informalization and firm innovativeness.
- H1c: Open mindedness will mediate the relationship between informalization and firm innovativeness.
- H4: Learning Orientation will mediate the relationship between decentralization and firm innovativeness.
- H4a: Commitment to learning will mediate the relationship between decentralization and firm innovativeness.
- H4b: Shared vision will mediate the relationship between decentralization and firm innovativeness.
- H4c: Open-mindedness will mediate the relationship between decentralization and firm innovativeness.

5.2. Sample and Data Collection

The questionnaire was refined and administrated to the initial sample consist of 146 SMEs located in Istanbul. The firms were selected from the reports of European Business Network which have partnership relations with foreign western firms so they have a natural tendency to learn and develop. Indeed European Business Network had provided consultancy and training support for technology transfer to over 50.000 SMEs but only 146 of them were reported to build such partnership relationships.

The managers of the selected SMEs were initially contacted by telephone and the aim of the study was explained to them. Out of the 146 firms contacted, 47 agreed to participate in the study. To avoid single-source bias, at least two respondents at middle management level and/ or top management level participated in the survey from each firm. The selection was based on the assumption that these individuals were knowledgeable about the firm level variables in their respective organizations. All

respondents were informed that the data would remain anonymous and would not be linked to them individually, to their company, or to the company products.

Out of the 47 firms that agreed to participate, 33 firms completed the survey in full. An overall adjusted response rate of 23 percent was achieved, with 101 completed questionnaires returned.

5.3. Measures

Firm Innovativeness scale is adapted from Calantone, Çavuşgil and Zhao (2002); Learning Orientation is adapted from Sinkula et al. (1997) and; the Aiken and Hage’s (1966, 1968) scales which were revised by Jaworsky and Kohli (1993) are adapted for measuring informalization and decentralization. The questions were designed on a seven-point Likert scale, 1 standing for totally disagree and 7 for totally agree.

Firm innovativeness scale is composed of 6 items. Some of the items of the firm innovativeness scale are as follows: “Our company frequently tries out new ideas”. “Our company seeks out new ways to do things”. Decentralization and informalization scales are composed of 5 and 7 items respectively. As an example to the items of informalization scale that: “I feel that I am my own boss in most matters”. An example to the items of decentralization scale is: “There can be little action taken here until a supervisor approves a decision.”

Learning orientation scale is composed of 11 items in total. But it is divided into three subdimensions which are called Commitment to Learning (4 itemed), Shared Vision (4 itemed) and Open Mindedness (3 itemed). Some of the items of the scale are as follows: “Managers basically agree that our organization’s ability to learn is the key to our competitive advantage.”; “There is a commonality of purpose in my organization.”; “We are not afraid to reflect critically on the shared assumptions we have made about our customers.”

6. Analysis and Results

Before testing the research hypotheses, factor and reliability analysis are conducted. Scale dimensionalities were controlled by principal component analysis. Principal component analysis with Varimax rotation and a factor extraction according to the MINEIGEN criterion (i.e. all factors with eigenvalues of greater than 1) was employed.

The factor analysis results of Learning Orientation scale can be observed in Table 1. KMO and Bartlett’s test results showed that the scale is appropriate for factor analysis (KMO= 0,831; Bartlett’s test of sphericity p<0,001). Three of the items were loaded in more than one dimension with close factor loadings, so those items are extracted from the analysis (CO1: Managers basically agree that our organization’s ability to learn is the key to our competitive advantage. ; OM1: We are not afraid to reflect critically on the shared assumptions we have made about our customers. ; OM3: We often collectively question our own biases about the way we interpret customer information.).

With the other two items loaded in different dimensions, only item OM2 (Personnel in this enterprise realize that the very way they perceive the marketplace must be continually questioned.) loaded in the third dimension which correspond to the Open Mindedness dimension in the original scale. Since one item is usually not adequate to explain one factor, open mindedness dimension totally extracted from the analysis. And factor analysis reacted. The two dimension still explains %76 of the scale, so analyses continued with those two dimensions.

	Commitment to Learning	Shared Vision
Organizational Learning		
Commitment to Learning		
CO2: The basic values of this organization include learning as key to improvement.	,780	
CO3" The sense around here is that employee learning is an investment, not an expense.	,877	
CO4: Learning in my organization is seen as a key commodity necessary to guarantee organizational survival.	,801	
Shared Vision/Purpose (VSHARE)		
VS1: There is a commonality of purpose in my organization.		,730
VS2: There is total agreement on our organizational vision across all levels, functions, and divisions.		,783
VS3: All employees are committed to the goals of this organization.		,866
VS4: Employees view themselves as partners in charting the direction of the organization.		,900

Table 1: Factor Analysis Results
Total Variance Explained %79,6; KMO, 811

According to the Cronbach Alpha results the reliability of the Firm Innovativeness scale is $\alpha=.681$, but the item total statistics showed that if the fifth item deleted the cronbach alpha value of the scale will rise to $\alpha=.842$ (I5: In our company innovation is perceived as too risky and it is objected to resistance.). So the fifth item is deleted.

The reliability analysis of informalization scale has first resulted in $\alpha=.632$ Cronbach Alpha value, while the item total statistics showed that the if the 6. and 7. items are deleted the alpha value of the scale arises to $\alpha=.874$, so those items deleted (Inf6: The employees are constantly being checked on for rule violations; Inf7: People here feel as though they are constantly being watched to see that they obey the rules.). And finally the Cronbach Alpha value for decentralization scale found to be $\alpha=.872$ which is said to be highly reliable.

The reliability analysis are redone after items are deleted from the analysis. The results can be seen on Table 2 which indicates that the Cronbach's Alpha values for each factors exceed 0,70. Therefore the scales are said to be reliable.

Concepts	Number of Items	Scale Format	Cronbach Alpha
Commitment to Learning	3	LRF	,878
Shared Vision	4	LRF	,888
Firm Innovativeness	5	LRF	,842
Informalization	5	LRF	,874
Decentralization	5	LRF	,872

Table 2: Reliability Analysis Results

Note: LRF- Likert Response Format (Five point: 1=strongly disagree to 7=strongly agree)

Before the hypothesis testing, correlation analysis is conducted in order to observe the relations between the variables. As it is shown in Table 3, only decentralization variable does not have statistically significant correlation with any of the other variables which means that we can not conduct any regression analysis with this variable. So it can be stated that H2 and H4 can not be tested.

		Commitment to Learning	Shared Vision	Innovation	Informalization	Decentralization
Commitment To Learning	Pearson Cor.	1	,510**	,511**	,326**	,148
	Sig. (2-tailed)		,000	,000	,001	,141
Shared Vision	Pearson Cor.	,510**	1	,551**	,264**	,179
	Sig. (2-tailed)	,000		,000	,008	,073
Innovation	Pearson Cor.	,511**	,551**	1	,373**	,190
	Sig. (2-tailed)	,000	,000		,000	,057
Informalization	Pearson Cor.	,326**	,264**	,373**	1	,264**
	Sig. (2-tailed)	,001	,008	,000		,008
Decentralization	Pearson Cor.	,148	,179	,190	,264**	1
	Sig. (2-tailed)	,141	,073	,057	,008	

Table 3: Correlation Analysis Results

** Correlation is significant at the 0.01 level (2-tailed)

Following Baron and Kenny's (1986) mediation analysis by using hierarchical regression analysis; the four stepped regression analysis are conducted to test the hypothesis and to define the direction and magnitude of the effects. The results of the regression analysis can be seen in the below Table 4.

In the first model (1A), the effect of informalization on the firm innovativeness is tested. The results show that informalization have a statistically significant effect on firm innovativeness with a beta value of $\beta=.299$ ($p < .001$), so H1 is accepted.

In the second model (1B), informalization regressed on learning orientation subdimensions, which are commitment to learning and shared vision. The results showed that informalization have statistically significant effects on both of the subdimensions with beta values of $\beta=.288$ and $\beta=.231$ respectively ($p < .05$ for both).

The third model (1C) represents the effects of commitment to learning and shared vision on the dependent variable. Both of the dimensions have statistically significant effects on the firm innovativeness with beta values of $\beta=.288$ and $\beta=.361$ respectively.

And in the final model 1D, the whole model is tested using hierarchical regression analysis. It is observed that when the

independent and mediator variables are entered in the analysis together, all of the values are still statistically significant but the beta value of informalization over firm innovativeness decreases from $\beta = .299$ to $\beta = .153$ and also the p level decreases to $p = .024$. Therefore the model which is aimed at measuring the mediating effect of learning orientation on the relationship between informalization and the firm innovativeness is found statistically significant. Since the p level of informalization decreased but still significant, the commitment to learning and shared vision variables are said to be partial mediators. So H4a and H4b are accepted and H4 is also partially accepted, since open mindedness is subtracted from the analysis.

Regression Model	Independent Variables	Depended Variables	Standardized β	Model Sig.
1A	Informalization	Firm Innovativeness	,299***	,000
1B	Informalization	Commitment to Learning	,288**	,001
		Shared Vision	,231**	,008
1C	Commitment to Learning	Firm Innovativeness	,288**	,001
	Shared Vision		,361***	,000
1D	Informalization (1)	Firm Innovativeness	,153*	,024
	Commitment to Learning (2)		,242**	,006
	Shared Vision(2)		,337***	,000
Adjusted R2 = ,389; F value= 22,244; p= ,000				

Table 4: Regression Analysis Results
Significance Level: *** $p < .001$; ** $p < .01$; * $p < .05$

7. Discussion

The purpose of the study was to examine the relationship between basically four variables which are learning orientation, organizations' decentralization and informalization and firm innovativeness. The model was build on the assumption (in accordance with the previous literature) that organizational structure comes before the learning orientation. Learning orientation or organizational learning in most of the related literature was found to be a predictor of innovativeness, so was the decentralized and informalized structure. Therefore it is stated that the more the organizational structure is informalized and decentralized the higher the level of learning orientation will be; and the higher the level of learning orientation, the higher the level of firm innovativeness will be.

According to the results which are represented above some of the hypothesis are accepted while some of them are rejected. Decentralization variable had to be subtracted from the analysis cause it had just a small value of significant correlation with the degree of formalization variable and it showed statistically insignificant correlation with the other variables of the model. Although one of the subdimensions of learning orientation open mindedness was also subtracted from the study because of its improper factor loadings, the remaining two subdimensions were still explaining a good amount of learning orientation.

The findings of the study showed that learning orientation is an important determinant of firm innovativeness while also acting as a mediator in the relationship between informalization level of the organization and firm innovativeness. But also the beta values of the learning orientation subdimensions show that they are more powerful predictors of firm innovativeness than the informal structure of the organization.

7.1. Managerial Implications

It appears from the study that informalization is effective on both learning orientation of the company and also the firm innovativeness. It is observable that informal structures should be emphasized where the employees and middle managers have more decision power and where the rules sometimes may be created by the lower levels of hierarchy so much more empowerment should be involved. It also should not be ruled out that shared vision is a more powerful predictor than commitment to learning and informalization on the firm innovativeness. So it should be regarded that the commonality of purpose, agreement on the vision and actually knowing what to do is a good driver for innovativeness.

8. References

- Ahmadi, P. & Pishdar, M. (2010). Organizational learning and innovation. Presentation at the Third Iranian Conference on Creatology, TRIZ. Innovation Management & Engineering. Tehran, Iran.
- Aiken, Michael and Jerald Hage (1968). Organizational Independence and Intraorganizational Structure. American Sociological Review, 33, 912-30.
- Amabile, T.M., Conti R., Coon H., Lazenby J., & Herron M. (1996). Assessing the work environment for creativity. Academy of Management Journal, 39, 54 – 84.

4. Argyris, C. & Schön, D.A. (1978). *Organizational Learning: A Theory of Action Perspective*. Reading, MA: Addison-Wesley.
5. Baron, R. M. & Kenny, D. A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research – Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology*, 51, 1173–1182.
6. Bassi, S. & Polifroni, E.C. (2005). Learning communities: the link to recruitment and retention. *Journal of Nurses in Staff Development*, 21, 103–109.
7. Bromand, M. & Ranjbari, M. (2009). Strategic human resource management practices and innovation performance, with emphasis on the role of knowledge management. *Journal of Human Development of the Police*, 62, 24–31.
8. Burns, T. & Stalker, G. M. (1961). *The Management of Innovation*, Tavistock, London.
9. Cahill, D.J.(1996). Entrepreneurial orientation or pioneer advantage. *Academy of Management Review*, 21, 603– 5.
10. Calantone, R. J., Cavusgil, S. T. & Zhaob, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management*, 31, 515– 524.
11. Daf, R. (2007). *Management*. USA: South Western Cengage Learning.
12. Damanpour F. (1991). Organizational innovation: a meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34, 555 –90.
13. Damanpour, F. & Gopalakrishnan, S. (1998). Theories of organizational structure and innovation adoption: the role of environmental change. *Journal of Engineering and Technology Management*, 15, 1–24.
14. Day, G. S. (1991). *Learning About Markets*. Marketing Science Institute Report No. 91-117. Cambridge, MA: Marketing Science Institute.
15. Day, G. S. (1994). The Capabilities of Market-Driven Organizations. *Journal of Marketing* , 58, 37-52.
16. Dixon, N.M.(1992). Organizational learning: a review of the literature with implications for HRD professionals. *Human Resources Development*, 3, 29– 49.
17. Esmaeil, M. S, Gholipour, A. & Jazavi, E. (2009). Studying the relationship between organizational structure of central libraries related to Ministry of Science, Research and Technology in Tehran and their degree of adaptation with characteristics of learning organizations. *Basirat Journal*, 40, 104-120.
18. Ettlie, I. F., Bridges, W. P. & O’Keefe, R. (1984). Organization strategy and structural differences for radical versus incremental Innovation. *Management Science*, 30, 682-695.
19. Galer, G. & Van der Heijden, K. (1992). The learning Organization: How Planners Create Organizational Learning. *Marketing Intelligence and Planning*, 10, 5-12.
20. Garvin, D. A. (1993). "Building a Learning organization. *Harvard Business Review*, 71, 78-91.
21. Goes, J.B. & Park, S.H. (1997). Interorganizational links and innovation: the case of hospital services. *Academy of Management Journal*, 40, 673–96.
22. Himberg, C., Hutchinson, G. E. & Roussell, J. M. (2003). *Teaching Secondary Physical Education: Preparing Adolescent to be Active for Live*. Champaign: Human Kinetics.
23. Hurley R.F. & Hult, G.T.M. (1998). Innovation, market orientation, and organizational learning: an integration and empirical examination. *Journal of Marketing*, 62, 42– 54.
24. Jaworski, B. & Kohli, A. K. (1993). Market orientation: antecedents and consequences. *Journal of Marketing*, 57, 53-70.
25. Khandekar, A. & Sharma, A. (2006). Organizational learning and performance: Understanding Indian scenario in present global context. *Education + Training*, 48, 682 – 692.
26. Lukas, B.A., Hult, G.T.M., & Ferrell, O.C. (1996). A theoretical perspective of the antecedents and consequences of organizational learning in marketing channels. *Journal of Business Research*, 36, 233– 44.
27. Nelson, R. R. & Winter, s. G. (1982). *An Evolutionary Theory of Economic Change*. Belknap Press/Harvard University Press: Cambridge.
28. Norman, R. (1985). Developing capabilities for organizational learning. In: Pennings JM, editor. *Organizational strategy and change*. San Francisco (CA): Jossey-Bass.
29. Rogers, E.M. (1995). *Diffusion of innovations*. 4th ed. New York: Free Press.
30. Rubenstein, A. (1989). *Managing technology in the decentralized firm*. New York, USA: Wiley.
31. Saki S., Shakiba, H. & Savari, M. (2013). Study of the Relationship between the Organizational Learning and Organizational Innovation at University of Tehran, *Journal of Organizational Learning and Leadership*, 11, 1–19.
32. Senge, P. M. (1990). *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York: Doubleday.
33. Sinkula, J.M., Baker, W.E., & Noordewier, T.A. (1997). A Framework for market-based organizational learning: linking values, knowledge, and behavior. *Journal of the Academy of Marketing Science*, 25, 305– 18.
34. Subramanian, A. & Nilakanta, S. (1996). Organizational Innovativeness: Exploring the Relationship Between Organizational Determinants of Innovation, Types of Innovations, and Measures of Organizational Performance, *Omega the International Journal of Management Science*, 24, 631-647.
35. Tapscott, D. (1998). *Growing Up Digital. The Rise of the Net Generation*. New York: McGraw Hill.
36. Thompson, V.A. (1965). Bureaucracy and innovation. *Administrative Science Quarterly*, 5, 1–20.
37. Tippins, M. J. & Sohi, R. S. (2003). It Competency and Firm Performance: Is Organizational Learning A Missing Link?. *Strategic Management Journal*, 24, 745–761.
38. Tobin, D. R. (1993). *Re-Educating the Corporation: Foundations for the Learning Organization*. Essex Junction, VT: Oliver Wright.

39. Trott, P. (2008). *Innovation Management and New Product Development*. Financial Times/Prentice Hall.
40. Wischnevsky, J. D. (2006). Research on innovation in organizations: Distinguishing innovation-generating from innovation-adopting organizations. *Journal of Engineering and Technology Management*, 23, 269–291.
41. Zaltman, G., Duncan, R., & Holbek, J. (1973). *Innovations and organizations*. New York: Wiley