

# Organizational Learning and Its Impact on Performance: The Mediating Role of Innovation

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## ABSTRACT

This research aims to explore the impact of organizational learning with a mediating role of innovation on organizational performance. Furthermore, this research was conducted in the textile processing sectors in Faisalabad, Pakistan. Organizational learning and its four dimensions managerial commitment, systems perspective, openness and experimentation and the knowledge transfer and integration contributes to the significant impact on organizational performance. Structural Equation Modeling was used to measure the model and SMART-PLS version 2.0 Package. The research identified some recommendations to textile processing sectors. Organizations can provide a platform to facilitate its processing sectors to promote innovation and creativity. Findings identify a number of suggestions through which there can be solve problems with the use of knowledge, learning and innovative skills in other organizations.

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## 1. Introduction

In the present world, change is very fast and acknowledged therefore it is important to learn and adjust quickly according to these changes in order to stay up-front in this Era(Englehardt & Simmons, 2002). The significance of regular and active learning process in firms had never been as important as it is now. Due to globalization and technology changes, the complexity and quickness of this process pushed organizations to increase their learning process. To survive and work effectively in this high dynamic world, learning is a key to competitive advantage (Amani, Akbari, Shakarami, & Jahani, 2015). Furthermore, researchers suggested that these four conditions are essential for organizational learning. First suggestion was managerial commitment, and therefore management should encourage and hold it strongly throughout the organization. Second is proper collective and systematic perspective. Third, adaptation to change is not only sufficient to provide the solution but also to learn to be more open-minded towards different options. Fourthly, there is need to develop organizational knowledge on the basis of its integration throughout the organization (Hertz, 2005). Organizational learning can be discussed at various levels such as on individual level, group level, or organizational level (Sadia Cheema, 2015)

When organizations learn to perform experiment on given information then there is always a possibility of creativity and innovation. Previous literature is filled with recommendations that innovative attitude have a positive impact on organizational learning as well as on performance(Cohen & Levinthal, 1990; Jiménez-Jiménez & Sanz-Valle, 2011).

Organizations now face challenge of highly competitive and unstable conditions. During such difficult time, the products and services of the organization, the knowledge and other resources they acquire at that time become useless. The organisation should have the ability to quickly adjust according to the changing demand and restore new knowledge. It would favor an organization to give competitive edge and also maintain its innovative image. It also helps in improving organization's performance (Martín-de Castro et al., 2011). The capability of the organization is to adapt change faster than their competitors gain continuous competitive edge (P. M. Senge, 1990).

Innovation is one of the ways; organization can protect itself from uncertainty and unstable condition. It makes organizations highly pro-active and always ready to seek new opportunities and teach them to be more effective(Matzer, Abfalter, Mooradian, & Bailom, 2013). Furthermore, innovation is considered as a key factor in developing and assisting an organization's competitive advantage, which in return also improves performance of the organization. To obtain flexible work structure, the organization needs to be innovative. Therefore, organization tends to find adaptation process easy. They can easily compete in competitive environment and this adaptation may help them to work effectively and to gain leverage (Leal-Rodríguez, Eldridge, Roldán, Leal-Millán, & Ortega-Gutiérrez, 2015). To obtain better economic value, organizations should combine their knowledge and way of innovation together to operate their processes more effectively (Zahra, Abdelgawad, & Tsang, 2011).

This study has the following pattern:

Part 2: presents literature review.

Part3: construct of hypotheses which is based on literature review.

Part 4: contain methodology which is applied to test these hypotheses and result analyses.

Part 5: discussion.

## 2. Literature Review

### 2.1. Learning organization, its four antecedents and organizational performance

The concept of “learning organization” first gained popularity by Peter Senge’s “the first discipline: the art & practice of the learning organization” (P. M. Senge, 1990). A learning organization mostly consider as an organization which embrace change, learn from its mistakes, keep experimenting in different situation for better development and always improve the input of their workers (Wilkinson, Rushmer, & Davies, 2004). Senge layout five basic discipline of organizational learning that are structural thinking, personal expertise, mental figures, sharing of vision and learning in team environment(P. M. Senge, 1990). These five disciplines of learning develop an environment in the organization that encourages regular learning, adaption of change and improvement in organization(Estrada, 2009). Therefore it is one of the main focuses of the learning organization to build a culture which promotes organizational learning (Tsai, 2014).

For the development of efficient operative conditions, four factors are required for organizational learning. First, the management of the organization should be supportive of organizational learning and should promote it. Management should encourage the employees, therefore making sure that everyone understands and make commitment towards it (Jamal, 2011). Second, the management should develop an open and friendly environment in which employees feel safe to share their ideas and the organization can obtain satisfactory results through it (De Geus, 1988; P. Senge et al., 1999). Shared vision is necessary towards organizational learning (Small & Irvine, 2006). Third, organizational learning is a never ending process, treating a wide collection of knowledge, in the system and the practices of the work itself, it is important for guarantee and continuous growth of organizational learning (Daft & Weick, 1984). Fourth, organizations should try to build system perspective. An organization needs to be more bold and ready to accept change for the betterment of itself. It is essential to make change in a system, develop it in a way to be more innovative, flexible and educational (P. Senge et al., 1999).

Organizational capability also enhances to learn its performance financially (Day, 1994a; Slater & Narver, 1995)Organizations which are up-to-date, keep check on customer’s demands and competitors strategies are likely more predictable to sense and act upon different celebrations and trends going on in the business (Day, 1994b). Additionally, learning organization are more experienced and disciplined when comes to dealing with their customers and rivals. Therefore organizational learning should lead to superior organizational performance(Slater & Narver, 1995). As far as in organization performance, sale growth is consider as a factor for the enhancement of organizational performance. An organization that eagerly learn about their customers and try to find out about their demands, are more successful to target the right market, which also increases levels of sale growth (Slater & Narver, 1995).Last but not the least, customer retention level can also build up linked to organizational learning.

Again targeting customer needs and wants by having precise knowledge on customers which can be achieved by organizational learning , through this, organizations can satisfy their customer and can lead to superior performance (Tippins & Sohi, 2003).

### 2.2. Innovation and performance

Innovation can be an outcome of new knowledge or perhaps combination of some new knowledge(Baker, Grinstein, & Harmancioglu, 2015). Previously innovation is been defined as the development and the process of generating new products and services(Damanpour, 1991). Further researchers suggested that possibility of organizations to achieve better innovation outcomes also depends on its earlier knowledge that they build up over time. The development of knowledge management buildup cooperation among knowledge and innovation as innovation is an organization’s achievement by the investment they put in knowledge and its workers. Similarly, outcomes which the organizations obtain from innovation procedure while developing new products or services can be shared to develop new knowledge(Prajogo & Ahmed, 2006). Different researches indicate that the ability to adequately accomplish knowledge from outside is an important factor for companies which also help to achieve positive innovative outcome(Cohen & Levinthal, 1990). An organization must have the capability of assimilating knowledge and to convert it into new procedure, products and services, to stay innovative (Cepeda-Carrion, Cegarra-Navarro, & Jimenez-Jimenez, 2012).

There are some absolute empirical studies which recommended that over the period of time as the process of innovation unravel itself, it gets more complicated, ceaseless and sometimes in innovation process it is hard to follow steps, often cover two steps forward and then fall backwards by one step (King, 1992; Van de Ven, Angle, & Poole, 1989). Furthermore, fresh ideas and bold methods are implemented by employeesmaybe considered as a step towards innovation in the focal organization (Janssen, 2000). However, it’s not necessary that the fresh idea must be generated by organization’s employees for innovation, the new idea and method may also generated by the outsider employee of the organization ()(Zhou & Shalley, 2011). As far as a worker is willing to generate and implement a new idea, approach, or procedure, they are engaged in innovation (Anderson, De Dreu, & Nijstad, 2004; West & Farr, 1990)

Furthermore exchange of knowledge with outside sources, organizations can obtain new ideas, which can be later mixed up with the present strategies in useful manners which creates more innovative opportunities for an organization (Subramaniam & Youndt, 2005; Yli-Renko, Autio, & Sapienza, 2001; Zaheer & McEvily, 1999)

## 3. Hypotheses

H1: Organizational learning has positive influence on overall performance.

H2: Innovation positively mediates the relationship between organizational learning and performance.

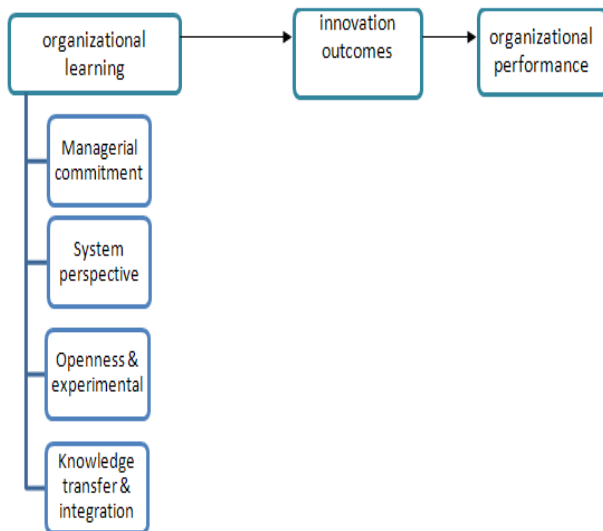
H3: Knowledge Transfer & Integration has positive influence on organizational performance.

H4: Managerial Commitment has positive influence on organizational performance.

H5: Openness and experimentation has positive influence on organizational performance.

H6: System Perspective has positive influence on organizational performance.

### Tested model on the base of this research



## 4. Methodology

### 4.1. Sample and Data Collection

In this study, the total population of textile processing sector for manufacturing of finished goods was taken from Faisalabad, Pakistan. Textile processing sector maintain a connection between the design and fashion requirements of the market and the processes involved in modifying grey fabrics into finished fabrics. Textile wet processing industry is essentially a service industry and may be the most craft oriented within the textile manufacturing in Pakistan. There is an appropriate number of Processing Units (Dyeing, Bleaching, Printing, Finishing, Packing and Packaging of Raw-fabric) are operational.

Approximately 255 Units

- Bleaching Units: 36
- Dyeing Units: 68
- Printing Units: 48
- Finishing and Packaging Units: 103

Majority of the units are of Small size with the exception of few Medium size units. Only 192 units are registered members of All Pakistan Textile Processing Mills association (APTPMA)(<http://www.smeda.org.pk>)

From this sector of textile processing sector, we got the list of 190 textile processing mills. Among these textile mills, we got after mailing efforts, the 62 organizations responded and agreed to participate in this survey (32.6% response rate). There was sent 400 questionnaires through post and emails to 62 mills and requested to distribute to their managers and supervisor of this specific department. Questionnaire was filled through top managers and supervisors. The confirmation was also done by phone and internet facility also. 15 organizations answered through emails and send us questionnaire within one month duration. We send a thankful letter individually to each organization who responded us. During one month, there was collected questionnaire data and after collecting all the data we found 3 questionnaires having missing information. Finally, from 62 organizations, there were useful data of 59 firms (31%) informative for methodology.

### 4.2. Measures

In this research, five point Likert scale was used (strongly disagree=1 to strongly agree=5). There were four items used to measure organizational learning (Jerez-Gómez, Céspedes-Lorente, & Valle-Cabrera, 2005). Meanwhile, for

measuring managerial commitment there were used five items, for system perspective three items, for openness and experimental four items, and for knowledge transfer and integration four items were measured. There were used five items for overall performance (Powell, 1995) while four items were used for innovation outcomes from (Prajojo & Ahmed, 2006)

### 4.3. Analysis

For data analysis, there was used Smart-PLS (version 2) for analysis. According to research model, there were used two stages for analysis that was based on model of reliability and validity (Hair, Ringle, & Sarstedt, 2011). There was analysis of model reliability and validity in the first stage of measurement model assessment. There was assessment of structural model in the second stage that evaluates the significance of relationships and to predict the explained variance.

**Table No 1. Items loadings, composite reliability, and the average variance extracted for the measurement model**

Variables	Question Items	Loadings	AVE	Composite Reliability	R Square
Organizational performance	OP1	0.890	0.762	0.942	0.370
	OP2	0.893			
	OP3	0.858			
	OP4	0.834			
	OP5	0.885			
Knowledge Transfer & Integration	TR1	0.696	0.525	0.764	
	TR2	0.831			
	TR3	0.630			
Managerial Commitment	MC1	0.819	0.571	0.800	
	MC2	0.627			
	MC3	0.806			
Openness & Experimentation	OE1	0.835	0.543	0.776	
	OE2	0.559			
	OE3	0.785			
System Perspective	SP1	0.804	0.569	0.798	
	SP2	0.762			
	SP3	0.693			

### 4.4. Results

There was collected the data of all respondent age, gender, education, job experience, income level and marital status that was mention in the top of questionnaire. Out of 59 textile mills, there were 145 respondents useful information. In which 125 (86%) were male and 20 (14%) were female. There was 61% single and 49% married according to data information. According to respondent information, 57% were in age of 20 to 35 and 30 % were in range of 36 to 50. But 13% were in the age limit of 51 to above. However, in the data there was working experience of 47% from 0 to 5 year and 33 % from 6 to 10 year and the rest of above 11 years. According to questionnaire information, there was 27% with Graduation and 36% with diploma and the rest of Master degree had. According to level of income, 52% were below 35000 Pak rupees and 35% between 36,000 and 60,000 rupees and the rest of above that income level that was not mention in the data.

### 4.5. Measurement Model Assessment

According to table no.1, there was all loadings ranged all items from 0.559 to 0.893 that exactly meet the close off value of minimum 0.50 (Hair et al., 2011). There was justified the verification and validity of the measurement model using AVE, that explained the mean value of square loadings that associated with the construct validity and reliability.

**Table No 2. Discriminant validity of constructs**

	Organizational performance	Innovation	Knowledge Transfer & Integration	Managerial Commitment	Openness & Experimentation	System Perspective
Organizational performance	0.876					
Innovation	0.475	0.726				
Knowledge Transfer & Integration	0.458	0.363	0.758			
Managerial Commitment	0.456	0.477	0.437	0.734		
Openness & Experimentation	0.442	0.455	0.288	0.375	0.747	
System Perspective	0.418	0.406	0.298	0.356	0.358	0.891

Note: Diagonals (in bold) explains the squared root of average variance extracted (AVE)

Other outputs explain the correlations.

Average Variance Extracted was ranged from 0.525 to 0.762 and that surpass the 0.50 beginning (Hair Jr, Hult, Ringle, & Sarstedt, 2013). Finally, the Composite Reliability was ranged from 0.764 to 0.942 that was also surpasses to 0.70(Henseler, Ringle, & Sinkovics, 2009). Thus the results concluded that there is reliability and validity of this measurement model assessment.

Table no.2 explains that the square root of AVE in diagonal values is greater than correlation of constructs (off diagonal values) that proof the sufficiency and validity at construct level (Fornell & Larcker, 1981).

#### 4.6. Structural Model Assessment

According to few researchers, the assessment of structural model apply bootstrapping procedure (re-sampling technique) in which standoff a lot of sub-samples from the real data with replacements and predict models for every sub-sample(Hair Jr et al., 2013). Additionally, also identified that always real observation of data should be lower than Bootstrapping sample(Hair Jr et al., 2013). According to the author, there are suggested 5000 re-samples but due to the limited number of observations we took 400 re-sample. Chin 2010 stated that the excellence of a model is to organize on the base of the clear and justified variance in endogenous construct  $R^2$  plus the significance of every coefficient  $\beta$ . There are significant, moderate and weak respectively the values of 0.66, 0.33 and 0.19 for  $R^2$  values. In this research, we found 0.36 that identifies that our results are moderate.

**Table No 3. Structural Model**

Hypothesis	Direction	Beta value( $\beta$ )	Standard Error	t-value	Outcome
H1	Organizational learning -> Performance	0.247	0.089	2.678	Supported
H2	Innovation-> Performance	0.246	0.084	2.567	Supported
H3	Knowledge Transfer & Integration -> Performance	0.245	0.086	2.571	Supported
H4	Managerial Commitment -> Performance	0.241	0.071	3.431	Supported
H5	Openness & Experimentation -> Performance	0.148	0.097	1.524	Non-Supported
H6	System Perspective -> Performance	0.197	0.075	2.738	Supported

Note:\*\*significant at  $p<0.01$ , \*significant at  $p<0.05$ , ns=not supported, bootstrapping (n=400).

According to Hair et al 2011, for one tailed test the critical values are 1.65 ( $p<0.05$ ) and 2.33( $p<0.01$ ) respectively.

Our results showed that five out of six items were showing significant relationship with organizational performance.

Organizational learning ( $\beta=0.247$ ,  $p<0.01$ ), mediating innovation ( $\beta=0.246$ , $p<0.01$ ), independent variables managerial commitment ( $\beta=0.241$ ,  $p<0.01$ ), knowledge transfer and integration( $\beta=0.245$ ,  $p<0.01$ ), and system perspective ( $\beta=0.197$ ,  $p<0.01$ ), while openness and experimental ( $\beta=0.148$ , $p>0.05$ ) show insignificant relationships.

#### 5. Discussion

The purpose of this study was to analyze the organizational learning influence on overall performance and to examine the mediating effect of innovation between organizational learning and performance. Furthermore, the relationships between managerial commitment, Knowledge transfer and integration, openness and experimentation, and system perspective was analyzed. The results showed that organizational learning ( $t=2.678$ ,  $p<0.01$ ), innovation ( $t=2.567$ ,  $p<0.01$ ), managerial commitment ( $t=3.431$ ,  $p<0.01$ ), knowledge transfer and integration ( $t=2.571$ ,  $p<0.01$ ), and system perspective ( $t = 2.738$ ,  $p<0.01$ ) had significant and positive relationship with organizational performance, whereas openness and experimentation ( $t=1.524$ ,  $p>0.05$ ) had no significant relationship with organizational performance. The results are confront with the outcome from (Munns & Bjeirmi, 1996) which identified that management commitment to continuously support resources is vital to developed the innovative skills of employees.

Meanwhile the results of this research are adequate to give sufficient answers to our study objectives. However,

There are still some weaknesses and limitations in this study. The research is limited to Faisalabad, Pakistan textile processing sectors. While it can be further in food companies, sports, cutlery fields with other regions as well. In addition, this research can be further in service industry and in banking sectors for future research.

#### Conclusion

The main purpose of this research was to explore the relationship between organizational learning and its four dimensions (managerial commitment, systems perspective, knowledge transfer and integration, and openness and experimentation) on organizational performance. The results showed that the hypothesis were slightly valid with three significant T values. The three dimensions managerial

commitment, system perspective and knowledge transfer & integration have significant relationship with performance. However, the fourth dimension openness and experimentation has not significant impact on performance. This research can be further strengthen with the qualitative study through interviews and observations with all these companies.

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## Appendix

### Measurement Items of the research

variables	Items
<b>Managerial Commitment</b>	<ol style="list-style-type: none"> <li>1. The managers frequently involve their staff in important decision making processes</li> <li>2. Employees learning is considered more of an expense than an investment</li> <li>3. My organization's management looks favorably on carrying out changes in any area to adapt to and /or keep ahead of new environmental situations</li> <li>4. Employee learning capability is considered a key factor in my organization</li> <li>5. In my organization, innovative ideas that work, are rewarded</li> </ol>
<b>System Perspective</b>	<ol style="list-style-type: none"> <li>1. All employees have generalized knowledge regarding my organization's objectives</li> <li>2. All parts that made up my organization (department, section, work teams and individual) are all aware of how they contribute to achieving the overall objectives</li> <li>3. All parts that make up my organization are interconnected, working together in an coordinated fashion</li> </ol>
<b>Openness &amp; Experimentation</b>	<ol style="list-style-type: none"> <li>1. My organization promotes experimentation and innovation as a way of improving the work processes</li> <li>2. My organization follows up what other firms in the sector are doing, adopting those practices and techniques it believed to be useful and interesting</li> <li>3. Experiences and ideas provided by external sources (advisors, customers, training firms, etc.) are considered useful instruments for my organization learning.</li> <li>4. Part of my organization culture is that employees can express their opinion and make suggestion regarding the procedures and methods in place for carrying out tasks</li> </ol>
<b>Knowledge Transfer &amp; Integration</b>	<ol style="list-style-type: none"> <li>1. Errors and failure are always discussed and analyzed in my organization, on all levels</li> <li>2. Employees have the chance to talk among themselves about new ideas programs and activities that might be of use to my organization.</li> <li>3. In my organization, teamwork is not the usual way to work.</li> <li>4. My organization has instruments (manual, databases, files, organizational routines, etc.) that allow what has been learnt in the past situations to remain valid, although the employees are no longer the same.</li> </ol>
<b>performance</b>	<ol style="list-style-type: none"> <li>1. Over the past three years, our financial performance has been outstanding.</li> <li>2. Over the past three years, our financial performance has exceeded over competitors</li> <li>3. Over the past three years, our revenue (sales) growth has been outstanding.</li> <li>4. Over the past three years, we have been more profitable than our competitors.</li> <li>5. Over the past three years, our revenue growth rate has exceeded our competitors.</li> </ol>
<b>Innovation</b>	<ol style="list-style-type: none"> <li>1. The technological competitiveness of our company.</li> <li>2. The speed with which we adopt the latest technological innovations in our processes.</li> <li>3. The up datedness or novelty of the technology used in our processes.</li> <li>4. The rate of change in our processes, techniques and technology.</li> </ol>