
Who is Better at Learning? A Comparison of Manufacturing and Service Sectors of Pakistan

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ABSTRACT: *This research has been conducted having twofold purposes; first one is to evaluate the degrees at which manufacturing and service sector's organizations of Pakistan are learning organization—based on Peter M. Senge's five disciplines. Secondly, determining the role of learning facilitators, like Culture, Structure, HRM, MIS, and Leadership in transformation to learning organization. Questionnaire encompassing both learning disciplines and facilitators was used to collect information. Fifty employees were randomly selected from both sectors, representing four companies—two from each sector. A descriptive analytical methodology and Pearson correlation coefficient was used to analyze the data. The results revealed that both sectors are on the way towards learning, but need improvements. There is no significant difference between the learning of manufacturing and service sector organizations. In service sector, learning facilities and learning disciplines have positive relationship, while learning facilitators do not play significant role in manufacturing sector.*

KEYWORDS: Learning Orientation, Learning Facilitators, Learning Disciplines, Manufacturing Sector, Service Sector

We are living in a world that is ever changing. This change is the main force in driving the "Survival of the fittest" theory. This theory clearly states that the best adapted creatures survive and other lag behind. Though this theory is more implemented biologically, yet this also helps us to explain the organizational moves, where best adaptive businesses rise to acme, while less adaptive one doom down.

Change is a phenomenon that is natural and necessary for creatures to exist in this universe. Organizations are also living organisms. They born, live and die. Organizations which survive for long are more adaptive to change. They are more competitive in market and left the competitors behind by taking long strides. Adaptation to change is only possible when an organization is a learning organization; where experiments with new ways of working are appreciated and employees are committed to their work and prepared for the change. But the developing countries, like Pakistan, are facing the dilemma of conventional ways of doing businesses; where culture of "not to learn new" prevails while contemporary ways of doing business is discouraged. But things have been changing since few years. With the reference to some scholars, the learning organization is "an organization skilled at creating, acquiring and transferring knowledge, and at modifying behavior to reflect new knowledge and insight" (Garvin 1985). "Learning organization is an organization where people continually expand their capacity to create the results they truly desire, where new and expansive pattern of thinking are nurtured, where collective aspiration is set free and where people are continually learning to see the whole together" (Senge 1993)

Behavior to change in employees and adaptability to "new" can be accessed by the five disciplines presented by "P. M. Senge" in his book "The fifth discipline". These are "Personal Mastery", "Mental Models", "Shared Vision", "Team Learning" and "Systematic Thinking". (1) Self proficiencies and deepening thought should be continuously clarified through personal mastery. (2) Everyone should bring one selves out from one's own standard of thinking and mental in order to get adaptive to change. (3) There should be a shared vision that grabs the beautiful picture of organization's future. (4) Team learning is the main ingredient to create an environment of working together in the organization. (5) Systematic thinking aligns all these four disciplines mentioned above. There should be systematic change (Senge 1993).

Many research studies have been conducted in the assessment of whether the organizations are learning or not. The first assessment tool was put forth by "Pedler et al". This tool is called "11 characteristics of learning organizations" which was presented as the result of a

research study conducted in some British companies (Moilanen 2001)

This paper focuses on to evaluate whether the organizations of Pakistan are learning or not by using the assessment tool based on Peter Senge's Five Models and learning facilitators presented by Dr. Sahar Moh'd Futa and Dr. Ahmad Ismail Ma'ani in their paper "The Relationship between Learning Facilitators and Transforming into a Learning Organization" (Al-Qutob, Moh'd Futa et al. 2011). For this purpose we select Manufacturing (Al Rehmat Textile Mills, Pepsi Cola International) and Service sector (Al Habib Bank Limited, Orix leasing Pakistan limited) of Pakistan to access the extent of learning practices are applied in these sectors.

LITERATURE REVIEW

"A learning organization is a group of people who have woven a continuous, enhanced capacity to learn into the corporate culture, an organization in which learning processes are analyzed, monitored, developed, and aligned with competitive goals" (Kapp 1999). "In learning organizations new ways of behaving is a product of new knowledge" (Giesecke and McNeil 2004) "Learning Organization is the integration of learning and processes" (Levine 2001). "The process of detecting and correcting errors is called organizational learning" (Argyris 1977). "A learning organization is the one where "learning" is a vital component in its values, visions and goals, as well as in its everyday operations and their assessment" (Moilanen 2001). "Learning can be expressed in a sense that a process of permanent behavioral changes that is result from environmental interactions" (Dulbecco and Garroute 1999). "Learning is a continuous process and a learning organization should be an everlasting state of an organization, because of the continuous need for learning" (Moilanen 2001). "Generative learning takes place when an organization shows its willingness to question long-held suppositions about its customs, mission, strategies, or capabilities" (Senge and Sterman 1992) "An entity learns if, through its processing of information, the range of potential behavior increased" (Huber 1991)

The purpose of learning organizations to have a way of thinking that is interconnected and being competitive, while maintaining the level of innovation. It has the knowledge to full fill customer need by linking resources in a better way and being in a position to cope up with external pressures. It is people oriented to enhance corporate image, improving quality of output at every stage and being adaptive to change. Firms are principally motivated to collaboration for the utilization of their knowledge, firms can produce new knowledge by creating team work spirit in employees (Filiou 2005). Experience plays a vital role in learning process.

Before and after action review should be adapted by every organization to bring behavioral change, learning in a team and to have a shared common vision in the organization. This can collectively take an organization in a position where it can leave its rivals far behind (Darling, Parry et al. 2005). Organizations should stay flexible and develop their human resources to stay well acquainted with the changing environment. The expansion and effectiveness of an organization in long-run can be sustained through competitive advantage which is the result of organizational learning (Kalyar, Rafi et al. 2012). Interaction with the environment encourages employees to adapt learning that would help the organization to perform better (Garvin 1985). Complete processes and efforts are required to bring the organization to a new position. A concrete learning process is necessary to bring about positive changes in the organization (Schein 1996). Permanent change should be emphasized in the organizations i.e. By placing organization from current position to a new position (Lewin and Gold 1999). There are three main characteristics that play a vital role in an organization for learning. These are called building blocks by Garvin. These building blocks are "supportive learning environment, concrete learning process, and leadership that enforced learning". These building blocks can separately be used to assess the learning process of an organization (Garvin, Edmondson et al. 2008).

The service quality can be assessed by examining the employee's dedication that giving the customer advance value and creating the sense of satisfaction in customers. The services sector is stressed downward due to the rapid change, making organizations to rearrange their approach and modernize their structure (Karmarkar 2004). The banking sector of Pakistan is a blend of organizational performance, capability and learning orientation" (Zahid and Ali).

To be a learning organization; leaders might think that sharing clear vision, providing right incentives and training to employees is essential (Garvin, Edmondson et al. 2008). Relationship between organization innovation, learning culture and learning transfers climate, in both public and private organization is examined by the (Bates and Khasawneh 2005). The essential component to be a learning organization is the organic organizational structure (Mis1hra and Bhaskar 2010). The relationship between interpersonal trust and commitment to organization is explained by the mediating variable "learning organization culture" (Song, Kim et al. 2009). The study conducted by (Yang, Wang et al. 2007) revealed that learning organization concept is mostly applied by high-tech firm and financial firms.

METHODOLOGY

In our study, we tried to find out the extent to which organizations are learning oriented and the significant relationship between learning facilitators: Culture, Structure, HRM Strategies, MIS and leadership with five learning disciplines presented by Senge. We also compared the strength of this relationship that exist in manufacturing as well as service sector that transform an organization into learning organization.

Two manufacturing and two service sectors working in Pakistan were selected. Learning organization disciplines and facilitators were measured with the help of a questionnaire. It was consisted on 55 questions. Questionnaire encompass not only learning disciplines and learning facilitators but also some sample characteristic like age, gender, working experience. 31 statement concerning Senge learning disciplines: System Thinking statements (1-5), Mental Models (6-11), Personal Mastery (12-17), Shared Vision (18-25) and Team Learning (26-31). (24) statements dealt with learning facilitators as follows: Culture (32-37), Structure (38-41), HRM Strategies (42-45), MIS (46-49) and leadership (50-55). 5-point Likert scale has been used to record the responses, with values ranging from 1= strongly disagree to 5= strongly agree. 50 employees were randomly selected. 25 from manufacturing and 25 from service sector to collect the responses. All questionnaires were analyzed. Cronbach alpha coefficient has been used to check the reliability of collected data (Table 1). The results show that all the variables were above 60% and accepted according to Sekaran (2004).

The sample characteristics were described with the help of frequency distribution and percentages (Table 2). The arithmetic mean was used to describe respondents degree of acceptance cumulatively in both sector (Table 3) and separate in each sector (Table 4) on the study questions. Correlation Coefficient was used to identify the association between the learning facilitators and the learning organization disciplines in each sector and finally the comparison of learning orientation between manufacturing and service sector.

FINDINGS AND DISCUSSION

The sample characteristics result shows that majority of respondents were male (96%), 98% respondents were in between 20-40 years of age and with working experience of more than five years were 42%.. (Table 2)

In our study, we considered Peter Senge's five disciplines as the predictors of transforming into learning organization. The means and standard deviations of the sample responses regarding to these disciplines are presented in the (Table 3). Average sample responses were above the mean of scale (3). The

results indicates that *Team Learning* was the most significant predictor of transforming into a learning organization, with the mean of (3.9) which represents that the respondents usually prefer to work in teams, working in a team enhance their personal intelligence, they share their thoughts and they like to take suggestion if they work in teams. *Personal Mastery* ranked the second with a mean of (3.58). It has been found that performance result matter employees the most and they enhance their proficiencies privately and their organization also held training workshops for them. *Mental Models* came the third with a mean of (3.48), the fourth was *System Thinking* with a mean of (3.44), the fifth and last was *Shared Vision*, its mean was (3.21). This meant that the last two principles had a relatively lower importance as learning predictors than the other three disciplines ,especially the statements (1,21,23,25) which all had means less than the mean scale (3).

Table (3) also displays the means and standard deviations of the learning facilitators. It is clear that *Culture* had the highest mean (3.64), which means that the respondents perceived their company's culture learning from the experiences of others, mistakes tolerated, policies and procedures understood by everybody. *Management information System* ranked with a mean (3.58),the respondents considered information system available, important for effective communication and basic daily duties...The third facilitator was *Leadership* with the mean of (3.53).*Human Resource Management Systems* ranked fourth with the mean of (3.45). Among the five facilitators *Structure* was the least facilitator with a mean of (3.18). The above mentioned results indicate that *Organizational Structure* and the other factors played a moderate role in building a learning organization.

Arithmetic means of respondents in each sector reveals that there is a slight difference towards learning orientation between both sectors. Although both sector are somehow learning oriented but manufacturing sector is a little bit step forward with the mean of (3.53) than the service sector which has the mean of (3.51). (Table 4)

Correlation coefficient table reveals that facilitators like *Culture* (.774), *HRM* (.755) are maximum correlated with learning disciplines followed by the *Leadership*, *Structure* and *MIS* in service sector. So this means that organizational culture and human resource strategies play a significant role to make service sector's organizations a learning organization. In manufacturing sector, *Culture* (.584) and *Structure* (.430) are somehow correlated with the learning discipline and remaining facilitators are poorly correlated. So this thing shows that facilitators do not play a significant role to make

manufacturing sector's organizations learning oriented and there are factors other than facilitators which make manufacturing sector a learning sector. (Table 5)

CONCLUSIONS AND RECOMMENDATIONS

The point under discussion since few years is that: in response to the influence of global business change, and in the adaptation of "new"; are the organizations of developing countries like Pakistan jumping on the bandwagon of organizational learning? Many research studies have been conducted in Pakistan with different results. Our study in this regard is a significant addition in unearthing the real situation of manufacturing and service sector of Pakistan. The results shows that both sectors are on the way towards learning by following the Peter Senge concept of learning organization and there is no significant difference of learning orientation between both sectors.

But it is also evident that although they are learning but these sector need improvements by applying learning practices and procedure formally to gain maximum results. In service sector, facilitators like *Culture* and *HRM* strategies plays significant role in transforming to learning organization. While in manufacturing sector *Culture* and *Structure* of organization have some impact in transformation to a learning organization. There are also some limitations of our study and these are as follow: first, it was conducted by taking only two sector– the manufacturing and service, using small sample size, hence the results might be less applicable in other organizations of other sectors, and in other countries. Secondly, due to study variables based on only five disciplines and five facilitators were used to support building a learning organization. So it should be recommended to conduct this research in multiple sectors with a large sample size, and to examine whether the same results are attained.

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TABLE 1
CRONBACH ALPHA

| Variables | Cronbach's Alpha |
|---------------------------------------|-------------------------|
| Learning Organization disciplines | .846 |
| Culture | .740 |
| Organization structure | .705 |
| Human resources management Strategies | .653 |
| Management Information systems | .615 |
| Leadership | .822 |

TABLE 2
SAMPLE CHARACTERISTICS

| Variable | Frequency | Percentage% |
|---------------------------|------------------|--------------------|
| Gender | | |
| Male | 48 | 96 |
| Female | 2 | 4 |
| Total | 50 | 100% |
| Age | | |
| 20-25 | 10 | 20 |
| 26-30 | 18 | 36 |
| 31-35 | 13 | 26 |
| 36-40 | 8 | 16 |
| More than 40 | 1 | 2 |
| Total | 50 | 100% |
| Working experience | | |
| Less than 1 year | 3 | 6 |
| 1-5 | 26 | 52 |
| 6-10 | 12 | 24 |
| 11-15 | 8 | 16 |
| More than 15 | 1 | 2 |
| Total | 50 | 100% |

TABLE 3

| No. | | Means | S.D |
|--|--|-------------|---------------|
| Learning Organization Disciplines | | | |
| System Thinking | | | |
| 1 | employees concern with their own work | 2.30 | .886 |
| 2 | employees have deep insight with the whole pattern of work | 3.28 | 1.144 |
| 3 | employees have known the consequences of their decision making on others | 3.48 | .909 |
| 4 | the org is perceived as one part of a larger economic and social system | 4.02 | 1.270 |
| 5 | employees recognize the importance of complementary performance of their department | 4.10 | .763 |
| | General Mean | 3.44 | 0.994 |
| Mental Model | | | |
| 6 | organization experiment frequently with different way of working | 3.36 | .985 |
| 7 | organization have formal process for conducting and evaluating new ideas | 3.46 | 1.054 |
| 8 | new way of working are always be appreciated | 3.70 | 1.093 |
| 9 | employee in this org like interesting and innovative ways of learning | 3.80 | .926 |
| 10 | there is a willingness to break old patterns and to experiment different ways in managing work | 3.56 | 1.013 |
| 11 | Employees are allowed to questions current practices, rules and strategies. | 3.00 | 1.161 |
| | General Mean | 3.48 | 1.038 |
| Personal Mastery | | | |
| 12 | org hold training workshops to enhance the skills of employees | 3.74 | 1.175 |
| 13 | employees enhance their proficiencies privately other than org training program | 3.82 | .774 |
| 14 | employees think that their performance results matter them the most | 4.10 | .678 |
| 15 | Employees fully devote themselves to make a difference. | 3.46 | .813 |
| 16 | Org always working for creating and acquiring new knowledge. | 3.36 | 1.045 |
| 17 | employee at all levels identify their needed skills for future work task | 3.00 | 1.178 |
| | General Mean | 3.58 | 0.94 |
| Shared Vision | | | |
| 18 | managers of this org share the big picture of org future with its employees | 3.10 | 1.147 |
| 19 | org has kind of common identity that binds the people together | 3.46 | 1.182 |
| 20 | Employees work in this organization because they are not told to but they want to. | 3.36 | .827 |
| 21 | manager share the common goal but not share the roadmap that how to achieve the goal clearly | 2.62 | .967 |
| 22 | leader motivate employees to work | 3.64 | .964 |
| 23 | employees only work for the goals that is necessary in the time of crisis | 2.78 | .840 |
| 24 | by sharing the vision, the commitment of employees increases with organization | 3.96 | 1.029 |
| 25 | employees are enabled to participate in strategic management process | 2.74 | .899 |
| | General Mean | 3.21 | 0.9818 |
| Team Learning | | | |
| 26 | employees usually prefer to work in teams rather than working individually | 3.26 | 1.084 |
| 27 | working as a team enhances personal intelligence rather than working individually | 4.24 | .744 |
| 28 | working as a team, would all members considered the factors that undermine learning | 4.02 | .845 |
| 29 | employees share their thoughts regarding different projects with other team members | 3.78 | .910 |
| 30 | employees like to take suggestion from their team members if they chose as a | 4.48 | .580 |

| | | | |
|------------------------------|---|-------------|---------------|
| | team leader | | |
| 31 | teams are recognized and rewarded for their achievement as a team/group | 3.62 | 1.193 |
| | General Mean | 3.9 | 0.8926 |
| Learning Facilitators | | | |
| Culture | | | |
| 32 | learning and knowledge are considered the most important resources in my organization | 3.64 | 1.120 |
| 33 | employees have the opportunity to learn from experiences and from each other | 4.36 | .598 |
| 34 | mistakes are tolerated, and discussed to be avoided in the future | 3.44 | 1.072 |
| 35 | problems in work are viewed as positive growth opportunities | 3.48 | .886 |
| 36 | policies and procedures support learning and are meaningful and understood by every body | 3.58 | .971 |
| 37 | employees are encouraged and provided with the needed resources to become self-directed learners | 3.32 | .935 |
| | General Mean | 3.64 | 0.930 |
| Structure | | | |
| 38 | decisions are delegated to employees in the lower levels than the top management | 2.76 | .981 |
| 39 | Functional area in my company is tightly integrated. | 3.56 | .972 |
| 40 | employees have great deal of freedom in making decision at their work | 2.84 | 1.201 |
| 41 | company structure emphasizes on rapid and open communication | 3.56 | .907 |
| | General Mean | 3.18 | 1.015 |
| HRM | | | |
| 42 | there is a clear written staffing strategies in my company | 3.26 | .876 |
| 43 | development and learning programs depend on the employees actual training needs | 3.88 | .918 |
| 44 | performance personal developments are the main factors considered in the evaluation process | 3.62 | 1.193 |
| 45 | compensation strategies depend on employees' competencies and skills | 3.02 | 1.169 |
| | General Mean | 3.45 | 1.039 |
| MIS | | | |
| 46 | hardware and software are available and accessible to all employees at all levels | 3.56 | 1.033 |
| 47 | learning is facilitated by effective communication systems, both internally and externally | 3.46 | 1.073 |
| 48 | Collecting, analysing and saving info are considered to be important daily duties for all the employees. | 3.76 | .960 |
| 49 | people are enabled to get needed info at any time quickly and easily | 3.52 | .909 |
| | General Mean | 3.58 | 0.99 |
| Leadership | | | |
| 50 | Leaders are seen as having the primary role in keeping the learning process running smoothly throughout the organization. | 3.70 | .839 |
| 51 | Leaders share up to date information with employees about competitors, industry trends, and future direction. | 3.32 | .978 |
| 52 | Leaders always enable their staff to become self-developers and learn how to improve their performance. | 3.52 | .974 |
| 53 | Leaders continually look for opportunities to learn. | 3.60 | .857 |
| 54 | leaders ensure that the company's actions are consistent with its values | 3.84 | .866 |
| 55 | There are formal ongoing education programs to prepare managers for their new roles as teachers, coaches and stewards. | 3.22 | 1.016 |
| | General Mean | 3.53 | 0.921 |

TABLE 4
ARITHMETIC MEANS OF THE SAMPLE RESPONSES

| Learning Organization Discipline | Sectors | |
|---|-----------------------|-----------------|
| | Manufacturing (Means) | Service (Means) |
| System Thinking | 3.42 | 3.46 |
| Mental Model | 3.57 | 3.39 |
| Personal Mastery | 3.49 | 3.67 |
| Shared Vision | 3.20 | 3.22 |
| Team Learning | 3.95 | 3.85 |
| Total | 3.53 | 3.51 |
| Learning Organization Facilitators | | |
| Culture | 3.78 | 3.49 |
| Structure | 3.21 | 3.15 |
| HRM | 3.53 | 3.36 |
| MIS | 3.42 | 3.73 |
| Leadership | 3.45 | 3.61 |
| Total | 3.48 | 3.46 |

TABLE 5

PEARSON CORRELATIONS OF LEARNING ORGANIZATION FACILITATORS AND LEARNING

| Facilitators | Learning (Total) | |
|--------------|----------------------|----------------|
| | Manufacturing Sector | Service Sector |
| Culture | .584 | .774 |
| Structure | .430 | .590 |
| HRM | .274 | .755 |
| MIS | .135 | .463 |
| Leadership | .216 | .673 |