



The Indicators of Organizational Learning and their Correlation with Organizational Innovation Strategies

Asif Iqbal, Assistant Professor of Education, University of Education Lahore, Faisalabad campus asif.iqbal@ue.edu.pk
M. Anees-ul-Husnain Shah, Assistant Professor of Education, University of Education Lahore, D.G. Khan Campus, Punjab Pakistan.draneesulhusnain@ue.edu.pk
Muhammad Shabbir Ali, Assistant Professor of Education, University of Education Lahore, Faisalabad campus, Pakistan. shabbir.alisaleemi@ue.edu.pk
Saba Shahzadi, MPhil Education GC University Faisalabad

Abstract- Organizational learning can examine learning of organization, its output, innovativeness, and effectiveness. The current research paper investigated the indicators of organizational learning and their correlation with organizational innovation strategies. The data were collected using simple random sampling technique of 452 students from different universities. The data were collected using the instrument, organizational learning & innovation survey. The Pearson r test revealed It is revealed that there is a strong positive relationship between organizational learning and organizational innovativeness between science and arts students, as well as significant. It was proved that when the organizational innovativeness increases, organizational learning also increases. It is revealed that there is a strong positive relationship of culture and moderate positive and relationship of process with organizational learning of students which were also significant. It is recommended that training about organisational learning may be provided to learners for better innovation in their studies.

Keywords: Organisational learning, innovativeness, knowledge integration

I. INTRODUCTION

Organizational learning can examine learning of organization, its output, innovativeness, and effectiveness. OL needs such tools that help in acquisition of knowledge, distribution of information, and understanding of organization. Organization require knowledge that has ability to change behaviour which make it strong. Employee working in an organization acquire knowledge in which OL lies, they take approaches, consult each other about challenges, and also enhance their understanding for learning. When people of the organization start generating, storing, regaining, clarifying and applying the information then organization learn. This information improves performance and processes to achieve life-long goals and as a result it make the organization successful. Working environment become effective (positive or negative) when a person try to learn or novel with organization (Abel, 2008; Aydin&Ceylan, 2009; Sunassee&Haumant, 2004; Van der Sluis, 2004).

Knowledge is Created and Transferred in Organizations

Some researchers have helped in generating and simplify the information (Allee, 1997; Nonaka, 1994; Nonaka & Takeuchi, 1995; O'Dell, Grayson, &Essaides, 1998; Sverlinger, 2000; Szulanski, 2000).

There are four models of knowledge creation and transfer.

1. Socialization:

Implicit knowledge will be conveyed with the help of social contacts i.e. connections such as discussion, experiences, preparation, repetition, opinion and so on amongst the people of the organization.

2. Externalization:

Implicit information is changed in explicit information as of ideas, comparisons, features, assumptions, explanations and representations. This happens in organizations when they enunciate their rules & regulations and formally set its target (Martín de Castro, 2007).

3. Combination:

In this process explicit information is derived from explicit information. In this way actual explicit information is blended, synchronized, rearranged, and made to established fresh explicit information. This is achieved with the help of broadcasting such as pamphlets, conferences, storytelling and electronic communications i.e. Yahoo Messenger, Skype, E-mail and phone conversations (Alavi&Leidner, 2001).

4. Internalization:

This is done by shifting explicit information into implicit information. In this way, conceptual ideas change in solid ideas and lastly, absorbed as an essential value.

These four actions reflect that the knowledge transfer is effected when the user gains the same idea of the concept as the knower.

Organizational Learning (OL) and Organizational Learning Capability (OLC)

To achieve better results, the appreciation of outside activities is very important. A precise knowledge is required to use these activities like creative, understanding, and decision making power etc. individual learning, organizational learning and knowledge are base of abilities to recognize. Learning is permanent change in behaviour because of repetition and experience that help in performing task better and faster. Learning has been known as the source of better outcome. Individual learning is the base of organizational learning and necessary for organization, organizational learning and each & every person in organization. Organizational understanding is changeable. It is a cyclic process in which individual level, group level and organization level included. By the help of this cyclic process, organization just like individuals, create and maintain system that not only affect their member but also deliver them to others by the way of organization's traditions. Organizational learning has broad scope that has been examined by the help of discipline. Organizational learning i.e. collection of accomplishments in organization that help in individual learning and constantly reconditioned itself. It is a process of obtaining, arranging, getting together and developing information within organization. The method of learning in organization include basic factors which enhances the knowledge that comprises of organized data, comparison of the organized data , progressing and collecting info on products, method & facilities. If we assume learning as an ability from the resource based thinking, require different advantages from learning. They learn in valuable, and unmatched method. In organization, establishment of learning require literature that basically emphasis on the development. OLC is of great importance in literature. It basically describe the physical and non-physical means that organization uses to achieve better results. OLC concept put it emphasis on the development of organizational knowledge to execute the assimilation of individuality at the organizational rank. Wherefore, intelligence need care in demand.

Individual learning

There are variety of views about organizational learning, and there is no single definition on it. Organizational members' their interaction, sharing experiences and knowledge, result in the form of organizational learning. This collective knowledge is higher in value than the knowledge of a single person's abilities. That's why individual learning is essential, but not a condition for organizational learning to occur. This information circulated through the organization's members, and, is shared and understood in an organized way. Strictly speaking individual and organizational learning are different things; individual learning is a cognitive process, and organizational learning is a social process (Tetrick& Da Silva, 2003).

Some scholars gave their point of views about organizational learning. They said that, it is a special arrangement of learning established in organizations through scholars. They can be interrelated to continuous organizational changes. Anthropological studies confirm that few learned person are capable of transferring that knowledge to all other persons. This happens to be associated when the person thinks to start a new. Group and organizational learning occurs through a tool i.e. individual learning. Although, it is not adequate for group learning. At higher levels of analysis, learning should be effective. Individuals required knowledge that would have to be delimited in an authentic source so that it is available to others as well. Individuals acquired knowledge and that knowledge could be inserted in a task-task network or member-task network (Cook & Yanow, 1995; Czarniawska, 2003).

Organizational learning: A Social Phenomenon

For the promotion of organizational learning, training and development programmes are required. These processes increase the central knowledge of the organization. Personality's essentials to the organization try to give the latest knowledge of their speciality to other persons working with them. The study of the contributions need a little attention. Different organization's members provide knowledge to organizational learning. Organizational learning ways are the elements of the organization such as the individuals, leadership, board of direction, associations, or consultants (Antal, & Krebsbach-Gnath, 2003; Friedman, 2003).

Levels of organizational learning

Organizational learning at different stages is a novel concept. Garvin (1998) postulated that organizational learning can be done at three levels. The first stage is called phase of cognition. Members of that institute are given new concepts resulting in increment of their knowledge and start experiencing unusual manner. The second stage is called behavioural. Members of organization adapt these new concepts thereby changing their attitude. The third stage is performance improvement. As a result of stage first and second stage outcome of organizational learning results in expected increase in the quality. In

fact, organizational learning is acquired in four steps which may not essentially be acquired one after the other (Pawlowsky, 2003).

1. Identification of information pertaining to learning and establishment of knowledgeable data or both (e.g. Nonaka's "Socialization", Nonaka, 1994).
2. Transfer of knowledge from one person to the others or vice versa (similar to Pawlowsky's prior reference) this stage and the stage of "Externalisation" are same as of the Nonaka and Takeuchi (1995).
3. Integration of knowledge into existing knowledgeable institutional level and personal level into regulations from where all others can change their behaviour (this stage and the stage of "Combination" are same as of the Nonaka and Takeuchi (1995).
4. Transformation of the above mentioned acquired knowledge into regular routines of that organization so that behaviour of the working people can be changed (the growth and progress to a novel leadership etiquettes or new commodities and benefits).

Learning Organization

I define learning in organizations as a step by step method by which elements specifically and collectively require knowledge by working and thinking together. Knowledge is required and actionable by one. In turn, individual knowledge is participated joined increased examined and applicable through particulars to become group and community knowledge. So, knowledge is acquired, retained & transferred, and reproduced in a systematic manner e.g. projects and protocols, so it becomes an integral component of an organizational atmosphere, or a set of ideas or rules which effect on groups and individuals learning program. These set of regulations continue to evolve through a particular personalized and combined collective learning capability. The learning organization is defined as organizations with full affect and outcome of organizational learning. The learning organization (Garvin, 1998) should be capable to invoke or yield, to elaborate & unfold, and to convey knowledge along with acclimatize its comportment realizing the recently availed information and sagaciousness. With the above mentioned qualities the organization should be competent enough to accomplish five main functions:

1. **Systematic problem solving** – this approach works by using the philosophy behind learning with development of a quality procedure or technique. Through this activity there is continuous hunt for incapacitating problems and their answers.
2. **Experimentation** – methodical course of actions to substantiate, contradict or demonstrate the authenticity of an assumption or concession. This involves the methodical exploration and endorsement/justification of new knowledge. The use of a systematic procedure is mandatory and problem solving is going on alongside. However, experimentation is generally inspired by clinging to the chances not by already faced challenges.
3. **Learn from past experiences** – this activity take place when organizations re-examine carefully their faults and success, getting them logically, and reporting the contributing lessons, so that it allows for organizational members to gain them in a free and simple way.

Organizational Innovativeness

In relations of organizational innovativeness, the literature suggests a complete method, coverage augmentation in the concocting innovativeness. So, it is believed that organizational innovativeness is an organization's whole inventive competency to introduce different methods for learners, starting of different subjects by combine efforts of staff with advanced activities as well as practice. This description covers expanded, expended and simultaneously generated angles of innovation operations & advances feigned within the organizations. It deliberately considers the role of equally official i.e. yields, facilities & routes and the administration i.e. work-out plans, define course of actions and social innovativeness of organizations (Wang & Ahmed, 2004).

Emphasis on organizational innovativeness comprises of a huge difference between regions in which innovativeness is shaped. Study of systematic activities since previous decades as reviewed by Crossan and Apaydin (2010). They prove the concept of innovation that it is a difficult, multi -purpose and vague concept. Conversely, it appears as a perilous issue in development of better results. Unluckily, the indescribability of innovativeness is the results of expansion for the hypothetical and investigation methodologies. Additionally, it's complicated and uncertainty cause of mechanical difficulties (Manoochehri, 2010) and form complicated selection measurement. Innovation represents the application of new better things (good or service), a new institutional methodology, or a new way of organizational learning practices, workplace organization or external relations". With the help of this statement, the under said types of innovation can be concluded:

•**Product & service innovation** is new and considerably improved with respect to its characteristics and uses in future, containing applicable developments in practical conditions, constituents and tools, assimilated software, user kindness and other practical features.

- **Process innovation** is the application of a new or significantly developed construction or transfer process, containing essential changes in skills, apparatus and software.
- **Social adjustment innovation** the application of a new method including necessary changes in product scheme, product location, product advancement.

Vision

Learners make personal efforts to manage their learning. They trace out learning parameters which are clear to them; find out jobs concerning these parameters; and, use level of intelligence to know how much they gain their goal. Students who have a significant benchmark and also direction to achieve their goals, gain success in their life. Committed learners have certain desires related to their education i.e. problem solving and understanding. Such type of students are inspired by their learning. Learning and ability to solve problems gradually improved by practice. This tendency for learning how to learn contains assembling effective knowledge and assets, even though this might be challenging and varying material. To solve a problem, they exchange their information and make association in difficult situations. Gathering and sharing of information is necessary in learning. They are capable to examine their selves and also their views as other people examine them. They might express their thoughts to other people and open minded in commitments with unlike thinking. They are able to recognize the expertise of others and self.

Tasks

In institutions, different types of tasks are presented. These tasks are different in nature and need a lot of time. To achieve these tasks, students should increase their efforts. A task must be achieved when it takes place in an accurate situation. These are just like a routine life challenges i.e. based on lives of people, need elaboration. This type of effort takes place in small groups inside institutions or outside institutions. Difficult tasks need joint efforts based on problem solving method in education.

Assessment

Learners collect information and made parameters to achieve their goal. Benchmark evaluation and assessment are designed with the help of students. The main aim of assessment is to increase the level of learning. In this sense, assessment may achieve goal, characterize skill, continuous effort, and supply an environment to perform better. The standard to do work should be well defined and according to the learner's abilities. In spite of these the criteria for learning and understanding is necessary in learning. Significant features of learning should be the part of assessment. It should covers the aspects like individual effort, combine effort, behaviours and understanding, parameters of evaluating, well defined tasks which emphasizes the interaction and real world applications. Multiple methods (e.g., studies, records, papers, graphics, spoken demonstrations, models, collections, and other parameters of learning) are required to achieve standard with the passage of time. Standard that are set by the teacher should be known to parents and students so that they can easily know their performance individually and combined.

Objectives of the Study

The objectives of the study were as follows:

1. To trace out the relationship between organizational learning and innovativeness of science and arts students at university level.
2. To find out the relationship between organizational learning and innovativeness of urban and rural students at university level.
3. To explore the relationship of organizational learning with innovative culture and process at university level.

Null Hypotheses

Following null hypotheses were formulated to achieve the desired objectives.

Ho1: There is no significant relationship between organizational learning and innovativeness of science and arts students at university level.

Ho2: There is no significant relationship between organizational learning and innovativeness of urban and rural students at university level.

Ho3: There is no significant relationship of organizational learning with innovative culture and process at university level.

II. RESEARCH METHODOLOGY

This part of the research deals with methodology and procedure of the study. It is an elaboration of methodology and procedure used in this chapter. The population, sampling procedure, sample, hypotheses, variables, instruments, validation, pilot testing, data collection, data analysis through statistical techniques, and permission to conduct the research was also taken.

Research Design

This study was descriptive in nature. A survey was conducted to explore the relationship between organizational learning and organizational innovativeness in the results of the teachers working in different institutions.

Population

Population of the study consisted of:

1. All public sector universities in Faisalabad.
2. All the students enrolled in B.S., M.Ed., B.A/B.Sc., and M.A/M.Sc. programmes in those universities.

Sample of the Study

Random sample technique was used to collect the data. Four hundred and fifty-two (452) students were randomly selected from all the four universities. From which 201 were male and 251 were female. The number of respondents from B.S., M.Ed., Graduation and master level were 72, 81, 178, and 121 respectively. Semester wise distribution of data were 52, 58, 42, 63, 53, 53, 52, and 79 from 1st to 8th semesters respectively. Students from science were 249 and from Arts were 203. Two hundred and fifty-six (256) students from urban areas and 196 from rural areas were randomly selected.

Instrument of the Study

The instrument, Organizational Learning & Innovation Survey (Likert type scale) was developed by the researchers in which forty-five (45) were divided into five (5) dimensions of organizational learning and five (5) dimensions of organizational innovativeness. The factors of Organizational Learning are: Organizational Learning 5 items; Management Commitment 5 items; Systematically Perspective 4 items; Outdoor & Experimentation 4 items; and Transfer & Integration of Knowledge 5 items. The factors of Organizational Innovativeness are Culture 4 items; Process 3 items; Product and Services 6 items; Academic learning and innovation 5 items; and Social adjustment 4 items.

Pilot Testing of the Instrument

As the instrument was developed by the researchers their selves, therefore it was validated by a pilot testing upon the limited population. The instrument was developed in English language keeping in view the literature review and different questionnaires already used for different researchers about learning and innovation.

Table: 1
Item Breakup of Organizational Learning

S. No	Factors of the scale	Item Number
1	Organizational Learning	1, 2, 7, 8, 19
2	Management Commitment	6, 10, 12, 15, 18
3	Systematically Perspective	13, 14, 20, 28
4	Outdoor and Experimentation	5, 9, 11, 38
5	Transfer and Integration of Knowledge	3, 4, 16, 17, 25

The table 1 demonstrate the five (5) factors of OL, which have twenty-three (23) items. They were further divided into Organizational Learning 5 items; Management Commitment 5 items; Systematically Perspective 4 items; Outdoor & Experimentation 4 items; and Transfer & Integration of Knowledge 5 items.

III. DATA ANALYSIS

Table: 2
Number of Respondents with respect to Semester

S. No	Semester	Frequency	Percent
1	First	52	11.5
2	Second	58	12.8
3	Third	42	9.3
4	Forth	63	13.9
5	Fifth	53	11.7
6	Sixth	53	11.7

7	Seventh	52	11.5
8	Eighth	79	17.5
Total		452	100.0

Table 2 denotes that number of respondents belong to first semester were 52, second 58, third 42, fourth 63, fifth 53, sixth 53, seventh 52, and eighth 79. Their percentages were 11.5%, 12.8%, 9.3%, 13.9%, 11.7%, 11.7%, 11.5%, and 17.5% respectively.

Table: 3
Number of Respondents with respect to Subject

S. No	Subject	Frequency	Percent
1	Science	249	55.1
2	Arts	203	44.9
Total		452	100.0

Table 3 signifies that number of respondents belong to science were 278 and of arts were 174. Their percentages were 61.5% and 38.5% respectively.

Ho1: There is no significant relationship between organizational learning and innovativeness of science and arts students at university level.

Table: 4
Relationship of Organizational Learning with Organizational Innovativeness Subject Wise

Subject	Organizational Innovativeness	P-value
Organizational Learning (science)	.762	.000**
Organizational Learning (arts)	.764	.000**

**P<0.01 and 0.05

Pearson r shows the relationship between organizational learning and organizational innovativeness of science and arts students. It is revealed that there is a strong positive relationship between organizational learning and organizational innovativeness ($r = .762$ and $r = .764$, $P < 0.01$ & 0.05) of science and arts students, as well as significant. So the null hypothesis that there is no significant relationship between organizational learning and organizational innovativeness of science and arts students at university level was rejected. It was illustrated that when the organizational innovativeness increases, organizational learning also increases. The results of Pearson "r" show the strong positive relationships between organizational learning and organizational innovativeness science and arts students, as well as significant.

Ho2: There is no significant relationship between organizational learning and innovativeness of urban and rural students at university level.

Table: 5
Relationship of Organizational Learning with Organizational Innovativeness Location Wise

Location	Organizational Innovativeness	P-value
Organizational Learning (urban)	.773	.000**
Organizational Learning (rural)	.742	.000**

**P<0.01 and 0.05

The relationship between organizational learning and organizational innovativeness of urban and rural students. It is revealed from the results that there is a strong positive relationship between organizational learning and organizational innovativeness ($r = .773$ and $r = .742$, $P < 0.01$ & 0.05) of urban and rural students, as well as significant. So the null hypothesis that there is no significant relationship between organizational learning and organizational innovativeness of urban and rural students at university level was rejected. It was proved that when the organizational innovativeness increases, organizational learning also increases. The results of Pearson "r" show the strong positive relationships between organizational learning and organizational innovativeness of urban and rural students, which was also significant.

Ho3: There is no significant relationship of organizational learning with innovative culture and process at university level.

Table: 6
Relationship of Organizational Learning with Innovative Culture and Process

	Organizational Learning	P-value
Innovative Culture	.529	.000**
Innovative Process	.491	.000**

**P<0.01 and 0.05

Correlation was conducted to see the relationship of innovative culture and process with organizational learning. It is revealed that there is a strong positive relationship of culture and moderate positive and relationship of process with organizational learning of students ($r = .529$ and $r = .491$, $P < 0.01$ & 0.05), which were also significant. So the null hypothesis that there is no significant relationship of organizational learning with innovative culture and process at university level was rejected. It is concluded that when the innovation in culture and process increases, the organizational learning of the students also increases. The results of Pearson "r" show the strong positive relationship of culture and moderately positive significant relationship of process with organizational learning of the students, which was also significant.

IV. CONCLUSIONS AND DISCUSSION

Pearson r shows the relationship between organizational learning and organizational innovativeness of science and arts students. It is revealed that there is a strong positive relationship between organizational learning and organizational innovativeness between science and arts students, as well as significant. It was illustrated that when the organizational innovativeness increases, organizational learning also increases. The results of Pearson "r" show the strong positive relationships between organizational learning and organizational innovativeness science and arts students, as well as significant.

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