

**Impact of Knowledge Management System on Organizational
Performance with Mediating Effect of Innovation**

By

**Muhammad Arif
(PM083012)**

**DOCTOR OF PHILOSOPHY IN MANAGEMENT SCIENCES
(HUMAN RESOURCE MANAGEMENT)**



**DEPARTMENT OF MANAGEMENT & SOCIAL SCIENCES
MOHAMMAD ALI JINNAH UNIVERSITY
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By
Muhammad Arif
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**DEPARTMENT OF MANAGEMENT & SOCIAL SCIENCES
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DEDICATION

To my praiseworthy mother

'Your prayers are what I need more than any thing else in my life'

To my charismatic late father

'The person whom I love the most, May his soul rest in peace!'

To my beloved brother, Nisar Bhai Jan

You are the spark of my life

To my ever sweet supervisor

I can never forget you till my last breath

May your soul rest in peace!

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2. Zubair Aslam Marwat , M. Arif Khattak and Khadim jan (Research Paper, IJCRB, November 2009 , Vol 1, No 7) "Impact of selection, training, performance appraisal and compensation on employee performance"
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ABREVIATIONS

No.	Phrase	Abbreviation
01	Combinative Capabilities	CC
02	Trust	T
03	Learning Culture	LC
04	Knowledge Management Practices	KMP
05	Leadership	L
06	Culture	C
07	Technology	TEC
08	Competency Development	CD
09	Knowledge Integration Capabilities	KIC
10	Innovation	I
11	Organizational Performance	OP

ABSTRACT

Knowledge Management (KM) plays a vital role in sustaining a firm's competitiveness; the strategies and capabilities of employee are instrumental in enhancement of organizational performance. Learning organizations possess capacity to cope with the challenging need of innovative practices. However, impact of knowledge management (KM) implementation on organizational performance still remains a composite matter that needs further exploration. The dependency on technological innovation has improved the diversities, but the relevance is the human and his/her knowledge. Companies have to update their knowledge and change their diversities, so as, to effectively use their resources and maintain them as well. In a 'learning' organization, control remains cautious to picture problems and to present solutions to overcome the challenges.

This study endeavors to find out how Knowledge-Management practices and Knowledge-Integration capacity enhance the innovative capabilities of the organization. This research also ferrets out as to how innovative methods improve the company's efficiency. It analyzes the impact of knowledge-integration capacity and knowledge-management methods on advancement and examines the impact of advancement on a company's efficiency. It also analyzes the mediating impact of innovation between knowledge integration capacity and knowledge management methods on the company's performance.

A sample of this study consists of 500 employees of corporate sector in Islamabad area. Of those, 423 respondents returned the questionnaire administered through field survey; thereby achieving success rate as 84.6%. Random sampling was used for the survey. For the purpose of analysis valid and comprehensive questionnaire was used ensuring its internal consistency and

validity. Items are analysed in such a way that shows maximum variance extracted from the variables and calculation of linear combination was made, finally resulting to uncorrelated factors. SPSS results are further authenticated using AMOS which authenticated the model in term of reliability and validated it with relations and their strength, values and variances. Result reveals that knowledge integrated capacity report a 30% whereas knowledge management practices signify effect as 87 % in organizational performance. Similarly, knowledge integrated capacity report 32% and knowledge management practices signify 73% in amplification in the innovation in the organizations. Results also indicate that innovation in an organization has significant impact on organizational performance and accounts for 65% strengthening of the organization performance. Through Mediation, the impact of KIC and KMP is 20 %and 40 % respectively. The study suggests that knowledge integrated capacity and knowledge management practices are instrumental in effective utilization of core competencies to achieve desired goals of organizational performance. Innovation has the functionality to develop what the company to adapt to remain viable entity in competitive environment: therefore, knowledgeable workers would remain strength in innovative practices, enabling organization to demonstrate growth.

Keywords: knowledge, integration, innovation, technology, culture and organizational performance

Chapter 1

INTRODUCTION

1.1 Operational Background

'Knowledge Management' has become a very essential concept in the industrial world. In many companies, investment in Knowledge Management has taken top precedence. It is the common view that the implementation of Knowledge Management is correlated with the academic capital of a company, which in turn influences the financial performance and innovative capability (Wong, 2005). However, earlier studies about how to develop Knowledge Management capacity are still contentious (Birkinshaw *et al.*, 2002).

Firstly, distinctiveness of knowledge from numerous viewpoints has been classified. Conversely, no consistent set of descriptions has been recognized. For example, Polanyi (1962) categorizes 'knowledge' into two classes: implicit and explicit. Precise knowledge can be categorized and collected in the shape of solid figures, handbooks, organized events or general values, while inferred knowledge is the result of human practice and is merely exposed through its application. Spender (1996) suggests that knowledge can only be collected or acquired by persons of a community. The combined knowledge in general is a combination of the collective hard work of numerous people having diverse but corresponding skills (Grant, 1995).

Secondly, several studies have shown that Knowledge Management is an industrial development containing several associated features such as organizational learning, knowledge integration, dissemination of knowledge and others (Wilkens *et al.*, 2004; Gold *et al.*, 2001; Sarvary, 1999; Nevis *et al.*, 1995). Most of the earlier lessons show that the activities of Knowledge Management will augment knowledge-management capacity (Lin &

Tseng, 2005; Lee & Hong, 2002). For example, organizational learning and knowledge management integration will affect knowledge-management capacity. Knowledge dissemination will influence the innovative capability of a firm. However, the relationship between these variables was ignored in earlier studies and thus necessitates additional investigation.

Thirdly, earlier studies conclude that Knowledge Management is strictly linked to knowledge-management approaches and objectives (Davenport & Prusak, 1997). For example, Zack (1999a) recommends that corporations use inside knowledge strategies, knowledge-oriented conventional, and unlimited innovators (companies that strictly incorporate knowledge investigation and development, regardless of organizational restrictions), and the most antagonistic strategy is knowledge. Although organizational learning and Knowledge Management have generated much attention, comparatively there are fewer studies that have examined the relative effects of knowledge management strategy and organizational learning on Knowledge Management. Thus, further studies on the association between these features are necessary to be made.

Fourthly, theory based on knowledge relating to knowledge integration and knowledge characteristics are widely used by the organization (Wang et al., 2004; Huang and Newell, 2003; Bonache & Brewster, 2001; McEvily & Chakravarthy, 2002) while some firms, to some extent, use disseminated information organisms (Grant, 1996b; Blackler *et al.*, 2000). In order to obtain a durable competitive advantage, the company should be able to incorporate dissimilar types of knowledge in an efficient manner. Together with other offers, Grant (1996a) suggested that diverse kinds of knowledge need different types of integration. Through the knowledge integration development within a corporation, a firm can employ individuals with particular knowledge which, openly or circuitously, are related to the firm's knowledge capability (Huang & Newell, 2003). In other terms, according to the

distinctiveness of knowledge, organizations with an excellent knowledge integration development system will increase their knowledge-management capability. Equally, Knowledge Management has a prominent role in investigating the relation between knowledge integration and knowledge management capability and it still formed little attention.

Fifthly, many studies on innovation have highlighted the degree to which innovation practice includes the mixing of peripheral knowledge within the accessible institutions (Wu et al., 2002; Leonard-Barton, 1995; Cohen & Levinthal, 1990; Powell, 1998). For example, Mullen and Lyles (1993) recommend that permanent organizational learning processes will ameliorate the efficiency and competence of an organization's innovation. An improvement in innovation will strengthen the organization's spirited ability and competitive benefit, as knowledge is the input factor that links the organizational learning and innovative capability of the organization. Organizations must guarantee constant organizational learning and develop a high level, internal knowledge-management system. However, it appears that scholars have infrequently discussed the relationship between wide-ranging models of knowledge integration, knowledge-management approaches, organizational learning, knowledge-management capability and innovative capabilities.

Organizational Learning is difficult to attain, particularly for the exchange of explicit knowledge. The key rudiments that facilitate learning are the means of communication that motivate individuals to make use of "investigation" rather than dependence on unreachable tacit knowledge (Senge, 1990; Anderson & Boocock, 2002; Probst & Buchel, 1997; Marquardt, 1996; Nonaka *et al.*, 2000). Some characteristics of knowledge play a central role in creating the knowledge development (Spender, 1996; Nonaka & Takeuchi, 1995; Nieto & Perez-Cano, 2004). If knowledge can be obtained unambiguously, as in language, common sense, or in their perception of the subject area, it is probably a more effective stake

in the company's use of, and in the transformation of, knowledge. In addition, Therin (2002) argued that the more intricately implied and complete that the knowledge is, the more difficult it will be to obtain and utilize it. Thus, the lower the intricacy is of the knowledge or the privileged the explicitness and clarity, the more companies will improve their knowledge-management capability.

The integration of recently developed components into the existing system of knowledge, by using modularity of knowledge, becomes easier (Garyda & Kumaraswamy, 1995). It appears that modular knowledge is a practice that may be useful way to apply an effective and subtle combination of Knowledge Management into the firm. Additionally, precise knowledge also denotes the integration of knowledge. Huber (2001) proposed that understanding the implicit knowledge is sometimes difficult for the owner to explicate and converse. In cases where a particular piece of knowledge in the organization is made simple to become common knowledge (in order to make an announcement easier in the organization), it is predictable that important information will be misplaced (Grant, 1996a). The higher-degree complexity of knowledge leads to more complexity faced by companies when attempting to integrate that knowledge.

Organizational Learning tricks provide a better appreciation of the entire firm (Chiva-Gomez, 2003; Hung et al., 2005) and generate open communication with minimal defense (Nonaka & Takeuchi, 1995). Wijnhoven (2001) recommends that Organizational Learning needs people who can donate to the organizational knowledge base. Through Organizational Learning, workers have more opportunities to cooperate with each other, so that the ability of Knowledge Management for the acquisition, transformation, and distribution of presented knowledge can be obtained. Gnyawali and Stewart (2003) further conclude that operational training in the organization strengthens the presented knowledge and the allocation of knowledge throughout the organization. In addition, Drucker (1993) studied that learning

organizations existing in an energetic atmosphere will improve the quantity and quality of information transmission and the gathering of knowledge. Cohen and Levinthal (1990) suggest that the company's ability to learn will improve both the creation and application of knowledge.

The organizational structure should have access to and integration of knowledge transfer between associates of the organization (Grant, 1996b). Integration of knowledge helps organizations to merge inside and outside communications and knowledge through the combination of them. The Grant (1996b) study suggests that incorporated knowledge is the key for the organization to create knowledge-management capability. He assumes that the majority of managerial skills necessitate the incorporation of knowledge from different people. Moreover, Huang and Newell (2003) demonstrated that the competitiveness of companies depends on their ability to incorporate knowledge through an efficient approach.

Badii and Sharif (2003) recommend that with no efficient amalgamation of knowledge, companies need more time, resources and information security, thus obstructing innovation. The wider that the body of knowledge is integrated, greater will be the diversity of the people involved (Grant, 1996b). Diversity resulting from the integration of knowledge and information helps people in the firm to correspond with each other and generates a new body of thought. In addition, Grant (1996b) suggests that the company is able to re-configure existing knowledge to promote continuous innovation.

When organizations create value by providing innovation, they must be prepared to have enough time to think of their employees and make appropriate ideas for sustaining the innovations that are needed for the development of the organization. Employing valuable practices, as well as the transformation and combination of existing knowledge are the main ways in which new knowledge can be introduced (Egbu 2006).

Combinative capabilities allow firms to generate new permutations of existing knowledge to be accessed and use multiple sources, kinds, and structures of knowledge in people and procedures (Kogut and Zander, 1992). Methods and practices maximize the combination of knowledge that governs the legal form, changing the efficiency, range and suppleness of integration (de Boer et al., 1999). According to (Szulanski, 1996; Moran and Ghoshal, 1996), the integration of different types of knowledge can be accomplished by communication convenience, contribution and participation. The direction (of expertise) interaction contributes to the plan of procedure influence (coordination and socialization skills) of both types of interaction (Grant, 1996a), thus contributing to the success of the integration (Szulanski, 1996). Therefore, the different types and structures of knowledge affect the application of the combinative capabilities to meet the requirements of integration.

The development of a climate of education and participation: Mullen and Lyles (1993) suggest that permanent organizational learning will further the competence and efficiency of the organization's innovation process (Ju *et al.*, 2006). A learning culture supports institutions to subject not only the information they practice, but also whether their approach to innovation is pertinent. Organizational characteristics, such as rotation, departmental teams and the delegation of responsibilities contribute to adaptive learning and promote innovation in the organization (Lundvall & Nielsen 2007; Nederhof *et al.*, 2002). It also ensures that the partners are integrated in a chain and they continuously learn (within the organization) in order to promote innovation and competence in the organization. A participatory type of culture which is smooth, has open communication channels, promotes contribution and attachment in decision-making, augments the distribution of information, is advantageous to a superior knowledge-management practice and encourages innovation (Rezgui 2007).

1.2 Problem Statement

In a learning organization, management remains vigilant in visualizing problems and to present solutions to overcome any lapses. The organization develops strategies to improve the necessary skills that are essential for the growth of the entity. Similarly, variations in the demographic characteristics have an impact on the desired results for innovation and organizational performance. It is, therefore, imperative to ascertain the effect of demographic characteristics on the knowledge-management system, innovation and performance of the organization. This study endeavors to determine how knowledge-management practices and knowledge-integration capacity enhance the innovative capabilities of the organization. This study also ferrets out how innovative practices improve the organization's performance.

1.3 Research Questions:

- What is the impact of knowledge-integrated capacity on innovation?
- What is the impact of knowledge-management practice on innovation?
- How does innovation help to enhance organizational performance?
- What is the impact of knowledge-integrated capacity on organizational performance if innovation mediates among variables?
- What is the impact of knowledge-management practices on organizational performance if innovation mediates among variables?
- What is the overall impact of knowledge-integrated capacity on organizational performance?
- What is the cumulative impact of knowledge-management practices on organizational performance?

1.4 The Objectives of the Study

The objectives of the study are:

1. To analyze the effect of knowledge-integration capacity and knowledge-management practices on innovation.
2. To examine the effect of innovation on organizational performance.
3. To analyze the mediating effect of innovation, between knowledge-integration capacity and organizational performance.
4. To study the mediating effect of innovation, between knowledge-management practices and organizational performance.
5. To ascertain the effects of demographic characteristic segment practice, and encourage innovation (Rezgui 2007).

1.5 The Rationale of the Study

It is essential to determine the major factors of contribution in organizational performance and to meet the demand of diversified functions of products and practices. It is, therefore, vital to find those essential factors, analyze their outcome and put the same into practice for achieving the results of the organization's growth through innovative practices. Recent survey data shows that while many organizations have implemented knowledge management, not many of them are flourishing in their knowledge-management practices.

The study of Kloot (1997) demonstrated the effects of knowledge-management strategies and knowledge-management capabilities on organizational learning. Kloot (1997) stated that organizational learning is a practice by which organizations can perceive problems and present a set of solutions to the problems. Knowledge gleaned from internal and external

training events has turned into a tactical practice that makes possible the acquisition of and use of existing and new knowledge in the organizations (Pablos, 2002). Diverse knowledge bases and dissimilar strategies in the expansion and exploitation of knowledge are directly related to differences in productivity between organizations (Bierly & Chakrabarti, 1996). While organizations acknowledge the significance of producing, administering and disseminating knowledge across the company, most of them are unable to make an effective Knowledge-Management strategy (Chase, 1997). As such, this is a big problem for companies, as the appropriate strategy, organizational learning and an improvement in the skills required for the future, provide an excellent opportunity to acquire Knowledge-Management capability.

Worren *et al.*, (2002) argued that, in an aggressive environment, the impact of Knowledge-Management strategy on knowledge integration as well as Knowledge-Management capability, companies must concurrently shift to organizational structures and strategies so that an inimitable and elastic arrangement can exert a significant impact on Knowledge-Management capability. Boer *et al.* (1999) argue that companies with the possibility of integrating obtainable knowledge into fresh structural knowledge as a proposal for introducing fresh merchandise marketplace combination. Grant (1996b) recommended that companies could incorporate knowledge according to three main criteria: effectiveness, range and elasticity. Boer *et al.* (1999) suggests that the context in which the company operates is a kind of integration that is deemed necessary. In other words, an unanticipated robust is needed to meet the typology of Knowledge-Management strategy and integration of knowledge types in order to achieve a higher level of productivity and innovation. Choi and Lee (2002) argue that the system based on Knowledge-Management strategy, focuses on Knowledge-Management capabilities and Knowledge-Management integration opportunities for explicit knowledge expansion.

'Knowledge Management' (KM) has become a distinctive feature to support the presence in ever-changing environments (Grant, 1996). The capability of organizations to integrate their intellectual assets on their core competencies is the key to sustainable competitive advantage in the marketplace. There is a need of greater focus on Knowledge-Management organizations to adopt new roles and for the implementation of various Knowledge-Management technologies. The new role began to emerge as a major knowledge (Davenport & Prusak, 1998). There are different technologies for creating and maintaining organizational memories as announced, such as portals, repositories and joint systems. Combined, these products are positioned as the dominant force of competition for companies in the knowledge economy. It is knowledge management who create positive impact on organization; it creates and manages to promote innovation.

'Knowledge' is an important resource for sustainable competitive advantage (Bock & Kim, 2002; Toffler, 1990; Quinn & Rivoli, 1991; Davenport & Prusak, 1998; Drucker, 1993). 'Knowledge' seems to make sense only source in the knowledge market, dissimilar to conventional manufacture funds such as wealth, employment and property (Drucker, 1993, 1998). 'Knowledge' is a multi-faceted theory to describe and evaluate. Descriptions of 'knowledge' vary from theoretical to realistic, tapered to extensive. Wiig (2004) illustrated 'knowledge' as reality and belief, opinion and thoughts, conclusions and opportunities, methodologies and expertise. Beckman (1999) treats 'knowledge' as a powerful display of information and facilitated data, productivity, dilemma solution, choice making, and education. Davenport and Prusak (1998) stated that 'knowledge' is a liquefied mix of structured expertise, principles, background information and practiced approaches that present a skeleton for assessing and integrating new knowledge experiences and information.

The study of Sveiby (1997, 2001) reveals two groups of knowledge: entity and development knowledge. Consider that an entity of knowledge can be detected and processed in the

information classification (Sveiby, 1997). Scientists in this area are focused on creating systems of information supervision and collaboration, etc. Thus, they concentrate on the utilization of innovative developments in Information Technology (Sveiby, 2001). If 'knowledge' is regarded as an entity, the emphasis is on creating and administering the knowledge structure (Hsu & Sheng, 2005). Unlike the *process* of knowledge which emphasizes how multi-faceted sets of energetic talents and capability, this is dealt with constantly changing (Sveiby, 2001). In this area, scientists focus on training and the management of these abilities and expertise independently (Sveiby, 2001). However, this method is not quick. If 'knowledge' is seen as a process, then the emphasis is on knowledge formation, transfer or exchange and distribution of the weight- distribution method (Hsu & Shen, 2005). Nevertheless, the organization must achieve equilibrium in terms of competitive benefit (Alavi & Leidner, 2001).

As previously stated, while many organizations have implemented Knowledge Management, not many of them are flourishing in their practical application of knowledge-management. Although Knowledge Management was recognized for improving the organization's activities, there are no events generated within the companies surveyed to appraise the worth of the resources that were dedicated for the acquisition (Davies, & Hobday, 2005). The concept of 'Knowledge Management' had appeared as a method to control knowledge. According to Rastogi (2000), 'Knowledge Management' is a logical and comprehensive process of management across all of the activities of the company's personnel and clusters in the investigation of the main goals of the organization. These measures comprise the acquisition, construction, storage, sharing, distribution, development and delivery of knowledge. Darrok and Maknoton (2002) suggested that knowledge about management for the management of set functions finds and manages the flow of knowledge within the

organization to ensure that it is efficient and effective for the long-term interests of the organization.

According to the previous description, 'Knowledge Management' is an extensive approach. This extensive capacity has directed several scientists to smash this conception and its key aspects relating to the management of knowledge, somewhat than short and simplistic description. O'Dell and Grayson (1998) advanced the thought that Knowledge Management; development discovery concealed assets by collecting, classifying, reassigning and using knowledge to generate consumer importance and to achieve operational efficiency and produce innovative products. Furthermore, adds Allee (2003) that the practice of producing, maintaining and updating 'knowledge' to advance organizational presentation and assessment creation is most significant in 'Knowledge Management'. Scarborough, Swan, and Preston (1999) established this view, but also stretched the consequence of study and work in the organization's improvement. Grover and Davenport (2001) added to the production of knowledge and codification as main feature of 'Knowledge Management'. Thus, the main features of 'Knowledge Management' may be to acquire knowledge and education.

The possession of knowledge and education are more efficient in the use of obtainable knowledge and the efficient construction of fresh knowledge is defined by discussion, externalized, and distributed in the form of new knowledge (Lawson, 2003; Choo & Bontis, 2002). The acquisition and development of organizational knowledge contains not only the association of knowledge in connection with the organization's purpose, visualization, assignment and main beliefs (Allee, 2003), but also the distribution and dissemination of personal experiences (Gold, Malhotra & Sehars, 2001).

Knowledge detain and storage procedures for recognizing fresh knowledge, as pertinent and significant for present and prospect utilization and storage of this component of knowledge in

an appropriate manner, so that anyone can access it in the organization (Lawson, 2003; Zack, 1999). Knowledge detains and storage spaces are imperative when knowledge is formed (Hung, Lien, McLean, & Fang, 2006). We are in the age of 'world knowledge', whereby Information Technology transformed the world and entered the information highway network. Information Technology is bound to increase when used by organizations for product quality, to improve workflow, to allow companies to respond to customers and to improve interaction with customers and suppliers.

The transfer and dissemination of knowledge is essential for 'Knowledge Management' in the process of management (Lee, 2000; Bock & Kim, 2002). The terms, 'knowledge transmission' and 'exchange of knowledge' are frequently utilized as synonyms (Bock & Kim, 2002). Knowledge distribution and transfer of describing industrial developments, transmission, and the distribution of knowledge among individuals or groups involved in the activities within countries and between organizations (Lin & Lee, 2005; Frappaolo, 2006; Bock & Kim, 2002; Lawson, 2003). The distribution of knowledge should be obtainable in a convenient way and in corresponding order, making it more comprehensible when interpreted by the users themselves (Ribiere, 2001).

Technology has become a great pioneer of organizational learning and knowledge management as technical systems within the organization to determine how knowledge travels across the enterprise and the knowledge is made available. Ettlé and Bridges (1983) suggest that implementing technical and policy maintenance organization and its commitment lead to innovation which is always reflected. We are talking about such things as the recruitment of technical personnel, the allocation of funds to develop new technologies and support the traditions at the forefront of the technological sector in a given field.

However, recent survey data has shown that while many organizations have implemented 'Knowledge Management' per say, very few are flourishing in their Knowledge-Management endeavors. Although 'Knowledge Management' is recognized for improving the organizational activities, there are no events generated within the companies surveyed to appraise the worth of their resources of knowledge (Longbottom & Chourides, 2001). Research of Takeuchi (1998) on the results of a survey done on 80 large U.S. corporations showed that very few managers feel that they administer their knowledge well (Ruggles, 1998; Dyer & McDonough, 2001; Bassi & Van Buren, 1999; Longbottom & Chourides, 2001). The execution of 'Knowledge Management' is a speculation that requires capital, and it also entails effort to evaluate the outcome. Without computable achievement, keenness and sustain for knowledge management is likely to maintain (Ranjit, 2004).

Thus, the current knowledge-management solutions are special, constrained by a strict and limited understanding of the basic knowledge required to address the necessities of today's spirited situation (Malhorta, 1998). Dissimilar points of view on the concept of 'knowledge' lead to a diverse explanation of 'Knowledge Management' and thus it is no surprise that the probable results of the labors related to 'Knowledge Management' are explained in different ways. Marr (2003) showed that many organizations have a narrow focus on 'Knowledge Management' as related to the management of Information Technology clarification such as intranets and catalogs. Thus, 'Knowledge Management' practices and their expected results have a narrow direction. Additionally, the intellectual growth of 'Knowledge Management' is not stabilized and cleaned in the manufacturing world. Though 'Knowledge Management' is used as a managing contrivance that is all about the competence, efficacy and innovation in this era of knowledge (Gupta *et al.*, 2000) aimed at improving the understanding of generally accepted accounting principles, or Knowledge Management (Stankosky & Baldanza, 2001).

This is because organizations typically execute recognized methods (Levette & Guenov, 2000).

'Knowledge Management' is difficult, because 'knowledge' is unsubstantial and facades in different forms (Rowley, 2004). Polanyi (1958) demonstrated 'knowledge' as implied and clear. Both the implied and clear knowledge are intangible assets because they can move from one form to another form in an organization (Nonaka, 1990) resulting in the distribution of and relevance of knowledge. Fresh and precious knowledge will be fashioned and implemented in goods, services and practices (Skyrme & Amidon, 1997). While implicit knowledge is considered as a significant factor for spirited benefit, it is the goal of 'Knowledge Management' to make the hidden knowledge clear in order to win the efficiency of industry. Nevertheless, only a little part of the organization's knowledge is unambiguous knowledge (guidelines, manuals, databases, etc.). They also overlooked the assets, meaning that they like the idea, intuition, guesswork, instinctive manners, morals, descriptions, similes, and similarities (Nonaka and Takeuchi, 1995).

The process of 'Knowledge Management' highlights 'knowledge' as related to human activities. It does not deal with the unique character of different types of knowledge or the relative significance of different pieces of knowledge in the organization. Although the cycle is common knowledge, all kinds of knowledge, the question of the balance between different kinds of knowledge in the organization is equally important, as are the accumulation of knowledge and the sharing of knowledge.

In considering the role of 'knowledge' in support of competitive advantages in a variety of controls, possess inimitable knowledge sets such as decisive the degree to which spirited benefit will be maintained (Prahalad and Hamel, 1990; Barney, 1986). According to Collis and Montgomery (1995), for example, different tests to assess the impact of organizational

skills (and probably also the subjects of knowledge sets): Is the ability to copy difficult? How strong is the capacity? What is the potential of the firm, its owner and of the remuneration for keeping ability? How easy is the ability to replace? Possessed specificity of knowledge, therefore, exerts a great influence on the organization's ability to achieve and maintain a high capacity compared to its peers, through its superior perspective to give spirited advantages and complexities linked with their replication and duplication somewhere else (Grant & Gregory, 1997).

Additionally, the said business is so important that the problem of 'Knowledge Management' for spirited improvement has also been documented. Demonstrating the study of Cuganesan (2005) illustrates that an organization should transform economic value by managing its capital and knowledge processes, mainly due to the fluid nature of resources together and utilize these resources through production processes. Similarly, Caddy (2000, 2001) describes that such resources have an adverse effect, which leads to spiritual debt or, conversely, an 'orphan knowledge', if these funds are on the edge and put into organizational activity to complete. This characteristic of knowledge is related to tacit to explicit informative (Nonaka, 1994; Polanyi, 1966).

Given the increasing number of IT applications and investments in 'Knowledge Management' by manufacturing companies, in the study we focus on the relationship between IT support for Knowledge-Management focus, dynamic, knowledge-based skills and entrepreneurial success. In particular, based on the dynamic capabilities theory, we expect to support the view that 'Knowledge Management' has no direct impact on the final experience, but IT support for 'Knowledge Management' has a direct influence on dynamic knowledge-based skills, which in turn affects corporate efficiency. Based on a sample of 113 managers from industry, IT supports for 'Knowledge Management' were significantly positive in relation to dynamic knowledge-based skills, and the productivity of the company. There was

no significant, direct relationship between IT and the business success of knowledge-management support, assuming that the knowledge of dynamic capabilities is a complete lack of explanation. It provides direct communication between IT support for the success of 'Knowledge Management' and business and provides a potential basis for future research to examine the impact of other types of IT investment on business performance. For production management, the results show that carefully analyzed IT investments in relation to the strategic directions of the organization must be made.

1.6 The Significance of the Study

This study should be a valuable document in the work of the orientation of the organization towards performance where 'knowledge' plays a critical role; hence, it would be a true document for the organization to make use of. Creating an environment of sharing 'e-knowledge' is an important component of socio-economic factors, psychological aspects and human management practices (Brown & Duguid, 2000). Firms believe, for example, to constantly update knowledge resources through the creation of environments to support 'Knowledge Management', promote affirmative approaches towards the sharing of knowledge and the creation of an international cultural organization, for the sharing of knowledge. Job design, recruitment and teaching, direction and socialization plans, evaluation and remuneration and reimbursement, open and credulous customs and an assortment of practices of Information Technology to facilitate effective 'Knowledge Management' is proposed. Lehner and Lehmann, (2004) recommended that the increase in the staff members' enthusiasm to distribute knowledge might very well depend on the perceived fairness regarding the rewards for the sharing of knowledge. A victorious development of knowledge sharing backgrounds needs an acceptance of the basic intellectual standards of persons and associations. The cultural value readiness, defines_determines

knowledge-sharing behavior (Jehn, Northcraft & Neale, 1999). It should be eminent, and also differ among the intellectual standards between countries and even within countries, as a rule.

Creation of environment, knowledge sharing requires consideration as socio-economic factors, psychological aspects and human management practices (Cabrera & Cabrera, 2005). Firms invited to believe, for example, to incessantly update knowledge resources through the creation of environments to support Knowledge Management, promote affirmative approaches towards knowledge-sharing and the creation of an international cultural organization, for knowledge sharing. Job design, recruitment and teaching, direction and socialization plans, evaluation and remuneration and reimbursement, open and credulous customs and assortment practices of information technology to facilitate effective Knowledge Management is proposed. Adya and O'Neill (2007) recommended that the increase in staff enthusiasm to distribute knowledge might depend on very well connected with the perceived fairness reward knowledge sharing. Victorious development of knowledge sharing backgrounds needs an accepting of basic intellectual standards of persons and associations. The cultural value readiness, culture defines determines knowledge sharing behavior (Kok, 2006). It should be eminent, also differ in that intellectual standards between countries and even within countries, as a rule.

The uniqueness of the integration process illustrates aspects of the business potential of integration, which affects the organizational structure (Grant, 1996a) and is necessary due to differences in the types and forms of knowledge. This, in turn, requires specific needs in the integration of knowledge (Kogut & Zander, 1992, 1995). The effectiveness of integration reflects the extent to which the function will help in the development and use of personal experience (Grant, 1996a). The degree of knowledge integration refers to the width of knowledge and skills among the firm's capabilities (Grant, 1996a).

Organizational and legal forms, usually on the number of hierarchical levels (Bosch et al., 1999), and the method of operation are grouped together (Grant, 1996a) and separate functional areas (Teece *et al.*, 1997). In this circumstance, there are rules and guidelines for integrating knowledge (Grant, 1996b) contribution, thus facilitating integration efficiency or impeding the integration of more and more explicit knowledge (Stokes & Clegg, 2002; Buckman, 2004). In this study, the effects of the three main organizational forms of knowledge integration are considered: functional departments and matrix forms. Other forms, such as networks and spherical forms (Miles & Snow, 1986, 1994), N-form (Hedlund, 1994), and the hypertext form (Nonaka & Takeuchi, 1995) are recognized, but not as a very accurate assessment of known characteristics of the integration process through their properties (De Boer *et al.*, 1999).

Using and managing data, information, and knowledge within the organization is attempted to gain a competitive advantage over organizations in the field of 'Knowledge Management'. 'Knowledge Management' essentially consists of processes and tools for the efficient collection and exchange of data and knowledge among the personnel within the organization. In the previous decade, there was an explosion of information obtained by the company through expanding the use technology. Collecting the information and knowledge management controlled within a data warehouse containing the method to achieve the chief in the areas of performance (Matusik & Hill, 1998). A company that develops and uses knowledge resources attains greater success than a company which is more dependent on material resources (Autio *et al.*, 2000).

Approved and concentrated training applications of new knowledge leads to innovative solutions and helps in changing management (Egbu, 2006). In addition, the staff members enjoy helping others as the staff members have a strong commitment to share knowledge in the organization. An intellect of confidence and competency provides incentive for

employees, know-performance (Lin & Kuo, 2007). An encouraging and supportive environment motivates the staff members to communicate with each other. In addition, enticement and rewards for knowledge-sharing are imperative instruments to encourage employees to share information and knowledge. This not only improves the knowledge base of organizations, but also enhances team spirit. It also helps employees understand where they are in the collective aspect of the workplace (Hsu, 2006; Rezgui, 2007).

Changing people's ways of thinking and education trust: The main functions of culture are interrelated internal incorporation and synchronization. Integration can be defined as a sense of identity and commitment among staff members within the organization. The organizing function, on the other hand, can be defined as a competitive boundary. An imperative factor of corporate culture is an element of trust among the employees. The more that people trust each other, the more likely that they will interact and share their knowledge with each other.

Technological tools such as intranets, databases, etc., or non-technological means, such as brainstorming and collaboration, create the avenues of innovation. The transformation of implicit knowledge in explicit companies increases their chances of sharing knowledge and innovations of improving performance. Information management encourages innovation by improving the innovator's search for relevant information and knowledge together. Thus, companies should have the right technologies, technological expertise will stimulate innovation understood (Gordon & Tarafdar, 2007).

CHAPTER 2

LITERATURE REVIEW

Management styles have been modified due to the gradual, technological improvements in the recent past. The reliance on technology has increased the number of diversities. To be aware of 'knowledge' is a definite asset, so companies must increase their volume of knowledge. It is a hell of a lot harder to beat a simple, focused strategy that is well-executed. Companies have to update their 'knowledge' and revise their diversities in order to effectively use their resources so that they can compete in the market and maintain them (the resources) as well. It is stated by Harrison and Leitch in (2000) that, to stay in the market, organizations must continuously update their knowledge. The easy access to information and the choice of products is forcing managers to think differently, ensuring the effective utilization of resource.

The knowledge capability of an organization is made up through different resources. According to Alavi and Leidner, 2001; Gold *et al.*, 2001, organizational systems, organizational environments and technology infrastructures are related to the organization's knowledge-infrastructure capability; knowledge application, knowledge protection, knowledge transformation and knowledge application are related to an organization's knowledge-process capability. Lee and Sukoco (2007) stated that tangible assets, natural resources and the effective management of knowledge are deployed to achieve improved organizational performance. According to Grant, 1996; Gold *et al.*, (2001); Lee and Sukoco (2007); Zack *et al.* (2009), the knowledge-management capability of an organization can be determined by combining these resources and is linked to several measures of organizational performance. In the knowledge-

based economy, the challenges faced by organizations are to manage these difficult activities. In the modern economy, the roles played by 'information' and 'knowledge' are very important to give new ideas to the workers of earlier economists, who had already hinted this concept, as did Marshall (1965), Hayek (1945) and Schumpeter (1951, 1952). Antonelli (2008) contends that an organization must be able to create and manage knowledge to achieve its objectives in the knowledge economy. According to Quintas *et al.*, (1997), "KM is a significantly critical process to meet existing requirements, to identify and exploit existing and acquired knowledge assets and, to develop new opportunities, knowledge management is critical". Davenport and Prusak (2000) argued that to be able to acquire the potential value of KM, organizations required to critically formulate strategies.

Hansen (1999) said that, Organizations are not concentrated on money, rather they are more focused on knowledge. Knowledge is scrambling money very fast. The necessary economic resources are financial prowess, manpower and natural resources. Benjamin Franklin said that "If a man empties his purse into his head, no one can take it away from him. An investment in knowledge always pays the best interest." Knowledge is the only thing that can radically modify the scope of the company and pose the correct query whenever you wanted to find the answer of any question. You cannot even think about the modification in the competitive environment of the industry without having the knowledge. Through knowledge you can bring quality to the services that your organization offers and to any product produced by your organization. The life cycle of a product and market service time can be quickened in extraordinary ways with the help of knowledge. To apply the knowledge in time and to derive benefits from this knowledge are only possible through the management of knowledge.

To operate an organization's core to the corporate management's objectives along with the supporting processes, managers use knowledge. Knowledge Management is a stimulative process that is used to increase the performance of company and to make the company more proactive(Grant, 1995).

Worren *et al.* (2002) stated that Organizations are using a knowledge-centric environment for their business rather than an asset-centric environment. Knowledge is creating super-ordinary returns and added value as it is radically used in the traditional economics of organizational assets. KM is a more reliable investment than many hard assets as it promises to provide increasing returns. This incremental and continuous improvement is created by the following three factors:

- A change in customers' requirements
- A change in the business environment
- Knowledge assessment is imperfect

2.1 Knowledge-Integration Capacity

Organizational design needs to access, and integrate transfer knowledge among members of an organization (Grant, 1996b). Knowledge integration helps firms to combine internal and external knowledge through communication and systems integration. Grant (1996b) takes knowledge as integrated within the organization in order to create KM capability. He proposes that most organizational capabilities require the integration of knowledge from a number of individuals. Furthermore, Huang and Newell (2003) state that a firm's competitiveness depends on its capacity to integrate knowledge in an effective manner. Badii and Sharif (2003) suggest that, without effective knowledge integration, the firm needs to spend more time and resources

administering and guarding information, thus impeding innovation. The wider the scope of knowledge that is integrated, the greater the diversity of the individuals involved (Grant, 1996b). Diversity resulting from knowledge and information helps individuals in the organization to communicate with each other and it stimulates more ideas. Furthermore, Therin (2002) states that when a firm has the ability to acquire knowledge and integrate existing knowledge with new knowledge, the firm should be good at producing process or product innovations. Grant (1996b) proposes that a firm's capability for re-configuring existing knowledge is a way of promoting continuous innovation.

Previous studies about how to efficiently improve KM capability are still controversial (Birkinshaw *et al.*, 2002). First, the characteristics of knowledge have been categorized from many perspectives. However, not a single, agreed-upon set of definitions has been identified. For example, Polanyi (1962) classifies 'knowledge' into two categories: explicit knowledge and tacit knowledge. Explicit knowledge can be codified and shared in the form of hard data, manuals, codified procedures or universal principles, while tacit knowledge results from an individual's experience and is only revealed through its application. Spender (1996) proposes that knowledge can be held both by individuals or else collectivity. Collective knowledge comes from knowledge integration: it is the combination of the coordinated efforts of several individuals who hold different but complementary skills (Grant, 1995).

K-M capacity is defined as the ability of firms in the acquisition, conversion and application of knowledge. Knowledge will not be able to promote innovation if it cannot be shared or distributed to the relevant people. Through the assistance of information technology such as intranets, data systems, or non-information technology tools such as brainstorming sessions and research collaboration, firms can exploit knowledge within the organization (Carrillo *et al.*,

2004). Thus, firms can increase innovation through the application of knowledge. By conversion process, firms can share, assimilate and improve innovation performance via transforming tacit knowledge into codified or explicit knowledge. Thus, firms can promote their K-M ability and initiate greater innovation.

Worren *et al.* (2002) argue that, in a highly competitive market, firms need to simultaneously re-align organizational structure and strategy so that a more unique, flexible, and firm-specific configuration could exert significant effects on K-M capability. Boer *et al.* (1999) contend that firms having the capability to integrate existing knowledge into new architectural knowledge can provide a platform for carrying out new product-market combinations. Grant (1996b) suggests that firms can integrate knowledge through three major dimensions: efficiency, scope and flexibility. Boer *et al.* (1999) propose that the context in which a firm operates determines the type of integration process which is required. In other words, a contingency 'fit' is required to typologies of K-M strategy and types of knowledge integration in order to achieve better K-M capability and innovation. Choi and Lee (2002) contend that system-oriented K-M strategy will enhance knowledge integration and KM capability for explicit knowledge.

Kloot (1997) states that organizational learning is the process by which firms can detect problems and provide solutions. Knowledge gleaned from internal and external learning activities has become a strategic process that facilitates the acquisition and deployment of an organization's stock and flow of knowledge (Pablos, 2002). Different knowledge bases and different strategies in developing and deploying knowledge result in performance differences between firms (Bierly & Chakrabarti, 1996). However, while the importance of creating, managing and transferring knowledge has been recognized by firms, most have not been able to transform this into an effective K-M strategy (Chase, 1997). Thus, it is a big challenge for firms

to establish a suitable knowledge strategy that improves organizational learning and further creates superior K-M capability. Long and Fahey (2000) and Krogh (1998) have argued that firms with human-oriented K-M strategy will have a better attitude towards learning and innovation because the sense of care gives rise to trust and empathy, which can encourage the organization's members to communicate and cooperate better. It is argued that, within a culture of care, individuals may have more favorable perceptions of K-M activities.

2.2 Learning Culture

In 1998, Davenport and Prusak clearly identified 'culture' as a necessary asset which is the base for successfully implementing knowledge-management systems. In 2003, Malhotra strongly advocates the need to develop a culture where learning, sharing and creating 'knowledge' is present at all levels. Malhotra conjectures that this will be a sign of successful durability in the future. When you have knowledge about this culture, the employees will be hired with an urge for intellectual eagerness.

In 2003 it was stated by Malhotra that if you want to get success you should develop a learning culture, which has the ability of quickly adopting to change. The philosophy of Malhotra is that in today's environment only certain things can be modified. The companies that are ready to accept change and take decisions on time will possess competitive benefits.

'Knowledge' is power. Through the integration of systems and communication, organizations can integrate their external and internal knowledge. Grant (1996b) takes knowledge as integrated within the organization in order to create knowledge-management capability. Grant suggests that the organizational capabilities need the integration of knowledge from a number of individuals. It was stated in 2003 by Huang and Newell that the competitiveness capacity of an organization is

depends on the company's ability to integrate knowledge in an efficient way. "We have an opportunity for everyone in the world to have access to the entire world's information. This has never before been possible. Why is ubiquitous information so profound? It's a tremendous equalizer. Information is power." Eric Schmidt (2009). In 2003, Badii and Sharif suggested that the firm which needs to spend more resources on administering, guarding information and time without having effective knowledge integration, impedes innovation. Grant (1996b) contends that if the scope of integrated knowledge is broad, it will increase the diversity of the individuals involved.

Strategy that comes from knowledge and information helps the individuals in the organization to communicate with each other and generates more ideas. As stated by Therin (2002), when an organization is willing to learn and gain knowledge and integrate previous knowledge with new knowledge, the organization should be eligible to producing process and innovating products. Grant (1996b) said that in order to promote continuous innovation, an organization must re-configure its existing knowledge.

Past studies of the methods of efficiently improving knowledge-management capabilities are still controversial (Birkinshaw *et al.*, 2002). Firstly, the characteristics of 'knowledge' have been divided from many different sources. No one has agreed on the set of definitions that has been identified.

In 1962, Polanyi divided knowledge into two types: tacit knowledge and explicit knowledge. Tacit knowledge can be gained from the experience of any individual and is only made concrete via its application. Knowledge must come through action; you can have no test which is not

fanciful, save by trial, while explicit knowledge can be shared and classified in the form of manuals, hard data, universal rules and classify methods.

In 1996 Spender suggested that information can be gathered collectively by individuals. Collective knowledge is obtained through the integration of knowledge: In 1995, Grant stated that you can get collective knowledge through the coordinated efforts of several individuals who have different, but complementary, skills.

Knowledge-Management capacity is defined as the capability of an organization in the accomplishment, conversion and implementation of knowledge. Knowledge will not be capable of promoting modification if you cannot distribute or share it with the relevant personnel. With the help of information technology such as data systems, internet or non-information technology sources such as conceptualizing sessions and collaborated researches, companies can exploit knowledge within the organization (Carrillo *et al.*, 2004). Through the implementation of knowledge, companies can increase modification. Companies can comprehend, share and improve modifications by a conversion process. Firms can enhance their innovation performance through transforming tacit knowledge into explicit or catalogue knowledge. Thus firms can bring forward more modifications and they can also promote their knowledge-management ability.

In 2002, Worren *et al.* contended that in a market which is highly competitive, firms need to continuously modify organizational structures and diversities so that a more flexible, unique and firm-specific composition could provide indicative effects on the capability of knowledge management. Grant (1996b) contends that firms can integrate knowledge via three main aspects. These are: scope, flexibility and efficiency. In 1999 Boer *et al.*, suggested that the framework in which an organization operates determines the type of knowledge-integration process that is required. In other words, a haphazard fit is required to typologies of knowledge-management

diversities and knowledge-integration types to attain better knowledge-management capability and modification. In 2002, Choi and Lee argued that system-oriented knowledge management diversity will enhance the integration of knowledge and the ability of knowledge management for explicit knowledge. It is stated by Kloot (1997) that firms can detect problems and provide their solutions by the process of organizational learning. MacMillan, (1924) states that, Education is the acquisition of the art of the utilization of knowledge. This art is very difficult to impart. We must beware of what I will call "inert ideas" that is to say, ideas that are merely received into the mind without being utilized or tested or thrown into fresh combinations. The process of information in terms of its underlying organization, it betters the learning and later retrieval of that information. This processing requires active involvement. The learner must verify an understanding of the structure by receiving feedback, from the internal and external environments, on the encoding choices made. Pablos (2002) states that knowledge activities have become a strategic process from internal and external learning that facilitates the deployment and accomplishment of an organization's stock and flow of knowledge. Bierly and Chakrabarti, (1996) confront that different knowledge diversities and knowledge bases in developing and deploying knowledge give results in the form of performance differences between companies. Chase (1997) claims that, even though the companies have recognized the importance of managing, creating and transferring, mostly these firms have not been able to transfer this into an effective knowledge-management diversity. To establish suitable knowledge diversity is a big challenge for firms; therefore, they should create superior knowledge-management capability and improve organizational learning.

In its broadest sense, 'learning' can be defined as a process of progressive change from ignorance to knowledge, from inability to competence, and from indifference to understanding.

In much the same manner, organizations can be defined as the means by which we systematize the situations, conditions, tasks materials and opportunities by which learners acquire new or different ways of thinking, feeling, and doing. Power of growth is learning and individual learning is the essential resource to further the progress made in business. Thus, in an information-explosive society, firms can acquire more knowledge and, there will be more benefits. Learning is not attained by chance; it must be sought for with ardor and attended to with diligence (Abigail & Adams, 2000). Hong (2001) stated that learning achievement means the ability to control information. Chou (2003) suggests that a process through which we obtain knowledge and improve our behavioral approach is the firm's 'learning'.

In 2004, Heijden suggested that a firm's 'learning' is a type of experience conclusion, a procedure to find and innovate new knowledge, together with the collaboration of the organization's input of knowledge. 'Learning' is a social process that occurs through interpersonal interaction within a cooperative framework. Individuals, working together, construct shared understandings and knowledge. The academic definition of 'organizational learning' means that the 'learning' firms are those that cover individual, group and whole-firm learning with continuous progress made in the effort of both organizational and individual learning. It is a type of collaborative task to reach an organization-shared vision. However, the learning capability of an organization depends on the response capability against the radical modifications in the environment (Kochan & Useem, 1992; Mathews, 1994; Redding, 1997).

Senge (1990) states that, to achieve common goals and acquire excellent achievement within the learning organization, collaborative work of firm members in different ways than the conventional operation but with mutual understanding, trust and supplementary aids is very

essential. To establish the learning organization, every discipline item is imperatively required.

Aksu and Özdemir (2005) give the summary of the main points of learning firms as:

- The learning firms required to modify the current applications and the views of the organizational members.
- The learning organization has direct bearing on the future of the organization.
- To improve, the organizations must modify their strategies for progress.
- The learning of all members in the organization must be made easier.
- It is necessary for all members of the organization to give their input.

The 'learning organization' capacity covered within this research focuses on the five main disciplines of building shared vision, personal mastery, improving mental models, analytical thinking and team learning. Senge (1990) proposed that to serve as the criteria for measuring the learning extents of the business organizations. In 1990, Garrate proposed that to develop learning organizations, the administrators shall previously propagate the learning abilities of working members and individuals. In addition, it is more important to create a culture and climate of the firms' learning (Watkins and Marsick, 1993; Pool, 2000; Hall, 2001). In 2001, Daft also contended that the 'learning firm' is a critical aspect to possess the organizational culture and to make the effort to encourage firms to bring about change and adaptations.

At present, there is an increasing consensus on the idea that firms are trying to introduce a culture which increases the level of communication between their workers; they are also doing experiments and taking risks to encourage the workers to ask questions about the working methods and fundamental beliefs. So it will create an environment which is suitable for the progress in their learning capacities (Lopez & Ordas, 2004). In 1999 Yeung *et al.*, stated that,

within the learning organizations, leaders need to design the system and culture and bring workers with simultaneous challenges to create prosperous futures for their firms.

In 1998, Davenport and Prusak declared that, to successfully implement knowledge-management systems, culture is an important asset which provides the foundation for it. Malhotra (2003) proposed that it is necessary to create a culture which provides the environment where sharing, creating knowledge and learning is present at all levels. He forecast that this will be a feature of the successful organizations of the future. If you have awareness of this culture, the workers will be hired with an urge for inventive and creative curiosity. In 2003, Malhotra contended that you have to develop a learning culture to achieve success and one which will be quick to adopt changes. His philosophy is that, in today's environment, the only certain thing is change. To gain competitive advantages, the organization should be ready to bring about change and take quick decisions at the correct time.

There is no doubt that to derive competitive benefits, learning is absolutely necessary. Love *et al.*, (2000) contends that learning lies at the genesis of partnering. In particular, there are three key issues: learning, continuous betterment and a learning climate. This learning-friendly culture forms the basis for developing a learning organization. In 2001 Kululanga *et al.*, proposed the nature of organizational learning, and emphasize that a learning culture is necessary to bring in both cognition and behavior through transitional learning. "In most organizational-change efforts, it is much easier to draw on the strengths of culture than to overcome the constraints by changing the culture" (Edgar Schein,1999). A learning environment is necessary for the consortium formed by the project parties and individual organizations. Once you create a 'learning culture', partnering team members are more willing to accept new knowledge, skills and technology. "We found that firms with cultures that encompassed all of the key managerial

constituencies (customers, stockholders and employees as well as leadership from managers at all levels) out-performed, by a huge margin, those firms that did not have those cultural traits.

Tracey et al. (1995), states that provide a good foundation for understanding culture. Intrinsically, a learning culture is used to explore the ways to experience learning, how to make continuous progress, and how to develop a learning environment. Although a learning environment and continuous improvement are related to each other, they affix themselves to distinctive topical issues. Gravin (1993) contends that as continuous learning is essential for continuous improvement, it is a necessary process for gradual improvements. Senge (1990) states that, to maintain a competitive position in the turbulent environment, firms are focused on learning. They are focused on the diversity of continuous improvement in their knowledge assets. If you have been trying to make changes in how your organization works, you need to find out how the existing culture aids or hinders you. Nonaka (1991) suggests that once a firm has experienced a number of successful improvement cycles, it will spread the knowledge gained throughout the entire organization, thereby leading to the synthesis of a 'learning culture'.

A learning environment established a supportive environment in order for a learning culture to evolve since strategic partnering involves a re-activation of partnering for new projects, whether the organizations have accumulated experience or they are focused on continually improving. Organizations are aware of the importance of the learning culture that it is necessary for the construction companies which are forming new partnering teams, (Cheng & Li, 2002). We tend to think that we can separate strategy from culture, but we fail to notice that in most organizations strategic thinking is deeply colored by tacit assumptions about who they are and what their mission is.

Bohn (1994) proposed that you must manage the knowledge as if it is capital. Thus, you also have to manage the experience. As experience is accumulated from time to time, it is necessary to structure the inventive assets (Bontis, 1998); that is, to structure an organization to become a learning organization (Hidding & Catterall, 1998). Another way of expressing accumulated experience from individual learning is 'human capital' (Hudson, 1993). Such human capital becomes the capital of a learning organization. Pool (2000) and Hall (2001) states that during the process of encouraging the workers to learn, it is essential for the existence of organizational culture to support the organization learning so that the organization can easily improve, obtain and transfer the knowledge which is required.

Kasper (2002) states that because leaders clearly affect the organizational operation, the most important issue in an organizational culture, is the relationship between the learning organization and its leadership, and is so with increasing emphasis. From the aforesaid research reports, we find that organizational culture and leadership is a critical relationship in creating a learning organization, and encourages workers to use the learning facilities. Thus, the first research motive within this research is intended to search the relationship between organizational culture, the learning organization and its leadership. Success in business requires training, discipline and hard work. But if you're not frightened by these things, the opportunities are just as great today as they ever were (David Rockefeller, 1915).

Gardiner and Whiting (1997) indicate some well-established research results and the said research results indicate that the altered behaviors of the learning organizations in response to external climate can bring an improvement in the job performance and satisfaction of workers and also have beneficial effects on the organization's performance. In 2001, Hong suggests that the operation efficiency of a learning organization can allow workers to possess the skills of

interaction, correct social manners and personnel companionship with the result that it will reduce the absence rate and job turnover rate and boost the workers' morale. The promotion of a learning organization is required to improve job satisfaction and we can find it from the practical instances of research. Extensive learning of culture, system thinking and the encouragement of continuous learning is possible under flexible experiment. It will change the workers' behavior and opinion towards jobs and increase the internal mental satisfaction. Furthermore, improving workers' idea about values and authorizing workers can actually enhance job motives, willing and also intensify external satisfaction.

Buckler (1998); Popper & Lipshitz, (2000); Hall (2001) have investigated the attitude of the learning organization through operation models and theoretical contents. Organizational culture is mostly seen as an essential condition and the facilitating factor for organizational learning to occur (e.g. Ahmed *et al.*, 1999; Baetz (2003); Campbell and Cairns, 1994; Conner and Clawson (2004); Hill (1996); Maccoby (2003); Marquardt (1996); Marsick and Watkins (2003); Pedler *et al.*, 1997). In the related literature on this subject, the cultural orientation towards learning is called "oriented learning culture" or simply "learning culture" or you can say "a type of culture that a learning organization should have". Wang *et al.*, (2007) states that, in practice, an organizational learning culture can be the core of a learning organization and the broader aspect of an organizational culture. Answering the two basic questions gives you the concept of the 'learning culture' what it is and what its responsibilities are and is a useful exercise. The authors that have studied this kind of culture say that the learning environment can be described as an organizational environment that is oriented towards the promotion and facilitation of employees' learning, its share and promulgation, in order to contribute to organizational development and performance (Rebelo & Gomes, 2009).

With this definition, we want to emphasize the central idea underlying this kind of culture, that is to say, that organizational success can be achieved through group learning or organizational learning and individual learning. This culture promotes and values individual learning with the objective that individual learning can be increased through the sharing process. Schein (1999); Marsick and Watkins (1999) proposed that, in the recent past, writers have focused on the coercive nature of the learning wave in organizations and that the organization must compel employees to learn and that the transformation of learning into an obligation can provoke apprehension. For a firm that wants to become a learning firm, it is necessary for employees to contribute to it through learning, knowing that it is a covenant relationship--as the firm realizes greater success, its workers will also benefit. Moreover, this main idea behind the definition is responsible for the relevance of the learning culture, its importance and re from the 1990s up to the present time.

Facing more and more universal, dynamic and inconsistent environments, culture-oriented firms need productive learning that leads to new and useful knowledge which provides innovative ways to optimize processes and to solve problems and it also increases the chances of a firm to achieve success. From individual commitment to a group effort that is what makes team work, a company work, a society work, a civilization works (Vince Lombardi). According to Ahmed et al. (1999); Hill (1996); Schein (1992; 1994); Marquardt (1996); Marsick and Watkins (2003); McGill and Slocum, (1993); Simons (1996); Reeves (1996), regarding its responsibilities or the framework that discriminate this type of culture from other cultures, you can easily see the points of convergence among writers. Among them, learning can be highlighted as one of the organization's core values, concern for all stakeholders, a focus on people, invigoration of analysis, exhilaration of an attitude of responsible risk, an expedition carried out to identify

errors and to learn from them and encouraging open and intense communication, as well as to promote the interconnection, cooperation and sharing of knowledge. The focus is on the relationship between the learning environment and its possible outcomes, for example, Baetz (2003), Bates and Khasawneh (2005), Egan *et al.*, (2004), Yang (2003), Lo'pez *et al.*, (2004), Reardon (2010), S ˇ kerlavaj *et al.*, (2007), and Thompson and Kahnweiler (2002) stated that learning is the most important factor in the organizations which have culture-oriented environments for productive and conceivable ways to find its link with other organizational variables that could interact for its progress is an issue for academics and practitioners. Actually through it we can understand the worth of these variables for the maintenance and development of a learning organization and it also gives managers the information which helps them to deal with the progress of this kind of climate in their firms.

Fiol and Lyles (1985) suggest that though often seen as the outcome of learning, the organizational structure plays a critical part in determining these processes (p. 805). According to these writers, a flexible, decentralized and organic organizational structure seems to be linked to the promotion of learning in organizations and, quoting Morgan and Ramirez (1984) focuses on the idea that the organizational structure is designed in a way that promotes learning culture. Actually, in the past, Shipton *et al.* (2002) discovered a negative relationship between organizational learning mechanisms and centralized structures because little attention has been paid to the relationship between organizational structure and organizational learning. In 1999, Hong said it is expected that, to some extent, a structure with organic characteristics will be related to cultural orientation towards learning in organizations. Regarding the variable of the organization aspect, Davenport and Prusak (1998) state that it is easier to share, create and transfer the knowledge of a small or medium sized workforce organization than that found in

large-sized organizations. Working with a sample of Portuguese manufacturing enterprises, it was found that there was no sententious discrimination between small, medium and large organizations in relation to the way they managed their knowledge (Cardoso, 2008). However, Chandler *et al.* (2000) found that organizational sententious and formalization tend to inhibit cultural orientation towards innovation. Schein (1992, 1994) states that to change the organizational culture is something that is difficult and very slow. Secondly, organizational learning as a management style or a way to react to rapid and new demands in the environment (such as the expansion of information technologies and globalization) is, to some extent, recent, older organizations have less cultural orientation towards learning. Even if older firms have made the effort to transform their culture, it is not an easy, linear or quick process. A 'conscious' business that is one that is conscious of inner and outer worlds. Would it, therefore, be a business that takes into account body, mind, and spirit in itself, culture and nature? Put differently, a conscious business would be mindful of the way that the spectrum of consciousness operates in the Big Three Worlds of 'self', 'culture' and 'nature' (Ken Wilber). Schein (1997) said that: "I'm especially struck by the glibness of those who call for the creation of learning cultures or cultures of openness and trust as if culture could be ordered up like an item on a restaurant menu."

Actually in a crystallized culture, it is difficult to bring change where the space for innovation and learning is limited, In this framework, Hodgkinson (2000), Salaman (2001) and Schein (1992) focused on the view that organizational culture as a blocked factor of the progress of organizational change programs that imply learning. Salaman (2001), based on Van De Ven (1986), contends that the older, the larger and more successful that organizations are, the higher the probability of having a set of systems and structures that inhibit learning and innovation. Hence, we could expect that organizational age might hinder the transformation of an

organizational culture into a learning one. The purpose of culture change has to strengthen with in the organization with various motivational tools; the culture should be treated just like other management objectives. Employees who take an extra step to observe the values need to be rewarded; they must be viewed as role models for others to follow. On the other hand, the employees who do not believe in those values have to be eliminated from the system to reduce their negative influence.

The culture of an organization is a construction of the people who work there, so the organizational culture could be affected by some characteristics of organizational actors. Wang *et al.*, (2007) stressed that analytical variables are directly related to learning culture; employees' analytical responsibilities can be linked with their perception of the organizational learning culture.

The organization's learning culture is dependent on employees' responsibilities, tenure in the organization, age and level of education. Every organization's culture is unique like a strand of DNA. The Portuguese commonly had traditional careers. Employees' tenures and ages are normally related to each other and to organizational age. Related to the level of education, the employees with a high level of education are predisposed, conscious and sensitive to learning in the workplace. The existence of a learning culture can be related to these three employees' responsibilities, but in different ways: the relationship between age and tenure is negative, acting as credibility inhibitors; education is probably positively related to the existence of the culture, acting as a potential facilitator.

Logician social scientists, as well as anthropologists in other fields, are coming to see that "learning cannot be separated from the framework in which it occurs and to re-conceptualize

cognition and learning as activities that occur through social interaction” (Lettuce, 2002). Researchers who have emphasized the importance of the contextual and social influences on learning (Lave, 1997; Lave & Wenger, 1991; Rogoff, 1990) have spoken of ‘situated learning’ or and above all have “cast learning as a basic cultural and social activity and contrast it with cognitive and behavioral models in which learning is an individual activity and as a widget that can be easily separated from the framework in which it takes place” (Lettuce, 2002). This socio-cultural view also gives equal weight to the prominence of both the immediate setting as well as to the larger one in which it is embedded, it shifts the focus to the multi-dimensional view of learning from individuals. This learning style allows them to be seen as being both individual, yet influenced by the social framework in which they have been created. Ngwainmbi (2004) stated that the learning environment in Asia and, most particularly in China, is an authoritarian and schoolmasterish method with the focus being on cooperative learning. This learning culture is the only one that Chinese students are exposed to right from the preschool years where the class size is between 40 and 60 students and the compliance of all is expected (Corwin, 2001).

2.3 Trust

Boon and Holmes (1991) proposed that a state involving confident positive expectations about another’s motives with respect to oneself in situations necessitating risk. The way an organization is designed can have a significant effect on the trust that is engendered within its walls. Organizational elements that affect trust include the ‘softer side’ of the house, including values and behaviors, as well as the organizational structures such as hierarchies and processes.

McAllister (1995) states that the extent to which a person is confident in and willing to act on the basis of, the words, actions and decisions, of another determines the willingness to do business

with another person, and to do that, first of all you have to develop some measure of trust, either in the other person or in the system.

The conscious regulation of one's dependence on another, according to Zand (1972), Cook and Wall (1980) is correlated to the extent to which one is willing to ascribe good intentions to and have confidence in the words and actions of other people. The leaders who work most effectively are those who understand that their job is to make the team function. They accept responsibility and don't sidestep it, but "we" gets the credit.... This is what creates trust and what enables you to get the task done.

Creed and Miles (1996) state that the specific expectation is that another's actions will be beneficial rather than detrimental and the generalized ability is to take it for granted . . . a vast array of features of the social order. When trust is established, it leads to synergy, interdependence and deep respect. Both parties make decisions and choices based on what is right, what is best and what is most highly valued Mayer *et al.*, (1995). The willingness of a party to be receptive to the actions of another party based on the expectation that the other will perform a particular action that is important to the trusting party, is irrespective of the ability to monitor or control that other party.

Lewicki *et al.*, (1998) state that the confident, positive expectations regarding another's conduct in a context of risk reflects an expectation or belief that the other party will act benevolently (Whitener *et al.*, 1998). We are never so vulnerable as when we trust someone--but paradoxically, if we cannot trust, neither can we find love or joy (Walter Anderson).

According to Rousseau *et al.*, (1998) this is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another.

Butler and Cantrell (1984) suggest rectitude, competence, frangibility, allegiance and broad-mindedness as key elements. Butler (1991) proposed eleven separate conditions that the trusted party has to fulfill: competence, rectitude, frangibility, individuality, fairness, promise fulfillment, allegiance, availability, broad-mindedness, receptivity and overall trustworthiness. In their classic article, Mayer *et al.*, (1995) emphasized on capability, benevolence and rectitude. Cunningham and McGregor (2000, pp. 1578-9) and Mishra (1996, p. 265) have both made powerful arguments for including 'reliability'. In the realm of "personal" and the role of "trustworthy," we can point to personal beliefs and behaviors as indicated in the Trust Quotient, but in business, trustworthiness is built through a set of daily operating principles. Trustworthiness is built from habitually behaving in accordance with a set of commonly shared beliefs about how to do business. Trustworthiness breeds trust (the reverse is also true); the combination is what leads to trust and this, by the way, is quite measurable in its impact on the end result.

Gardiner and Whiting (1997) state that developing trust between administrators and workers has a critical effect on whether the learning firm can be successful or not. In fact, 'trust' is the highest form of human motivation. John Eliot states that "like squirrels, the best in every business do what they have learned to do without questioning their abilities - they flat-out trust their skills, which is why we call this high-performance state of mind the 'Trusting Mindset'." Moorman *et al.* (1992) said that trust is a willingness to rely on an exchange partner in whom one has confidence." According to Coulter and Coulter (2002), higher levels of trustworthiness lead to a higher level of co-operation as well as lower levels of perceived risk and uncertainty, and vice-versa. Gulati (1995) states that trust deepens with repeated alliances between the same partners. Parkhe (1993) said that trust is indicated by the increased lengthening of the

relationship between the client and the service provider. Organizational trust has been treated mainly as an interpersonal phenomenon (Mayer *et al.*, 1995; Cummings & Bromiley, 1996; Shockley-Zalabak *et al.*, 2000; Tyler, 2003): 'lateral trust' referring to relations between workers and 'vertical trust' referring to relations between workers and their immediate head, the members of the top management or the organization as a whole (McCauley & Kuhnert, 1992).

This social approach to organizational trust is limited. First, the need for trust within firms has strengthened because of the focus on knowledge as a focal resource; virtualization and globalization make the evolution of equitable trust more challenging. Temporary and technology-enabled task forces, projects and virtual teams increase their 'knowledge' work. Leaders and supervisors have dual responsibilities, working as experts and only 'part-time' as supervisors (Alvesson, 2004). Axelrod (1984) proposed that, in many cases, workers may not have a shared past or future vision. These settings provide limited chances for the natural evolution of Equitable Trust. According to Zeffane and Connell, 2003; Schoorman *et al.*, (2007) trust between workers and trust between workers and supervisors is very thin and fragile, and workers actually become less trusting, resulting in fewer natural opportunities for interpersonal trust to evolve. Equitable Trust refers to trust in equitable organizational factors such as 'vision' and 'diversity', the capability of the top management, the goals of the top management, the management group's technological and commercial competence, structures, roles, carrying out justice, fair processes, technology and prominence, as well as human resource-management policies (Costigan *et al.*, 1998; McKnight *et al.*, 1998; McCauley & Kuhnert, 1992; Kramer, 1999; Tan & Tan, 2000; Atkinson & Butcher, 2003; Kosonen *et al.*, 2008).

Within the framework of sociology, 'trust' is considered crucial in supporting comprehensive coordination within social groups. Luhmann (1979) states that the chances and consanguinity

characterizing modern life demand commitment to--and trust in--the system. He further differentiated 'trust' in abstract systems and interpersonal trust: complex systems like organizations require some basic confidence or trust, both in the institution and in being a member of it. 'Trust' is a critical characteristic that is more essential to business performance than ever.

According to the social-exchange theory and social psychology, 'justice' and the criterion of cooperation are also critical elements in the dimension of organizational trust. This is visible in the symmetry of the psychological contract between employer and employee (Rousseau, 1989; Whitener, 1997; Blau, 1964). According to Parzefall, 2006, Rousseau et al. 1998 "Reciprocal attitude may affect the dyadic relationship; it could also become a generalized level of exchange and meta-psychological contract".

According to Kogut and Zander, 1992, Foss, 1996 "Research on strategy beliefs and economics is seen as a higher order organizing principle that enhances knowledge-sharing and transfer." According to the dynamics capability view of the firm, operational routines support adaptation in difficult situations because of the dynamics-capability view of the organization. Human Resource Management, leadership practices and organizing principles, and the responsibility and decision-making processes among the members of the top management are complex factors (see, e.g. Tzafrir *et al.*, 2004). Creed and Miles (1996) state that the organizational culture in terms of exception, values and identity has an effect on the disinterested nature of organizational trust. Values which support trust are those which encourage the interdependent working together and support of others, just because it is the right thing to do. Trust may be explicitly mentioned in company values, along with themes such as 'focus on the customer' through which people can

legitimately request things of one another and trust that they will support activities that are working towards these common goals.

Multi-disciplinary research emphasized on organizational confidence has identified that 'vision', 'diversity', 'decision-making processes', 'characters' and the HRM practices of the top management as sources of the disinterested element (Costigan *et al.*, 1998; Atkinson & Butcher, 2003). Courtesy in decision-making and HRM practices are also complex factors (Tan & Tan, 2000; Kim & Mauborgne, 2003).

McCauley and Kuhnert (1992) contend that trust between management and workers is not interpersonal in nature, but is derived from the responsibilities, laws and structured relations of the firm. They said that trust is determined by the propriety and efficiency of the organizational structures. Atkinson and Butcher (2003) argued that disinterested organizational trust is based on the responsibilities and systems of the employer organization, especially with regards to the perceptions of the other's competence to fulfill the responsibility or task.

McKnight *et al.*, (1998) divide disinterested trust along the dimensions of situation normality: trusting that success is likely because the situation is normal, and structural confidence: believing that success is likely because the contextual conditions, such as promises, contracts, laws and guarantees, are in order. Zucker (1986) differentiates institution based trust from character-and process-based trust, which could be built on certification, endorsement and indemnification.

Costigan *et al.*, (1998) states that the conviction of an organization is also evaluated based on its leadership style and behavior. For most workers, the decision to trust the members of the top management depends upon the results of its actions. Moreover, it is argued by McCauley and Kuhnert, (1992); Tan and Tan, (2000) that trust in top management is usually dependent upon

the result of its (the top management's) effective decision-making. Perceived organizational justice has an effect on experienced organizational conviction. Values which act to reduce trust are often those which emphasize individual excellence and financial goals above any statements of trust. Where employees are rewarded more for the achievement of individual rather than group goals, this divisive encouragement is likely to lead to non-collaborative and untrustworthy behavior. Discouraging such overt actions are the broader social rules, including what remains of historical social values.

Whitener (1997) argues that organizations that make competent decisions generate greater trust in its upper management. Employees feel that the trust in the organization is partially based on its decision history, possibly in the hands of higher-level superiors with whom they have no interpersonal relationships and they think that they have exchange relationships with the organization as an entity. The trust placed in an organization can be evaluated through the experience of these decisions, routines and activities and where people are dependent on each other and there are reciprocal requirements between them. The dynamics for reciprocity is thus set up by the difficult task culture and the limitations of time as well as the skills and control that the individuals possess. Where dependence is a one-way street, positions of vulnerability and power arise, in which the powerful can take advantage of the vulnerable, almost on a whim. Power behavior in organizations often involves delays and 'not now' can easily become a technique of deliberate sabotage. Even when the powerful are well-intentioned, as most are, the pressures of work lead them to prioritize dependent employees completely off the scale, thus leading to unintentional sabotage (which is of little compensation to the dependent person who is losing out).

Blunsdon and Reed (2003) point out those characteristics of the production system that define the framework in which 'work' occurs, and are therefore included among the organization's values, as is reliance. Shockley-Zalabak *et al.*, (2000) contends that trust in an organization encompasses having the assurance that it is able to produce quality products in terms of expected production technology.

Perry and Mankin (2007) contend that organizational trust incorporates the acknowledgment of aims and values as well as a strong desire (by the employees) to identify with the organization. According to Shockley-Zalabak *et al.*, (2000), 'identity' depends how individuals manage the ambiguity of separation and association as a worker of an organization: those who identify with it are more likely to consider the organization as being worthy of trust.

Employees observe how outsiders such as customers, employees of other companies and the media value their employer. Its notoriety may derive from the conviction of the firm and its services or products, how familiar/popular the brand is or its position in the branch or in the stakeholders' networks. According to Gillespie and Dietz (2009) and Atkinson and Butcher (2003), it is stated that an external notoriety that is determined to be 'good' by the employees, leads to trust in the employer.

Whitener (1997) states the experience of routines, decisions and activities related to justice in the firm's HRM practices has an effect on experienced organizational conviction. In a similar vein, Kim and Mauborgne (2003) contend that fair processes adhere to the human need to be valued as a human being and not as a human asset or as a mere personnel member. Tan and Tan (2000) state that a worker's level of trust may change if the firm does not compensate fairly or recognize the worker's roles.

McCauley and Kuhnert (1992); Tan and Tan (2000), perceived that organizational support also has an effect on experienced organizational conviction. In earlier research done by Rousseau (1989), Whitener (1997) and Blau (1964), the pattern of reciprocity, especially in terms of the psychological agreement between employer and employee, is discussed. Whitener *et al.*, (1998) state that the dissemination of correct information, explanations for decisions and openness in communication affect (the employee's) discernment of the organization's conviction. The exchange of thoughts, ideas and communication in the form of honest information enhance the feeling of trust.

2.4 Combinative Capabilities

Since Cohen and Levinthal (1990) called for the development of an assimilative ability of an organization's learning and innovation, the research on assimilative capability and its ancestor (Liao *et al.*, 2009; Lane *et al.*, 2001 and Narasimhan *et al.*, 2006) has grown rapidly. Organizations require to effectively manage the flow of resources in order to be able to survive and to grow in a competitive business environment. The view depends on the seizure of increasing knowledge as a prominent responsibility related to research diversity. The knowledge based view describes that tacit knowledge is the critical component of the value that an organization adds to input, and that an organization's capability to transmit this tacit knowledge is a very important source from which competitive benefits may be realized. Companies which have a good assimilative capability as well as coalescence capabilities can compete efficiently. A capability is the capacity for a set of resources to interactively perform a stretch task or an activity. Through their continued use, capabilities become stronger and more difficult for competitors to understand and imitate. As a source of competitive advantage, a capability

"should neither be so simple that it is not easy to imitate, nor so complex that it defies internal steering and control."

Assimilative capability is a source from which to gain competitive advantage and it is important as related to innovative capabilities and the absorption of knowledge. The latest research has emphasized on the processes that are indispensable to the schematization of assimilative capacity, i.e. on its predecessor, such as collaborative abilities. According to Kogut and Zander (1992), an organization's collaborative abilities involve the synthesis and application of current and acquired knowledge and Van den Bosch *et al.*, 1999 determine the level of an organization's knowledge-assimilative capacity. Therefore, an organization's innovative learning is the outcome of the organization's collaborative capability of creating new applications from previous knowledge.

Organizational capabilities are socially constructed: when they are leveraged into products and services, they generate value and provide the organization with sustainable competitive benefits and long-term, superior performance. Dynamic capabilities shape and systematically reconfigure organizational competencies through assimilating new knowledge and linking, organizing and integrating the generated knowledge into organizational routines.

A number of 'blanks' in the literature remain in the acceptance of the study of collaborative abilities. First, the indispensable organizational contrivance that is associated with an organization's collaborative abilities is still under-explored. We refer to organizational structure as "design actions" or "structural arrangements" (Nambisan *et al.*, 1999) for combinative capability. For example, an organization must design organizational structure by developing virtual communities for work groups and recapitulate working manuals that can enhance the

organization's combinative capabilities. A few pieces of research emphasized on how organizations actually achieve combinative capability through related organizational contrivance.

Different research emphasized on the process as indispensable – that is, the ascendant of – assimilative capacity. Jansen *et al.*, (2005) address the role played by the organizational ascendant in managing assimilative ability. The ascendant of assimilative capacities includes the level of previous knowledge, organizational form, and combinative capabilities (Van den Bosch *et al.*, 1999). According to Kogut and Zander (1992), these ascendant, combinative capabilities have been empirically shown to have a strong influence on assimilative capability and to be central to the 'knowledge' of the firm. Bordoloi (2004) states that combinative capabilities are particularly necessary in the framework of a call center.

Van den Bosch *et al.* (1999) state that a firm uses three types of combinative capabilities: system capabilities, coordination capabilities and socialization capabilities. Jansen *et al.*, (2005) stated that systems capabilities provide a type of organizational memory for handling routine situations. Van den Bosch *et al.* (1999) state that systems capabilities are related to various aspects of building internal work and reflect the degree to which laws, instructions, procedures and communications are laid down in written documents or formal systems. Two functions of systems capabilities are "synchronization" and "formalization", "which prepare patterns for organization action.

Joglar and Chaparro, (2007) state that 'coordination capabilities' facilitate the relationships within a group, between teams and among organizational unities. Three features of coordination capabilities are the firm's cross-function interfaces, its decision-making participation and job rotation. Joglar and Chaparro (2007) contend that organizations make many internal efforts to

improve knowledge diffusion through the development of a common understanding related to its socialization capabilities. According to Kenny and Gudergan (2006), a firm's identity and value can be built through socialization capabilities and the primary integration requirement is not necessary. Connectedness and socialization tactics are two functions of socialization capabilities.

2.5 Knowledge-Management Practices

According to Wong, (2005), 'knowledge' is the most important factor for business success. Organizations are becoming more knowledge-intensive, they are hiring "minds" more than "hands" and the needs for leveraging the value of knowledge are increasing.

"'Knowledge Management' caters to the critical issues of organizational adaption, survival and competence in the face of increasingly environmental change. Essentially, it embodies organizational processes that seek a synergistic combination of data-and-information- processing capacity of information technologies, and the creative and innovative capacity of human beings" (Malhotra, 1997). Wong (2005) stated that many organizations in the global market, especially the larger ones which are aware of this, try to explore the field of Knowledge Management (KM) in order to improve and sustain their competitiveness. Knowledge Management focuses on 'doing the right thing' instead of 'doing things right.' To our way of thinking, 'knowledge management' is a framework within which the organization views all of its processes as 'knowledge processes'. According to this view, all of a business' processes involve the creation, dissemination, renewal and application of knowledge as related to organizational sustenance and survival.

Drucker (1993) states that the latest economic systems are knowledge-intensive, as society has moved into a post capitalist mode, with the result being that the management of knowledge

resources is increasingly critical in knowledge-based society. Kwan and Balasubramanian (2003) propose that Knowledge Management (KM) involves establishing an environment that allows the employees in organizations to capture, share, create and leverage 'knowledge' so as to make the performance better. Scarbrough, Swan and Preston (OECD, 2003) contend 'knowledge management' as follows: "Knowledge Management (KM) covers any intentional, systematic procedure of procuring, acquiring, sharing and using productive knowledge, wherever it resides, to improve learning and performance in organizations." According to OECD (2003), KM is a matter of using a category of practices which are difficult to observe and employ and sometimes are even unknown to those who possess them. The most important issue for companies is to ensure that they focus on the synergy of data and the information-processing capacity of information technologies as well as the creative and innovative capacity of their human members. Advanced information technologies can increasingly accomplish 'programmable' tasks that were traditionally performed by humans. If a procedure can be programmed, it can be delegated to information technology in one form or another. The information and control systems in organizations are intended to achieve the 'programming', for optimization and efficiency. However, checks and balances need to be built into the organizational processes to ensure that such 'programs' are continuously updated in alignment with the dynamically-changing external environment.

Evanescence assets comprise one of the major factors in the present and future success of organizations (Banegil Palacios & Sanguino Galvan, 2007) therefore; knowledge is the main source of competitive advantage. But managers do not have enough insight about knowledge productivity and its growth, which leads to distorted resource allocation and poor (external) communication about organizational performance. Instead of the traditional practice of

controlling the people and their behaviors through the setting up of pre-defined goals and procedures, they need to view the organization as a human community that is capable of providing diverse meanings to information outputs that are generated by the technological systems. Managers need to develop a greater appreciation of the intangible human assets that are captured in the minds and inherent in the experiences of their 'knowledge workers', because without these assets, the companies are simply not equipped with a vision to foresee or to imagine the future if they are facing a fog of unknowingness. As noted by Strassmann, elevating computerization to the level of a 'magic bullet' may lead to the diminishing of what matters the most in any enterprise: educated, committed and imaginative individuals working for organizations that place greater emphasis on people rather than on technologies.

According to Gao *et al.*, (2008), Knowledge Management means to use all of the information within an organization--which allows individuals to apply suitable information and knowledge to what they already know--to create new knowledge (Raisinghani, 2000). The major task is the development of organizational structures that combine the most advanced elements of information resources, indispensable input of human response, and effective decision-making. Wilson and Asay (1999) said that Knowledge Management is a process that provides quick access to information and expertise throughout whole system, as needed, to improve organizational learning and performance. Gold *et al.*, (2001) state that firms require the ability to leverage current knowledge and create new knowledge that positions them in the chosen markets as competitive entities. The 'knowledge workers' would also need to have an overall understanding of the business of their organization and how their work contexts fit within it. Such understanding is necessary for their active involvement in the organizational un-learning and re-learning processes. If they understand the implications of changes in their work contexts

for the business enterprise, only then can they be instrumental in synchronizing the organization's 'best practices' within the external reality of the business environment. Given the need for autonomy in learning and decision making, such 'knowledge workers' would also need to be comfortable with self-control and self-learning. In other words, they would need to act in an entrepreneurial mode that involves a higher degree of responsibility and authority as well as capability and intelligence for the handling of both.

The latest theoretical context by Crossan *et al.*, (1999) proposes organizational learning as part of organizational knowledge-management procedures that can be categorized into new learning and improving what has already been learned.

Organizational learning can be done at the individual level, group level and organization level (Vera & Crossan, 2004). Senge (1994) contends that knowledge gathered from the same source of information could be different in quality and in implementation due to the different capabilities of individuals, groups and organizations. According to Crossan *et al.*, (1999) at each level the organization can gain or obtain new knowledge and also transmit this knowledge continuously.

Integrating instinct, awareness and institutionalizing (the four 'Is') are four social and psychological processes that connect the levels of obtaining and transferring knowledge. These can occur respectively at the individual level, group level and organization level. The processes can be simultaneously transmitted into the first two stages of knowledge management, which are obtaining and organizing through instinct and awareness to integrating and institutionalizing.

Researchers use various terms for obtaining knowledge, such as Nonaka's (1991) "knowledge creation", Huber's (1991) "knowledge acquisition", Cohen and Levinthal's (1990) "absorptive

capacity”, and March’s (1991) “knowledge exploration and exploitation”. Other researchers extend the need for organizations to organize newly acquired knowledge by interpretation, storing, integration and distribution

‘Knowledge’ is simply “information” or “data” if it facilitate organizations in creating value. Information is descriptive and it is derived from the answers to “who”, “what”, “where”, “when” questions. According to Pfeffer and Sutton (2000), the essential stage is to apply the knowledge to transform the “how-to” questions into sustainable value within the entire knowledge-management process. Organizations should apply knowledge to develop the values that are embedded within the knowledge.

Knowledge must be obtained before it can be effectively manipulated to meet the purpose of an organization. Duffy, (2000) states that ‘knowledge’ can be created inside an organization or gained from external sources. The critical factor in an organization’s success and competitiveness is the creation and transfer of knowledge and the process of gaining new knowledge. In order to make the most appropriate decision, the concept of ‘knowledge management’ ensures that the correct information is transferred to the right person at the right time. The use of the information and control systems as well as compliance with pre-defined goals, objectives and best practices may not necessarily achieve long-term organizational competence. This is the world of ‘re-everything,’ which challenges the assumptions underlying the ‘accepted way of doing things.’ This world needs the capability of understanding the problems in a new light, given the changing environmental conditions. The focus is not only on finding the ‘right’ answers but on asking the ‘right’ questions. This world is contrasted from the ‘old world’ by its emphasis on ‘doing the right thing’ rather than ‘doing things right. The scope and the area of knowledge management have increased but the indispensable rules that govern it

cannot change. How we manage knowledge determines the decisions that we make and the actions that we take. We must identify and understand the procedures that affect our decision-making and actions so that important steps may be taken to enhance the quality of these procedures and, as a result, enhance the quality of the actions taken and the decisions made.

Organizations are focused on their efforts to improve the delivery of knowledge. Drucker (1995) states that 'knowledge' has become the main economic resource, perhaps even the source of competitive advantage. Natarajan and Ganesh (2008) state that an organization's diversity process is a force which has been termed as the "knowledge force", which is powered by the 'knowledge workers'. The growth in the firm's diversity is determined by the knowledge force and it is reflected in terms of customers retained and gained, and the new services that are launched from time to time.

2.6 Leadership

Bethel (1990) contends that good leadership has the ability to impress others. (Bohn and Grafton (2002) suggest that 'leadership' is a source from which to develop a clear vision, provide self-confidence to their assistants and it is possible with the help of collaboration and communication to detail.

Heilbrun (1994) said that the concept of 'leadership' has three steps of discussion. The first step is to define leaders. The second step is the attitude of the leaders. The third step is to focus on how well they conclusively coordinate and behave with individuals and concerns as well as material matters between leaders and assistants (The concept of leadership contingency). Burns (1978) and Bass (1997) contend that, on the basis of recently publicized leadership concepts, we can divide leadership theories into "covenant leadership" and "revolutionized leadership".

Pounder (2001), Kim and Shim (2003) suggest that 'covenant leadership' is assimilated by needs, with the focus on fundamental and peripheral satisfaction against needs. It has a standard process to control and its aim is to maintain the stability of the organization. Robbins (2003) stated that intercourse leadership creates the aim assimilation through illuminating the responsibilities and task requests, as it encourages and leads assistants through these activities. A corporation is an ingenious device for obtaining profit without individual responsibility. Namely, leaders will guarantee and reward the assistant's efforts and fulfill their relevant demands to gain pride in and support from these activities. Bass (1997) contends that whenever assistants exhibit any erroneous behavior, the leader has to punish them immediately. Personal leadership is the process of keeping your vision and values before you and aligning your life in congruence with them.

According to Burns, (1978) and Fry, (2003, the higher level of the task request of the worker can be improved through conversational leadership and it will enhance the plausible ability of the worker and it also allows the assistants with more responsibilities to become an employee, building upon self- improvement and self-assimilation. In this way, these employees can simultaneously fulfill the company's aims and realize individual metamorphic achievement. Tichy and Devanna (1986) propose the detailed definition of 'transformational leadership'. They state that transformational leaders should be speculative in bringing improvement in the organization and also create the changed vision. By the procedure of the change process, the transformational leaders can receive support in the organization because, within this research, the learning organization is a new concept of business management and for subsequent research we can also follow the new leadership theories and divide 'leadership' into "intercourse leadership" and "revolutionized leadership". Peter F. Drucker contends that 'management' is doing things

right while 'leadership' is doing the right things. The most important contribution that leadership needs to make in the 21st century is to increase the productivity of 'knowledge work' and the 'knowledge worker'.

Organization learning can be affected by leadership (Popper & Lipshitz, 2000). Leaders can make the system of the organization and make the organizational culture by using several affairs, actions and service; so basically, the organization's learning is affected by its leadership. According to Lam, 2002, Leithwood and Menzies, 1998 and Leithwood et al., 1998; 1996, organization learning and leadership are related to each other; the process of organization learning activities can also be improved by the organization's leaders.

According to Edmondson (2002), Gilley and Maycunich, (2000) and Popper and Lipshitz (2000), the critical factor that affects organizational learning is leadership. The ability of an organization's learning can be improved by leadership through its vision and by the learning opportunities that are created by the leaders and they can also provide opportunities for their assistants to bring improvement to the organization. Benjamin Franklin stated that the great part of mankind's miseries is brought upon them by the false estimates that they have made of the value of things. Vera and Crossan (2004) stated that the organization's learning activities are affected by the development models for high-rank administrators and strategic leadership. The basic purpose is to perform research on how the systematic factors of organizational learning are affected by the leader. Leaders should be vigilant about engaging in learning activities in order to enhance the level of organizational learning and to be able to face the fierce competition.

According to a cross-nation research done on revolutionized leadership and organization learning conducted by Lam (2002), the process and achievement of organizational learning can actually

be affected by transformational leadership. Leithwood *et al.*, (1998) argue that revolutionized leadership can affect the abundant efficiency of organizational learning. The organization's learning can be effectively affected by revolutionized leadership and it also enhances the procedure and achievement of the organization's learning.

According to Lam (2002), Sadler (2001) and Leithwood *et al.*, (1998) revolutionized leadership has a positive impact on emphasizing and encouraging spirit of teamwork and involvement. According to Bass (1997) and Avolio (1990), the process of the organization's learning and revolutionized leadership have a significant relationship and firms can bring improvement and efficiency in their learning with revolutionized leadership.

2.7 Culture

An organization's hindrance to modifying when facing environmental pressures and ambivalence is a circumstance for which many possible solutions are offered. Schein (1985, 1992) suggests an approach to this problem that is very popular and widely discussed: an organization's culture that causes hindrance at the root level requires changes. The past and current assumptions, experiences, philosophy, and values that hold it together and are expressed in its self-image, inner workings, interactions with the outside world and future expectations, is called the 'culture' of an organization. 'Culture' is basically the values and behaviors that comprise the social and psychological environment of the organization. John P. Kotter and James L. Heskett (1992) state that having an organizational culture serves three purposes: it aligns, motivates and controls large groups of people – three functions that are difficult to do by any source. As such, the powerful leadership tool is 'culture'. The psychology, behaviors, experiment, expectations, personal and cultural values are determined by the 'culture' of an organization. The leaders pay attention on

organization design and structure in order to measure, and control on a regular basis. Organizational culture is unique to every organization and is one of the hardest things to change. In a management dissertation on organizational culture in particular (Deal & Kennedy, 1982; Peters & Waterman, 1982), which also includes the work of Schein, state that 'culture' is a mechanism that is used by management to achieve specific goals of the organization as well as to control the beliefs, understanding and attitudes of individuals. This concept of culture is also attested to in discussions of schools as organizations, in what Evers and Lakomski (1991) emphasized on educational administration from the cultural perspective.

Schein's claim that making a 'culture' is a matter of endeavor toward impression and integration and that group learning happens at the theoretical internal level and behavioral level, the submerged levels of learning must be thought of as views or ... shared basic conjecture" (Schein, 1992, p. 11). Schein (1992, p. 12) contends that "A group culture can be defined as: a pattern that is used to solve the problems of external transformation and internal integration assumptions, to teach a new worker the 'right' way of perceiving, thinking and feeling in relation to those problems."

The concept of 'culture' is useful for the leader to understand "seemingly unfathomable and inconsistent aspects of groups and organizations", unspoken and unidentified understanding which help people's attitudes and actions and overt explanations of their conduct. We cannot encounter or debate these; it is very difficult to modify them.

According to the meaning of Argyris and Schön's 'double-loop learning' we have to modify them and the more consistent parts of the cognitive system. This type of learning procedure is immersed and such a learning process is deeply exhilarating; uncertainty-creating and leaders

must become aware of defense mechanisms so that the existing culture of the group is defended. If they do not, the 'culture' will manage them instead of it being managed by them. Schein is clear regarding the relation between culture and leadership. There are two types of leaders: one of them creates a culture while the other create groups and organizations. After the culture is created, they determine the criteria for leadership and then decide who the leader is. When the culture becomes mal-functioned, it is the specific task of leadership to perceive the fully-functional and mal-functioned factors of the existing culture and to manage cultural development and modification in such a way that the group can exist in a modified environment (Schein, 1992).

The hurdles in Schein's proposal for organizational culture are in part the difficulties encountered by all cultural analysts. Schein's solution to this apparent inconsistency, as we saw, is plunged in his formulation of leadership as the development of culture, a model evocative of the classical view of change (Chandler, 1966) as well as the learning leader.

In organizational learning theory Schein, Argyris and Schön, Senge, and many other writers address the fact that the problem is anything but trivial, and its solution centres on being able to explain the origins and nature of concepts-in-use, or the "pattern of shared basic assumptions."

In order to bring change in the culture of the group or organization, these are the roots that have to be changed. The censorious issue is how did group workers learn by them and come by these assumptions? This question remains unanswered by Schein and he cannot give the answer to this question. The question can be answered when it is recognized that human cognition has non-symbolic ways, while different, is not rapidly separated from its external, symbolic representation. Hutchins (1996b) contends that the language and symbolic systems which hold the traditional assumption that human cognition is identical with its public expressions, has

misled us and has led to a exiguous establishment of human cognition and comprehension that eliminate the knowledge of our inner world of feelings, values and the things that we know how to do but which we cannot express in symbolic form. Unlike linear computers, our brains are not fundamentally symbolic processors, but are a vast amalgamation of interlinked neural nets which works in parallel rather than linear fashion. Neurons are its base unit that assemble into patterns when suitably activated, and dis-assemble when they are not. The human brain can process and recognize wonderfully efficient patterns because of its processing capability and symbols, such as words. Neural nets have enormous numbers of connections, and it is this variation which explains human strategy. Churchland (1993) states "The particular configuration of weights within that network can recognize the character of one's cognition, one's perception, and one's attitude. The anthropologists Strauss and Quinn (1997); also Holland and Quinn (1993) state that this is the feature of our brain which accounts for the unprecedented plasticity of human nature, and it is this plasticity which made 'culture' possible in the first place, a recognition shared by everyone. No matter what is happening in the outer/"public" or inner/"private" world, the human mind constructs a meaning of it. The analysis of cultural meanings, created by intrapersonal mental system assumptions, understanding, schemas, and extra personal, world systems is the root of analysis. They represent the culture, and the problem, in their view and why both are 'right'.

As we know, humans also develop relatively consistent systems which may remain for a considerable period of time, so how can we explain the enormous plasticity of human nature? How to explain the durability of cultural centripetal tendencies in organizational theory is a discriminating issue for cultural theory as well as how to modify the mal-functional attitudes and routines. According to Strauss and Quinn, the interactions between these schemas and this world,

the new definition “consists of regular occurrences in the humanly-created world”. Strauss and Quinn (1997) summarize such regularities. Culture is a cognitive procedure, it is not different from the everyday routines, interactions with others, understanding with others, with materials or artifacts. According to Strauss and Quinn (1997), these are the factors which contribute to the endurance of shared cultural understanding, as re-described in terms of net architecture and properties. It is the understanding of these which is most relevant. For Schein and other organizational learning theorists, the propagation of change in an organization’s culture understands this net architecture and properties, as follows:

- Neuronal connections that are activated by the culture are accelerated and are not easily undone.
- Cultural understanding is self-reinforcing. Tienson (1990) states that this is so because the interrelationship strengths or gravity of a pattern of activation are set so that they can complete themselves in situations where only a few of their terminals are working. This tendency would make it difficult to antagonize a pattern, as well as screen out invalidating the manifestation in the sense that invalidating the manifestation is disregarded by the older self-completing pattern.
- Negative schemas, for example, ‘boilerplate’, may cause people to avoid cases which change their thinking, that is, their schemas, because they could contain testimony which contradicts the boilerplate or negative schema.
- The last cause for the persistence of cultural schemas is that strong (positive or negative) feelings preceded an experience, which would aggrandize the neural connections that resulted from the experience. The result of possessing such neuronal tendencies favor the persistence of schemas by considering these features together. Organizational behavior is represented by

these durable entities. To maintain these schemas – resisting change, in other words, it is determined by constantly interacting in the workplace or elsewhere, as well as by organizational policies, practices and routines and, therefore, is not simply caused by the properties of one's individual schemas.

2.8 Technology

The technological explosion has changed the way we communicate, store, share and exchange data at low cost and high speed. The availability of personal computers on every worker's desk has made information more rapidly available than ever. Information Technology (IT) systems enable the integration of information and knowledge in the organization as well as the development, transfer, storage and safe-keeping of the organization's knowledge resource.

According to Powell and Dent-Micallef (1997) and Webb and Schlemmer (2006), a technological system is necessary for effective 'knowledge management'; studies that have examined the link between information technologies and the measures of organizational performance have failed to demonstrate whether or not IT is directly related to performance. In their study of U.S. firms, Powell and Dent-Micallef (1997) found that IT in itself did not improve organizational performance, but it can enhance organizational performance when it works with human and business assets. Teece et al. (1997) contend that the technology is easily copied so that is why there is no association between technology and performance; it becomes a fragile source of competitive advantage, but technology is not always directly linked to organizational performance. Research shows that IT can improve performance and lead to sustained advantage when combined with other resources (Clemons and Row, 1991; Powell and Dent-Micallef, 1997). As such, the technological system may not directly contribute to organizational

performance, but it is important for the acquisition of knowledge and knowledge-application processes. Ruggles (1998) states that during the last few decades, contributions made to the field of 'knowledge management' (thereafter KM) have grown and put forward a series of doubts and critiques about the value and the effectiveness of KM technologies and solutions.

Organizations that are facing poor results and dissatisfaction with these tools (Rigby, 2001 and Rigby & Bilodeau, 2005) invest a reasonable amount of money and effort in implementing ICT-based KM applications (Rigby & Bilodeau, 2007). From a new, institutional perspective, technology can be seen in two major ways. According to Meyer and Rowan (1977), technology is the "core" that expresses the way in which work is actually carried out, so it should be protected and preserved from organizational pressures and myths. The instrumental dimension of the organization can be represented by the technology and the institutional level protects this core from external pressures. Thompson (1967) contends that the organization's role is to comply with rational myths, at a technological level which has the role of performing the instrumental function of the organization such as producing goods or performing services. Scott, (2001) states that technology itself can be considered as an institutional vehicle, incorporating those rational myths and values that make the organization and adopts it as a legitimate organization.

Technology is no longer a 'core' to be protected by institutional myths and pressures. Rather technology is a formal structure in itself, being a symbolic layer of rational fashions. As such, it is adopted to seek external recognition. Technology would be subject to the same institutional dynamics that are outlined above. Firstly, actual working practices, technological tools themselves could be decoupled and would continue to operate side by side with technology. Secondly, since technology becomes an integral part of the institutionalized system, the goal is to

verify the effectiveness of the adopted technology invariably carried out 'rejoicing' in the technological myth and not obtaining an objective verification of its utility (Meyer & Rowan, 1977). Third, technology can play an important role in forming a bridge between the organization and its institutionalized environment (Scott, 2001). Professional institutional networks that influence organizational choices by proposing legitimate technologies also act as a vehicle, through technology, to legitimize behavioral and value systems derived from technological tools and methods. According to Beck and Walgenbach (2005) and Currie and Suhomlinova (2006), "Isomorphic processes can be observed at the technological level by a researcher. Technology has been identified as subject to isomorphic processes".

Exploring the idea of using technology in more depth can be fruitfully analyzed in terms of institutional rather than instrumental dynamics. Knowledge-Management technologies, as part of a formal structure, can be seen as a celebration of the organizational identity as a Knowledge Intensive Company (KIC). These myths are imported from the outside as a means to legitimize the organization in a wider knowledge society by KM technologies. A review of existing conceptualizations of IT-enabled knowledge management suggests that sparse attention has been given to the human aspects of knowledge-creation. Given the increasingly 'wicked' environments, this dominant model of organizational knowledge-management systems is increasingly constrained by its 'Lockean and Leibnizian' nature. It is suggested that the 'Hegelian and Kantian' systems are better suited for the so-called 'wicked' environments.

The knowledge structure of the KIC is embedded in KM technologies in addition to various institutional networks which are externally conveyed by these structures. On the other hand, they are decoupled from the way in which people actually operate these structures and, consequently, technologies. To avoid a conflict between legitimate and actual behaviors, decoupling is used. In

this sense, the authors observe that regardless of the evaluation of their performance, these technologies are chosen, changed and updated. As an organization tends to adopt KM technologies and solutions which are already in use and recommended by other organizations and professional networks, the KM technologies and solutions are subject to isomorphic dynamics. Regardless of their proven performance or applicability to the specific organizational context, the use of new technology becomes a marker of their legitimacy. The confirmation of these hypotheses would lead us to conclude that analyzing KM technologies in terms of their instrumental value is like judging fashionable clothes for their capacity to keep warm; if their role is symbolic, issues such as efficacy matter only as long as they are part of the myth. A rational myth rather than a rational choice will be represented by the adoption of KM technologies.

2.9 The Development of Competency

The competency approach to human resource management is not new. In 1970, competency-based approaches within the corporate environment were initiated at that time and their use has increased. David McClelland introduced the idea of “competency” into the human resource literature; its selection procedures improved due to his efforts to assist the United States Information Agency. McClelland stated that the job-analytic approaches to the selection of personnel was the proposal to test for competence, intelligence testing and the traditional job-analytic approaches to personnel selection and the then-growing dissatisfaction. McClelland (1973) proposed the selection of Foreign Service Information Officers in his research as a case study. The competencies such as cross-cultural positive regards, interpersonal sensitivity and management skills differentiated the ‘superior’ from the ‘average’ Information Officers (Dubois, 1993).

Firms need to effectively manage the flow of resources in order to survive and to grow in the competitive business environment. The knowledge-based view explains that tacit knowledge is the critical component of the value that a firm adds to its input and that a firm's ability to transfer this tacit knowledge is the essential source of sustained competitive advantage. When firms interact with external constituents, be they suppliers or customers, they seek to acquire and/or maintain access to knowledge that otherwise would not be efficiently available. Knowledge transfer is a function of the absorptive capacity and the combinative capability that characterize the competitiveness. Resources are inputs into a firm's production process, such as capital, equipment, and the skills of individual employees, patents, finance and talented managers. Resources are either tangible or intangible in nature. With increasing effectiveness, the set of resources available to the firm tends to become larger.⁵ Individual resources may not yield to a competitive advantage. It is through the synergistic combination and integration of sets of resources that competitive advantages are formed.

Ulrich (1998) states that, through competencies, human capital, as part of intellectual capital, can be observed. Bontis and Fitz-enz (2002) argue that the knowledge, talent and experience of employees are derived from human capital, whereas codified knowledge and relational capital represent knowledge that is embedded in the organizational value chain through structural capital. The ascendant of human capital has to do with values, motives, talents, knowledge, skills, and experience. Mansfield (1999) states that competency is the indispensable characteristic of any individual that results in effective or good performance. Boyatzis (1982) stated that successful performance distinguished from less-successful performance, includes personal qualities, motives, experience and behavioral characteristics that can be differentiated by limited factors.

Competencies components are composed of knowledge and skills effectiveness, volition, drive and use of will. In the old economy, due to the afore-mentioned cluster quantity, diligence and productivity, the cognitive component of competencies was predominantly fostered. Florida (2002) contends that in the evolving innovative economy, harmonious persons are living in communities which let them validate their identities. The cognitive component of competencies leads towards fulfilled individuals whose aspirations are in accordance with the organization's goals. Sustainable competitive advantage is the prolonged benefit of implementing a unique value-creating strategy based on the unique combination of internal organizational resources and capabilities that cannot be replicated by competitors.

In the mid-twentieth century, the concept of behaviorism and cognition that prevailed as a connotation is only now making its way in recent management studies; many scholars (Snow *et al.*, 1996. Atman, 1987. Huitt, 1999, Kolbe, 1997 and Bertoneclj & Kovacj, 2007) have renewed interest in the concept and its increasing importance to corporate performance. Competency-based approaches have proved to be a critical tool in many organizational functions throughout the years, such as succession planning as well as workforce and performance appraisal.

For selecting these approaches, the major reasons are the following: they can provide knowledge, behaviors, identification of the skills and capabilities required to fulfill current and future personnel selection needs.

To eliminate the gap between the competencies requested by a project, job role, or enterprise diversity and those available, the focus should be on the individual and group development plans. A competency can be defined as: a specific, definable, identifiable and measurable piece/body of knowledge, ability, skill and/or other deployment-related characteristic like

attitude, behavior, physical ability which a human resource may possess and which is important for the performance of an activity within a specific business framework. The main definition of “competencies” has been put forward from different writers and companies in an effort to provide a complete understanding of the different aspects that this term incorporates.

Further to the study and research that we have conducted on a CM-based analysis of the existing definitions, we have adopted the following definition of the term “competency”: “The combination of explicit knowledge and tacit, skills and behavior that gives someone the ability for effectiveness in task performance is called competency”.

‘Competency’ is defined by the words of Marrelli (1998): “Competencies are measurable human capabilities that are required for effective work performance demands. Dubois (1998) stated that “Competencies are those characteristics—knowledge, skills, mindsets, thought patterns and the like that, when used either singularly or in various combinations, result in successful performance.”

HR-XML: “A specific, identifiable, definable and measurable knowledge, skill, ability and/or other deployment-related characteristic (e.g. attitude, behavior, physical ability) which a human resource may possess and which is necessary for, or material to, the performance of an activity within a specific business context.

Boyatzis (1982) - Boyatzis described competencies as “underlying characteristics of an individual, which are, causally (change in one variable cause change in another) related to effective job performance.”

Selby et al. (2000) described it as “an ability expressed in terms of behavior”. The UK National Vocational Council for Vocational Qualification (1997) described competency as “performance standards, the ability to perform in work roles or jobs to the standard required in employment”

The Treasury Board of Canada, Secretariat (1999) “Competencies’ are the knowledge, skills, abilities and behaviors that an employee applies in performing his/her work and that are the key employee related levers for achieving results that are relevant to the organization’s business strategies.”

Perrenaud (2000) “A capacity to mobilize diverse cognitive resources to meet a certain type of situation”. LeBoterf (1998) LeBoterf says that “competencies are not themselves resources in the sense of knowing how to act, knowing how to do, or attitudes, but they mobilize, integrate and orchestrate such resources. This mobilization is only pertinent in one situation, and each situation is unique, although it could be approached as an analogy to other situations that are already known.”

Jackson and Schuler (2003) Competencies are defined as “the skills, knowledge, abilities and other characteristics that someone needs to perform a job effectively”. Intagliata et al. (2000) - “Most fundamentally, competencies provide organizations with a way to define, in behavioral terms, what their leaders need to do to produce the results that the organization desires and do so in a way that is consistent with and builds its culture. They should provide the ‘North Star’ by which leaders at all levels navigate in order to create synergy and produce more significant and consistent results.” ‘PeopleSoft’ claims “a set of measurable and observable knowledge, skills and behaviors that contribute to success in a job/position.” The Gartner Group said that “a

competency is a set of characteristics, including skills, knowledge and attributes, that causes or forecasts performance.”

The current definition of the concept of competency: “A descriptive name for the specific competency, competency definition and demonstrated behavior. The general category of the competency is the “people-management competencies”, which amongst others can include the competencies of “Building a Team’s Spirit” and “Developing People”.

The life cycle of competencies consists of four macro-phases the purpose of which is to improve and create individual and organizational competencies. The four macro-phases are as follows: competency mapping, competency diagnosis, competency development and competency monitoring. The purpose of competency mapping is to provide the firm with an overview of all the important competencies in order to achieve the aims that are defined by the organizational business plan, the groups’ needs, the requirements of projects, and the requirements of job roles. The required proficiency level for each task profile is defined in this phase as well. The second phase is competency diagnosis: the equivalent proficiency level that each individual employee possesses against the current situation of the competencies. An essential task in this phase is a skill-gap analysis in order to define the distance between the number and level of competencies that the workers possess, and compare these with the number and level of competencies needed by the firm, according to their task responsibility.

The third phase is competency development and it deals with the scheduling of activities according to the previous two phases and the results of the skill-gap analysis to increase the number and proficiency level of the competencies that the workers have. The last phase is the examination/monitoring of competencies, i.e. a continuous examination of the results achieved

by the competency development phase. Category competency definition demonstrates behavior provides team members with the excitement and desire to cooperate with each other, contributing to common goals. People-management competencies build team spirit, create a common mission and a feeling of belonging to a team which aims at developing people. It helps team members to achieve their potential in personal development, provides experience transfer and mentoring, gives feedback on the strengths and weaknesses of the team members, encourages respectful and helpful behaviour to the other team members. The components of a competency-based system are as follows:

Identification/assessment of desired results: In order to identify the “desired state” competencies, one needs to know what organizational performance is being attempted to achieve. To evaluate the success of your development efforts, organizational performance assessment will also provide data to help.

Employee development strategies and resources: Wills (1995) observed that when discussing the meaning of competency, “a Tower of Babel Image” emerges. From her analysis, five meanings of competency were evident and the definitions varied from broad to specific. A human characteristic by which people may differ is in the performance of work, while another included only competence to perform specific job-related tasks. Data on job performance and employees are gathered, measured and used by establishing occupational clusters, comparing jobs, identifying transferable competencies, and so on.

2.10 Innovation

KM is an initiator for organizations that want to turn business culture agitation into opportunity. Your line of business is affected by every change in the business environment. Implementing

individuals, team-level assessments and private companies from the smallest to the largest. The measure of innovation for organizations can be conducted by surveys, workshops, consultants or internal benchmarking. Today, there is no established general way to measure organizational innovation. In business and economics, innovation is the catalyst to growth. With rapid advancements in transportation and communications over the past few decades, the old world concepts of factor endowments and comparative advantage which focused on an area's unique inputs are outmoded for today's global economy.

There are so many definitions for 'knowledge management'. Gloet and Terziovski (2004) contend that knowledge management is the experience, knowledge and expertise that create new capabilities, enable best performance, make innovation and improve customer value. Knowledge Management is described as an 'umbrella' term by authors for a variety of interlocking terms, such as knowledge creation, knowledge valuation and metrics, indexing, knowledge transport, knowledge mapping, storage and distribution as well as knowledge sharing.

Darroch and McNaughton (2002) propose that knowledge management creates or locates knowledge, manages the flow of knowledge and ensures that knowledge is used effectively and efficiently to achieve long-term advantages for the organization. A firm that competes in knowledge management has a knowledge-orientation and therefore, that knowledge management provides a guideline business philosophy that influences the diversities undertaken by an organization's managers.

Parlby and Taylor (2000) described knowledge management as supporting innovation, to explode the organization's thinking power and generate new ideas. Knowledge sharing, collaboration, continual learning and improvement can be achieved by knowledge management.

To manage the creation, sharing, harvesting and leveraging of knowledge as an organizational asset, knowledge management is a planned, structured approach. Knowledge Management can improve the firm's capability, speed and effectiveness in providing products or services for the benefit of clients, in line with its business strategy. There are three levels where knowledge management takes place and these are the individual level, the team level and the organizational level. Knowledge Management is not only focused on innovation, but it also provides an environment which is suitable for innovation. There are three main applications of knowledge management in connection with innovation.

The first driver for knowledge management's responsibility in innovation in the current business environment is to build, create and maintain competitive benefits through the collaboration and utilization of knowledge. Cavusgil *et al.*, (2003) suggest that creating an innovation program is becoming complex due to changing customer requirements, technological modifications and extensive competitive pressure. Cavusgil *et al.*, (2003) argue that large organizations like Xerox and Hitachi start working together across organizational boundaries to gain a competitive advantage. Knowledge and skills gained through such collaboration is an effective and efficient way to gain successful innovation.

The second driver of knowledge management's responsibility in innovation is that, in the innovation procedure, the complexity can be reduced through knowledge and managing knowledge as a resource that will consequently be of significant importance. According to Adams and Lamont, 2003, Cardinal *et al.*, (2001), Darroch and McNaughton (2002), Pyka (2002) and Shani *et al.*, (2003), innovation is dependent on the availability of knowledge and therefore the explosion of its richness and the reach of knowledge has to be recognized and managed.

Cavusgil et al. (2003) argue that knowledge management is a source through which we can address the complexity of innovation. It helps in managing new knowledge which is created by the innovation procedure, but also in managing existing knowledge. Cavusgil et al. (2003) propose that organizations that create and use knowledge efficiently are capable of innovating more quickly and more successfully than those that do not. By synergistic creation and the management of knowledge, innovation networks are driven, (Pyka, 2002).

The third driver of applying knowledge management is the integration of both internal and external knowledge for the benefit of the innovation procedure; knowledge can be exchanged, shared, evolved, refined and made available at the point of need.

To allow personal and organizational learning and innovation we require knowledge integration through knowledge-management platforms, tools and processes. This needs likability, adaptability and dynamic representation of business information and knowledge. According to Baddi and Sharif, (2003) and Chen *et al.*, (2004), without effective information and knowledge management, organizations could be underutilizing knowledge as a resource for innovation.

With the help of innovation, KM structures contribute to achieve a sustainable competitive benefit. The qualities required by the organization to gain competitive benefit cannot be achieved by the information and knowledge-management systems alone. Knowledge-Management systems using the resources of other organizations and core competencies is the basic factor to developing and maintaining a competitive advantage through product and process innovation.

According to Adams and Lamont (2003), knowledge-management structures play a main role in such a position, in the conversion of learning capabilities and core competencies into sustainable benefit by revitalizing organizational learning and resource-development processes.

According to Shani *et al.*, (2003), the organization can capitalize and create new knowledge that can be determined by knowledge management and innovation configuration and providing a framework for product development efforts. According to Montes *et al.*, (2004) and Subramaniam and Youndt (2005), the organizations that have good innovative capability are better at new product introduction and new market entry which enable organizations to receive favorable innovation outcomes and improve their performance. Youndt *et al.*, (1996) states that the organizations are dependent on the knowledge, skill and commitment of the organization's workers to take innovation initiatives.

2.11 Organizational Performance

Lin *et al.* (2008) state that the degree to which organizational objectives are met is measured by organizational performance. Matin *et al.* (2009) contend that organizational performance can be measured by worker performance and value addition and that it can enhanced by specifying the organizational culture and procedures of serving customers.

Knowledge has to be used to support the firm's processes and to impact organizational performance. According to Cohen and Levinthal, (1990), Seleim and Khalil, (2007) and Zahra and George (2002), the knowledge gained by the organization can be utilized to transform potential capability into a realized and dynamic capability that improves organizational performance.

An investment in knowledge always pays excellent interest. The heightened realization of knowledge as the core competence (Prahalad & Hamel, 1990), coupled with recent advances in information technology such as intranets and the World Wide Web, has increased organizational interest in the topic of knowledge management. Examples of known knowledge-management

initiatives include Andersen's "Knowledge Xchange", Booz Allen & Hamilton's "Knowledge On-Line", CAP Gemini's "Knowledge Galaxy", Ernst & Young's "Center for Business Knowledge" and Monsanto's "Knowledge-Management Architecture".

Davenport and Prusak (1998) state that KM is emphasized on processes and contrivance, for locating and sharing what is known by an organization or its external stakeholders. Szulanski, (1996) state that the ability to share internal best practices is necessary for optimum organizational performance and exploiting external knowledge is crucial in driving new product innovation. Items were included to measure the extent to which the organization is able to identify internal sources of expertise and exploit the external knowledge of stakeholders such as customers and deliver the best practices throughout the organization.

Schulz and Jobe (2001) state that, to create competitive advantage, the potential for KM is positively linked to organizational performance. Treacy and Wiersema (1995) contend three "value disciplines" or strategic performance capabilities, each offering a path towards competitive advantage. Competition based primarily on products, product leadership represents service innovation. Competition based on understanding, satisfying and retaining customers is represented by customer intimacy. Operational excellence represents competition that is based on efficient internal operations. O'Dell et al. (2003) state that, to improve one or more of these three value disciplines, organizations must implement KM practices.

There are three indicators that are linked to knowledge-management practices of strategic organizational performance. Items that measure the limit of product and customer satisfaction, service innovation, retention, quality and operating efficiency retention were included, and these are linked to other organizations in the industry. The organizational performance items were

combined together to develop a limit of overall organizational performance and these are used to create a performance construct for each value discipline.

According to Wong and Wong (2007), Prajogo *et al.*, (2007) and Moneva *et al.*, (2007), different ways of studies are applied to measure organizational performance. Seventeen models of organizational effectiveness were reviewed by Steer (1975) and combined the framework of these different bodies of research that are used to measure the performance of an organization. Venkatraman and Ramanujam (1986) contend that, the degree to which an enterprise achieves its own goals and aims can be measured by organizational performance. They generalized the results into three dimensions after reviewing ten different types of measurement: business performance, financial performance and organization effectiveness. Market share and profit ratio are the two factors of measuring the organizational performance structure at the market level (Delaney & Huselid, 1996).

Andersen (2006) contends that the effectiveness concept is a ratio; in order to define and measure the effectiveness (e.g. return on assets), two entities are needed. Lee and Lee (2007) argue that the behavior of managers and workers have a strong influence on the measurement of the organization's performance and organizational performance measurement methods in KM can be divided into four sections: intellectual capital, financial measures, intangible benefits and tangible, and a balance scorecard. The organizational performance measurement model is developed by Hanvanich *et al.* (2006) which integrates the organization's overall performance and its innovativeness and to assess the whole performance of the firm.

2.12 Hypothesis

On the basis of theoretical framework, some of the assumptions have been formed as under:

H1: Knowledge-integrated capacity has a positive impact on innovation

H2: Knowledge-Management practices have a positive impact on innovation

H3: Innovation has a positive impact on an organization's performance

H4: Knowledge-integrating capacity has a positive impact on organizational performance, with the mediating effect of innovation.

H5: Knowledge-Management practices have a positive impact on the organizational performance with the mediating effect of innovation.

H6: Knowledge-integrating capacity has a positive impact on organizational performance

H7: Knowledge-Management practices have a positive impact on organizational

Performance

2.13 Conceptual Framework

After an extensive review of prior theories and literature, some variables are selected to conceptualize the originality and novelty in the existing literature. The conceptual model that is presented below shows how knowledge is to be managed, integrated and plasticized to create innovativeness which, uniquely through this model, upgrades the organization's performance.

2.14 Schematic Diagram & Variables

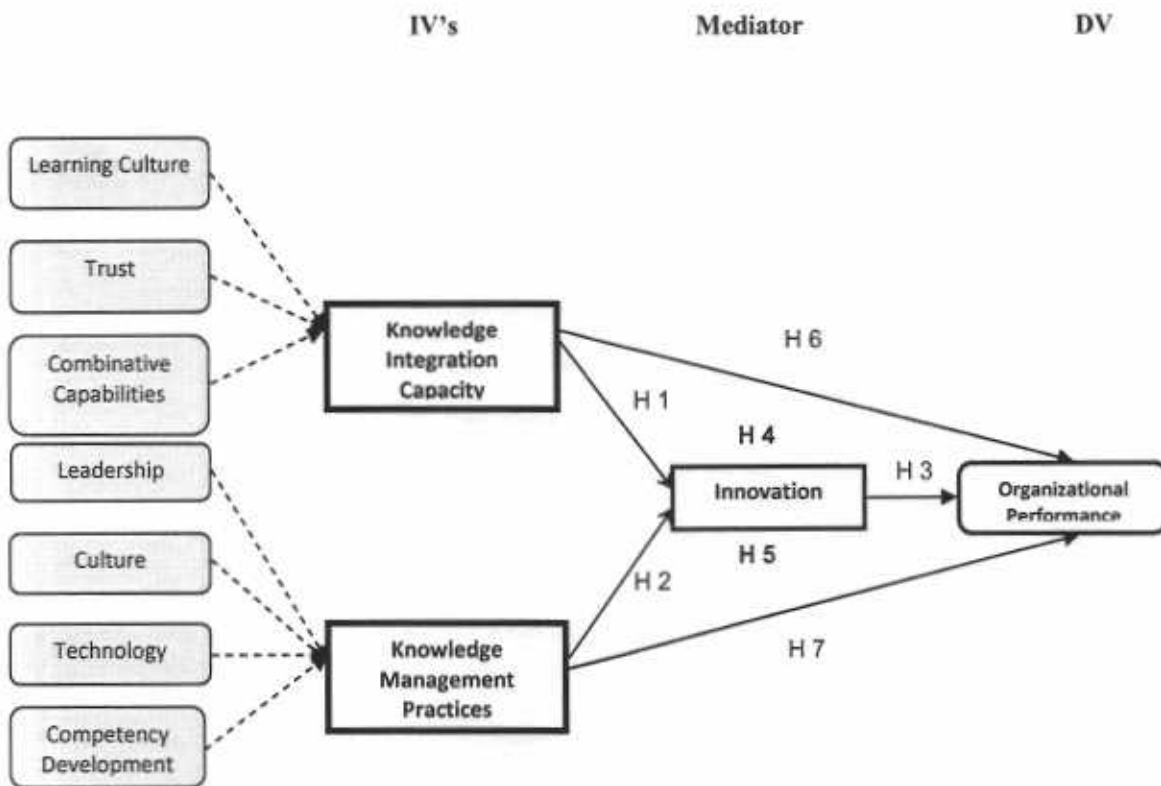


Fig 2.1: Conceptual Model

Chapter 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The preceding two chapters reviewed the literature pertaining to knowledge-integration capacity and knowledge-management practices and their effects on innovation and scrutinized their effect on organizational performance. This chapter identified the analysis technique that was used in this research to analyze the speculation and the reasoning behind it as well, as the inhabitants, example and the choosing strategy were described. Furthermore, the pieces of equipment that were used in the analysis were described and their usefulness was mentioned. Lastly, brief information regarding the appropriate, precise techniques used in the research was also offered. According to Babbie and Mouton (2004), there are dissimilar kinds of cultural analysis techniques that can be determined from the materials, namely: exploratory analysis, illustrative analysis and informative analysis. Peil (1982) mentions that much of the cultural analysis, especially in creating nations around the world, serves to discover a new era or at least one about which little is known in the regional perspective.

This aptly describes the present research as a first of its kind in Knowledge Management and its effects on organizational performance in the capital areas of Pakistan. Thus, the nature of this study leaned towards exploratory research, exploring the relationship of knowledge-integration capacity and its management with innovation and, finally, its effect on the organizational performance being practiced within the Telecom and Banking Sector in the capital areas of Pakistan.

Babbie and Mouton (2004) consider that the goals for cultural research vary a great deal, including those of: bringing new places into the phenomenon; performing initial research before a more arranged research of the event is carried out; reporting the central ideas and constructs of a phenomenon; identifying goals for the research and creating new practices related to current observable fact.

Deutsch, Selltitz, Cook, and Johoda (1966) suggest that for any research to be meaningful, it should discover solutions to the research questions. They highlighted that there are three research techniques the means by which exploratory research can be conducted:

- An evaluation of related cultural science and other relevant materials
- A study of people who have had working experience with the problem that is to be investigated
- A research of “insight-stimulating” illustrations

The above three exploratory-research techniques appropriately applied to the present research as it required the evaluation of relevant materials, the relationship between knowledge-integration capacity and its management with innovation and, finally, their effect on organizational performance.

3.2 GOALS OF THE RESEARCH AND HYPOTHESIS

The overall goal of the research was to identify the different dimensions of ‘Knowledge Management’ that have an influence on innovation in general and to be able to determine the relationship between the two. Thus, the main objective of the study was to investigate the relationship between various knowledge-integration capacities and their management with the innovation and, finally, their effect on the overall organizational performance in Pakistan. From

the identification of the broad objectives of the research, the specific hypothesis was formulated. The hypotheses were concerned with the relationship between the various knowledge-integration capacities and their management with the innovation and finally their effect on the organizational performance. The results of the research could mould how future knowledge implementation would be configured within the company being researched. Therefore, the hypotheses for this research are as follows:

H1: Knowledge-integration capacity has a positively significant effect on innovation

H2: Knowledge-management practices have a positively significant effect on innovation

H3: Innovation has a positively significant effect on organizational performance

3.3 RESEARCH DESIGN

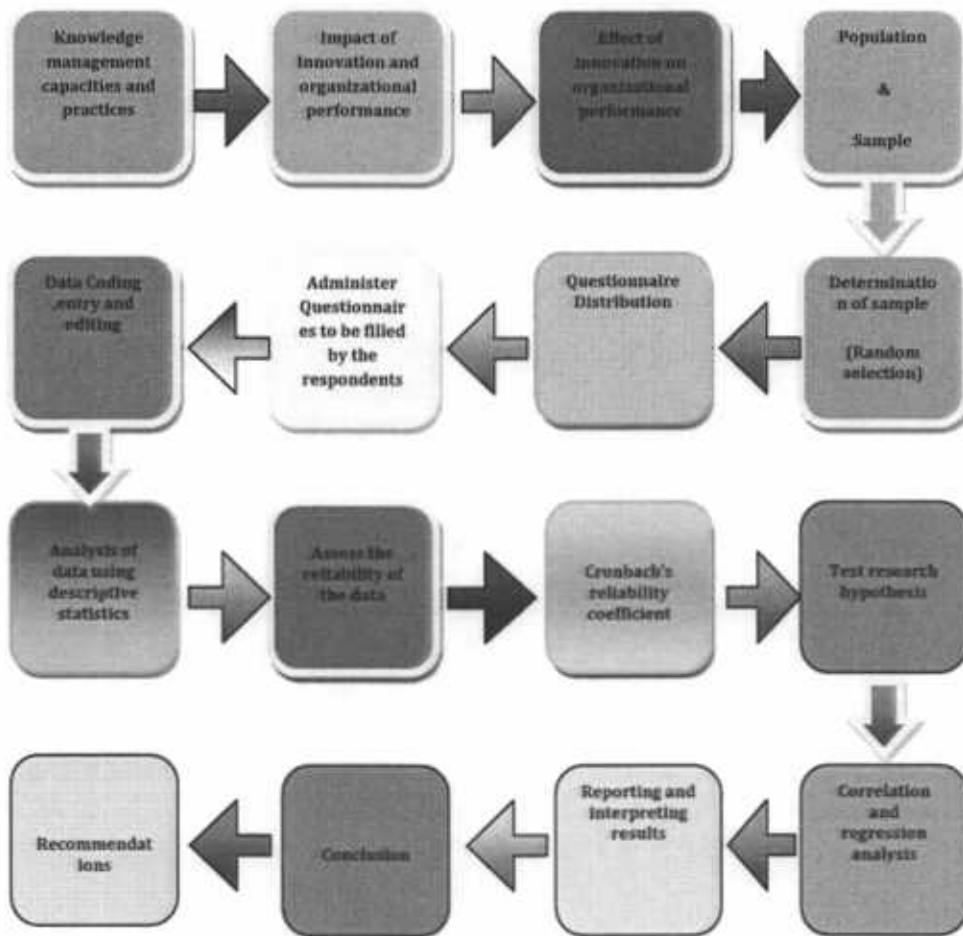
The analysis was performed within the post-positivist archetype. This philosophical position recognized a specialist as a purpose specialist and as translation of physical cultural actuality (critical realism), providing the former flexibility from the analysis, the capability to really consider the proof and simplify (Williams and Remenyi, 1996). According to Adams and Schvaneveldt (1985, pp103) "Research style represents a strategy, strategy or guideline for information selection and decryption, a set of guidelines that allowed the researcher to contemplate and see the issue under study". According to Churchill (1996) and Zikmund (1997), analysis design provides a useful plan to guide and adjust procedure for the collection of information. Keeping this driving condition in mind, the analysis could be identified as illustrative, exploratory and informative or causal (Neuman, 2002). This today has been designed as illustrative, 'corner sectional'. It was illustrative for the reason that it determines the

relationship among factors of the analysis. The primary purpose of the analysis was to gather information from the participants at a single time (Bryman, 2004). These studies contained qualitative structures to create the concept as an inductive evaluation and quantitative form to take the result into the analysis. From the hypotheses, it was obvious that the analysis was comprised of qualitative characteristics. Figure 3.1 below provided a schematic plan of the analytic method that was recommended. This method consisted of the following steps: selection of the research method; population and sampling; questionnaire selection; data collection; data capturing; data statistical analysis.

3.3.1 Ethical Considerations

Ethical considerations of comfort were resolved. A serious and concerted effort was made at all times to maintain this assurance. An assurance was given to the capital area's participants that their labels were not revealed in the analytic review. To ensure the success of the analysis, professionals were attached to subordinates in such a manner that each subordinates' reaction remained unknown, apart from being attached to a particular administrator. Lastly, the company was given a duplicate of the final review.

Figure 3.1: A Schematic Representation of the Research Design



3.4 POPULATION AND SAMPLING PROCEDURE

Trochin (2000) defined the 'research population' as a group that the investigator desires to simplify the 'sample' as the group of members of populace chosen to be in the research. This was sustained by Sekaran (2000) when she distinguished a 'sample' as a compartment of the population in query and encompassed an assortment of associates from that meticulous population.

3.4.1 Population

The 'population' of this study was comprised of the employees of the corporate sector, NGO's (along with their branches in the Islamabad and Rawalpindi areas) of Pakistan. Thus the sample frame encompassed the upper and middle management of the stated entities. As stated by Nesbary (2000), a population contains the actual record of the 'people-part' of the inhabitants. The listing of the example size involved the 423 workers of the aforesaid agencies in various management levels from upper to middle. Every endeavor was made to choose fastener size from the population which symbolizes population for the excellence of the data. Patten (2004) stated that the excellence of the sample size provides a mechanism of a companionable echelon of the study's output. Nesbary (2000) contended that the larger sample size, the larger would be the representation of the population. It was very important to secure an unprejudiced sample to scrutinize the compatibility of the sample (Patten, 2004). It was also considered as apt to observe the investigative model of unprejudiced data.

The ideal strategy in research depended upon the information to support the items Leedy & Ormrod (2001). In particular, this study provided the precession of features had by the inhabitants, indicating those capabilities needed for the firm's development (Dillman, 2000; Wallen & Fraenkel, 2001). Leedy & Ormrod (2001) consider that information gathered along various factors engenders an opportunity to understand the characteristics of the matter under study. Market research was performed using the device to the selected example section.

3.4.2 The Sample and Sampling Technique

The study was executed in the corporate sector of Pakistan. Random sampling techniques were used for the distribution of the study's questionnaires among the employees. A total of five

hundred (500) questionnaires were distributed among the workers of different Banks and Telecom. The targeted population for this study was professionals (Top Level managers, Middle Level Managers) who had been with the company/Banks for more than three years.

For the purpose of this study, derived from a population of 5,000 people, a sample of 450 was randomly drawn (using EXCEL Random Generator). Bless and Higson-Smith (2000) believed this technique to be valid as it provides an equal opportunity of selection for each element within a population.

3.4.3 The Selection of the Sample Size

There were some features that manipulated the size of the population, the rationale of the research and the superiority of the sample (Israel, 1992). The decisive factor regarding the assortment making up the sample comprised the level of self-assurance, degree of unpredictability and exactitude of the dimension (Miaoulis and Michener, 1976). Of these features, the echelon of exactitude, at times called a 'sampling mistake' determined the worth of the predictable population. Its variability was frequently indicated by a proportion point of $\pm 5\%$. Buoyancy echelon designated the standard value of the acknowledgment accomplished through this equivalent to assessment of the population. In this procedure, 95 % of the sample value was within the assortment of two standard deviations. Similarly, the degree of unpredictability determined the characteristics of assorted population, the bigger size of the population was mandatory and vice versa.

3.4.4 The Strategy Used For Selecting the Sample Size

To conclude, an apt size of the population was essential that investigator to compute sample size

in a different way for the amalgamation echelon of self-assurance, exactitude and inconsistency. The chosen population of the afore-mentioned entities encompassed a population size of 5,000 while the sample size was 500, which was representative of accordance with the sample computation procedure.

3.5 INSTRUMENTATION

3.5.1 Measuring Instruments

The measurement scale used by (Chourides, Longbottom and Murphy, 2003), was adopted to measure the learning culture within the organization. The learning culture scale consisted of three items which were adopted from the study of (Cummins, J.N. 2004). The scale for trust was be adopted from the study of Kipping & Armbruster (2002). The trust in the organization was measured on a three-item scale.

Likewise, the scale of competitive capabilities was adopted from the study of Haas (2006). Competitive capabilities were measured through a six-item measurement scale. Different types of questions were asked about the combinative capabilities from the survey's respondents.

The scale used by Davenport & Marchand (1999), was adopted to measure the leadership in the organization, with the measurement scale (of leadership) consisting of four items. The measurement scale for culture was adopted from the research study of Liao (2010). The cultures in the organization were measured through a three-item measurement scale. The measurement scale for technology was adopted from the study of Kostova & Roth (2002), with a six-item measurement scale being used for technology. The measurement scale for competency development was adopted from the study of Hall & Sapsed, 2005 and used a three-item

measurement scale. For the measurement of the innovation capability of an organization, a six-item measurement scale used by Kipping & Armbruster (2002) was adopted.

The measurement scale for organizational performance was adopted from the study of Imai (1991), using a three-item measurement scale for this. However, instrument for some of the variables not available through other studies were listed to indigenously develop covering essential aspect in each element. In some of the cases, scholar used these instrument were approved through email for the provision of the instrument. The validity and reliability of the scale were tested in order to harmonize it with the matter under study.

3.5.2 The Questionnaire and the Scale

The study's instruments comprised of elements that encompassed information about the employees in the given sector. Each item was measured on the five-point Likert scale with the ranges of "from strongly disagree" to "strongly agree", with the numbers of the scale being defined as follows:

1 = Strongly disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly agree

The questionnaire is enclosed with this study as an Appendix

3.5.2.1 - Section 1

Responses were measured through a research instrument that consisted of two parts. The first part of the research questionnaire revealed the demographic profile of the participants. The main items of the demographic profile were 'Gender', 'Age', 'Level of Education', and 'Experience Level'.

3.5.2.2 - Section 2

The second part of the questionnaire comprised of various measurement scales of the variables explained in the study. It covered the elements of knowledge-integration capacity, knowledge-management practices, innovation and outcome of the study as organizational performance. Each component of the survey was reserved as divergent for the effortlessness of satisfying the respondent. The implemented mechanism was definitely declared and the aboriginal enlargement was also recorded. The elements of each capricious were elutriated and endeavor was completed to keep 5-8 survey of each variable comprehensive of their construct.

3.6 THE PILOT STUDY

A pilot study is a typical systematic instrument for 'soft' research, permitting scholars to perform a preliminary investigation before assigning a full study or experiment. Before commencing a full study, scholars required to determine that the study was suitable and the study's purpose was be capable of discovering the data they were looking for. They needed to identify that the study that they intended to undertake would be the most precise and consistent research possible. The excellent way to do this was to execute a "pilot study". One of the advantages of performing a pilot study was that it provided 'go forward' notice regarding where the main study could fail,

where the study's procedures could not be trailed, or whether projected techniques or appliances were unsuitable, too luxurious, or too complex.

A pilot study could involve the pre-testing of a research instrument, such as 'fresh data-compilation method'. It could also be utilized to check a thought or assumption. Pilot studies are also employed in clinical experiments, in order to check dissimilar quantities, courses of management, quantity schedules, and probable obstructions to devotion before a large-scale multi-center drug study is launched. In addition to attaining all the objectives of the common test, such as improving data-gathering practices and examining the suitability of typical procedures, the pilot study presented extra knowledge that directly related to a superior study work. The pilot study significantly decreased the number of action errors because the unanticipated troubles that were exposed in the study overcame obstacles and was useful in re-designing the work or the training programs.

3.7 Interviews / Meetings

Supervisors, who were well-versed with the knowledge-management practices levied with integration capacities and their effects on innovation which determine the organizational performance, were interviewed. The structured interview encompassed questions related to knowledge-integrating capacities, knowledge-management practices, innovation and organizational performance. It facilitated in clearing the concepts with regards to the work practices and Knowledge Management (KM) inspiration. It augmented the primary survey through administering the instrument. The in-depth knowledge acquired through the interviews and blended with the responses on the questionnaires facilitated in the in-depth analysis.

3.8 Procedures

Consequently, after conducting the Pilot Study, organizations selected (Standard chartered Faisal Bank, Bank Alfalah, Allied Bank, U-phone), it was planned out to eliminate at least 50 reviews to each company through email or individually. Participants were given the extended opportunity to complete this review within twelve to fifteen days. They were requested to deliver the loaded surveys through email to the specialist. The human source control office was requested to synchronize action with the personnel and give advice, as necessary. Individual visits were also paid to review the success. Pointers were sent to the left-over cases. Individual relationship assisted in securing the data within the established time period. Upon bill of the review, its analysis was done to leave out the design and not effectively loaded questions in order to obviate the opportunity of coming into incorrect darts. Cohen, et al., (1988) recommends that group of terms; designed report should assist in to evaluate the particular feature.

3.8.1 The Collection of Data

According to Bless and Higson-Smith (2000), there are three avenues of information selection, namely: the questionnaire, the interview and surveys. Sekaran (2000) proposes that surveys are the most powerful information selection process provided that the specialist knows exactly what is required and how to evaluate the factors of interest. Questionnaires were applied individually by being sent to the participants or even digitally allocated according to the needs of the situation (Sekaran, 2000). A list of all of the professionals and expert workers in the example was acquired from the HR Managers in the capital city of Islamabad in Pakistan. The specialist and the People Source Administrator then wrote a letter and had it sent via e-mail to the appropriate

professionals and expert workers in the example. It notified the professionals and workers in the example about the objective and the privacy of the research work. The specialist presented information to certain HR professionals in which the factors and method of the research were mentioned and highlighted.

For the requirements of this research, surveys were used to collect the necessary information. In an attempt not to affect business functions and to ensure that the participants would receive the records in the least possible time, surveys were allocated through the internal emailing system. This was a non-personal strategy of information selection due to the fact that the participants finished the surveys without the interview panel member being present. Each review contained a further masking page that described the purpose of the study to the potential participant. General guidelines on completing the review and presenting an emphasis regarding the value of responding to all questions were involved. The masking page also described why it was important that the potential participant individually finished the review. This strategy of information selection resolved the issues of cost, some time to regional difficulties. In both calculating equipment, the participants were informed that they were permitted to leave a question unanswered if the indicated concern had not yet been determined or was currently uncertain. Information was provided on the masking page, providing the management and employees the opportunity to contact the specialist in the event that any inquiries or problems that might develop. The masking page also prompted the management to return the review and response piece, via the inner emailing system, to the specialist.

3.8.2 Securing the Data

Once the questionnaires were completed, the researcher then coded the responses found on each questionnaire. These scores and codes were assigned to each question for the analysis and for the segregation of the data into particular fields. The scores were then captured onto a SPSS spreadsheet for analysis (in SPSS 18.0V). The resulting analysis of the data was discussed further in the next chapter.

3.8.3 Analysis of the Data

Once the information was gathered, it was necessary to utilize precise methods to evaluate the information, as this analysis was quantitative in character. .

3.8.4 Cronbach's 'Alpha Co-Efficient'

Cronbach's Alpha Co-Efficient is generally associated with inner excellence (De Vellis, 1991). The Cronbach's Alpha is considered as a Co-Efficient Alpha and its value varies from 0 to 1. Sekaran (2000) suggests that when determining Cronbach's Excellence Co-Efficient, reliabilities that are less than 0.6 are regarded inadequate, reliabilities within 0.7 varies are regarded as satisfactory and those co-efficient that are over 0.8 are regarded as excellent.

3.9 THE RELIABILITY AND VALIDITY OF THE ANALYSIS

To assess the excellence of the items on the questionnaire, a Cronbach Alpha was used for the statistics of the questionnaire (Ayes, 1998). Optimum reliability requires outcomes of co-efficient values of 0.70 to .90 (Bair et. al., 1995; Pallant, 2000). This range was used in the regional perspective, developing its excellence and credibility assisted in ascertaining the

interaction between the factors. The validity of the information was confirmed through contextual, cosmetic elements and a reliability-centered device. Soundness assisted in evaluating inductive element of actual research (Mathura, 1999; Zikmand, 2000).

An instrument is legitimate once its excellence is obtained and it facilitates what the Specialist is looking for in the design of the research (Patten, 2004; Wallen & Fraenkel, 2001): henceforth, a serious attempt was made to secure the credibility of the outcomes. Patten (2004) opines that tests are not completely legitimate; however, the Specialist highlights that confidence in the device used would give relatively precise outcomes (Wallen & Fraenkel, 2001). Therefore, an attempt was made to stay as close as possible to the excellence of the outcomes in accordance with the device. Patten (2004) also recommends that great focus would be applied to securing legitimate information and reliable outcomes.

3.10 The Testing of the Hypothesis

As above described, the speculation of the research was concerned with developing a connection between the authority design and the personnel's responsibility to the company. Thus, it was necessary to use precise assessments to analyze the durability and route of the connection between these two factors of the speculation.

Pearson Correlation Research was performed, using SPSS, in order to determine if a correlation prevails between understanding incorporation potential and advancement. Relationship research methods describe the level of a connection between two variables and disclose the level of this connection (Bless & Kathuria, 1993). Boyd, Westfall and Stasch (1985) as well as Bryman and Cramer (1990) declared that methods of connection indicate both the durability and route (+ or -) of the connection between the two factors. The SPSS determines the Pearson Correlation Co-

Efficients (r) and differs between -1 and $+1$. The deeper that the value of r is to zero, the more sluggish was the connection, and the better the oneness ($-$ or $+$), the more powerful was the connection. In conclusion, the indication of the Pearson Correlation Co-Efficient indicated the route of the correlation, and its total value indicated the durability, with bigger total principles showed more powerful interactions. In this research, connection co-efficients signify the characteristics of the connection between understanding Developing Potential and Advancement, whereby a co-efficient of above 0.8 signifies a powerful connection, a co-efficient of between 0.5 and 0.8 signifies an average connection, and a co-efficient below 0.5 signifies a vulnerable connection (Devore & Peck, 1993).

The precise relevance (p -level) of the outcomes symbolized a reducing catalog of the excellence of an outcome. The greater the ' p -level', the less we believed that the noticed regards between factors in the example is a trusted sign of the regards between the specific factors related to the inhabitants. The ' p -level' symbolizes the prospect of mistake that was engaged in recognizing the noticed outcome as legitimate, that was, as a consultant of the inhabitants (MacColl, 2004). The process to analyze the precise relevance of the speculation in this research was as follows:

If the pc -produced ' p -value' was less than the stage of relevance (α) of 0.05 , the Specialist would REJECT the zero speculation. The specialist then indicated that there was a precise considerable and positive/negative connection between the factors under the study. If the ' p -value' was greater than the stage of relevance of 0.05 , then the Specialist would FAIL TO REJECT the zero speculation and consider that there was no precise considerable and positive/negative connection between the factors (Sekaran, 2000). It was significant to specify whether the analysis was one-tailed or two-tailed. A one-tailed analysis was used when there was a particular route to the speculation being examined, while a two-tailed analysis was used when a

connection was predicted, but the route of the connection was not predicted (Field, 2000). Due to the characteristics of the speculation of the present research, the two-tailed analysis was used.

The mean ratings and conventional diversions for each of the aspects of understanding the incorporation potential, KM methods, advancement and business efficiency were examined; with referrals to the Pearson Connection Analysis outcomes for further comprehension and research.

3.11 Statistical Tools

3.11.1 The SPSS

Information was examined using inferential research whereby outcomes were generally based on the foundation of the information gathered from the example. Rates and wavelengths were used for the specific data in the form of a group. The analysis of variance (ANOVA) was used to find the factor among the various factors. Data software program (SPSS) were used to perform detailed analysis through regression. Moderate data was used for securing outcomes using the Likert Range.

The purpose of knowledge-management assessment was to find out in particular how the knowledge-management practices and integrated capacities with its construct affected the innovation process and organizational performance.

3.11.2 AMOS

SPSS results were further authenticated with the AMOS which authenticated the model in terms of reliability and validated it with the relations and their strength values and variances

3.12 CONCLUSION

This section presented the techniques used in the research and the process of information selection and research. The speculation of the research was provided and the research design defined. Information regarding the example size and the number of individuals involved in the final precise research was provided. A summary of the information selection method was then given. Each of the two pieces of equipment that were used in this research, as well as their excellence and credibility, were then outlined in detail. Finally, the precise research of practices was defined. Also involved within this section were the honest factors that needed to be taken into account when doing the actual research and information-gathering.

CHAPTER 4

DATA ANALYSES, RESULTS AND DISCUSSION

Table 4.1

Gender	Number of Respondents	Percentage
Male	294	69.5035
Female	129	30.4965
Total	423	100

The above Table 4.1 demonstrates the demographic analysis by gender of the survey respondents in terms of the number of respondents and percentages. The results of the table further signify that out of the total (423) survey respondents, the response of male participants is 69.50 % (294) whereas the response of female participants is 30.49 % (129). The results further demonstrate that male participants responded more to the survey as compared to female participants.

Table.4.1.1

Age	Number of Respondents	Percentage
25-30 years	70	16.5485
31-35 years	147	34.7518
36-40 years	99	23.4043
41-45 years	58	13.7116
46 years and above	49	11.5839
Total	423	100

The above Table 4.1.1 exemplifies the demographic statistic of age of the survey subjects. The results of the table reveal that the survey participants in the age group of 25-30 years showed a

16.54 % (70) response to the survey conducted out of the total (423) survey respondents. The results further reveal that the survey record 34.75 % (147) respondents are aged between 31-35 years and 23.40 % (99) have ages between 36-40 years, whereas 13.71 % (58) survey subjects fall in the age group of 41-45 years. It is evident from the results of the table that the majority of the survey respondents are aged between 31 and 35 years.

Table 4.1.2

Education	Number of Respondents	Percentage
Bachelor's Degree	209	49.409
Master's Degree	138	32.6241
Professional Diploma	48	11.3475
Others	28	6.61939
Total	423	100

The above table reveals the demographic analysis of the survey subjects in terms of education. The results of the table indicate that out of a total of 423 survey subjects, 49.40 % (209) of the respondents hold Bachelor's Degrees whereas 32.62 % (138) of the respondents hold Master's Degrees. The results further demonstrate that out of the total survey respondents, 11.34 % (48) respondents have Professional Diplomas for their qualification. It is evident from the above table that the majority of the survey subjects have Bachelor's Degree qualification.

Table 4.1.3

Experience	Number of Respondents	Percentage
1-3 years	50	11.8203
4-7 years	161	38.0615
8-11 years	142	33.5697
12-15 years	38	8.98345
"15 years and above"	32	7.56501
Total	423	100

The above table signifies the demographic statistics of the survey subjects in terms of experience. The results reveal that out of the total (423) survey subjects, 11.82 % (50) respondents have experience between 1-3 years whereas 38.06 % (161) respondents have an experience level of 4-7 years. The results demonstrate that 33.56 % (142) participants have experience of 8-11 years and 8.98 % (38) participants have an experience level of 12-15 years. It is evident from the analysis that most of the respondents have an experience of 4-7 years.

Table 4.2 Test of Mean Difference of Learning Culture with Respect to Gender

Levene's Test		Gender	Sample	Mean	SD	t-stat	Sig	
LC	F-stat		Male	294	3.9795918	1.061066	2.143	.003
	.945	.689	Female	129	3.7286822	1.21032		

**Levene's Test denotes equality of variance across groups*

The result in the above table reveals Levene's Test for equality of variance, mean, standard deviation, t-stat and associated probability values. The independent sample t-test is carried out with the purpose of locating the mean of perceived 'Learning Culture' among male and female workers in the company. After obtaining the equivalent difference supposition by the means of Levene's Analyze of value of difference ($F=0.945$, $P=.689$) the test of separate products is performed. The results further prove the mean value of men ($x=3.979$, $SD=1.061$) and the mean value of women ($x=3.728$, $SD=1.2103$) represents that male workers within the company view breakdowns as studying possibilities instead of being something to be humiliated of, they support the part of knowledge in the organization's success, enhancement in the employees' skills and knowledge and overall learning culture. Likewise, the statistical results of independent sample t-tests divulge that male employees' perception regarding failure as an opportunity to learn rather than as a reason for shame and, as well, support the role of knowledge in the firm's success, improvement in the employees' knowledge and skills and overall learning culture is significantly different from those of female employees ($t=2.143$, $p<.05$).

Table 4.2.1 Test of Mean Difference of Trust With Respect to Gender

Levene's Test		Gender	Sample	Mean	SD	t-stat	Sig
T	F-stat	Male	294	3.79932	1.03052	1.490	0.017
	0.114	Female	129	3.62791	1.21237		

**Levene' Test denotes equality of variance across groups*

The results in the above table reveal Levene's Test for equality of variance, mean, standard deviation, t-stat and associated probability values. The independent sample t-test is carried out with the purpose of locating the mean of perceived 'Trust' among male and female workers in the organization. After securing the equal variance assumption by the means of Levene's Test of equity of variance ($F=0.114$, $P=.614$), the test of independent samples is carried out. The results further provide evidence that the mean value of males ($x=3.799$, $SD=1.030$) and mean value of females ($x=3.627$, $SD=1.212$) indicate that male employees within organization believe that the members are generally trustworthy, members are respectful and are able to understand what other members need while they are doing their jobs, members have reciprocal faith in each other's abilities, intentions, behaviors and overall trust developed in the organization. Likewise, the statistical results of independent sample t-tests reveal that male employees' perceive trustworthiness in the member colleagues, respectability and an knowledge of what other members need while they are doing their jobs, members have faith in other's abilities, intentions, and behaviors and overall trust developed in the organization and that these perceptions are significantly different from those of female employees ($t=1.490$, $p<.05$).

Table 4.2.2 Test of Mean Difference of Combinative Capabilities With Respect to Gender

	Levene's Test		Gender	Sample	Mean	SD	t-stat	Sig
	F-stat	Sig						
CC			Male	294	3.06463	.30603	1.015	0.021
			Female	129	3.20155	.20792		

**Levene's Test denotes equality of variance across groups*

The results in the above table exhibits Levene's Test for equality of variance, mean, standard deviation, t-stat and associated probability values. The independent sample t-test is executed with the purpose of locating the mean of perceived 'Combinative Capabilities' among male and female workers in the organization. After securing the equal variance assumption by the means of Levene's Test of equity of variance ($F=0.793$, $P=.181$), a test of independent samples is carried out. The results further present evidence that the mean value of males ($x=3.064$, $SD=1.306$) and the mean value of females ($x=3.201$, $SD=1.207$) imply that male employees within organization possess the know-how about how a threat was identified, know-how about the steps taken to respond to a threat, know-how about how to prevent future similar threats, the reasons behind decisions made by others in responding to the security threat, the reasons behind involving certain people in the security response, the reasons behind decisions made for not pursuing certain security responses and overall know-how about combinative capabilities. The statistical results of independent sample t-tests divulge that male employees' perceptions regarding know-how about how a threat was identified, know-how about steps taken to respond to a threat, know-how about how to prevent future similar threats, the reasons behind decisions made by others in response to the security threat, the reasons behind involving certain people in the security response, the reasons behind decisions made for not pursuing certain security

responses and overall know-how about combinative capabilities is significantly different from those of female employees ($t=1.015, p<.05$).

Table 4.2.3 Test of Mean Difference of Leadership With Respect to Gender

	Levene's Test		Gender	Sample	Mean	SD	t-stat	Sig
L	F-stat	Sig	Male	294	3.8979592	2.4361742	1.358	0.030
	0.144	0.705	Female	129	3.5968992	0.9480192		

**Levene's Test denotes equality of variance across groups*

The results in the above table reveal Levene's Test for equality of variance, mean, standard deviation, t-stat and associated probability values. The independent sample t-test is carried out with the purpose of locating the mean of perceived 'Leadership' among male and female workers in the organization. After securing the equal variance assumption by the means of Levene's Test of equity of variance ($F=0.144, P=.705$), a test of independent samples is carried out. The results further provide evidence that the mean value of males ($x=3.897, SD=2.436$) and mean value of females ($x=3.596, SD=.948$) signifies that male employees within organization realize the leaders' support in the processes of acquiring and disseminating customer knowledge when needed, the leaders' encouragement in the generation of new ideas and/or suggestions coming from customers, celebration by leaders of distinguished achievements and the announcement of them to all customers through organized meetings, leaders' provision of transparency and openness about ongoing activities to activate customers' participation in decision-making and overall leadership in the organization. The statistical results of independent sample t-tests indicates that male employees' perceptions regarding the leaders' support of the processes of acquiring and disseminating customer knowledge when needed, the leaders' encouragement in generating new ideas and/or suggestions that come from customers, leaders' celebration of

distinguished achievements and their announcement of them to all customers at organized meetings, leaders providing transparency and openness about ongoing activities to activate customers' participation in decision-making and overall leadership is significantly different from those of female employees ($t=1.358, p<.05$).

Table 4.2.4 Test of Mean Difference of Culture with Respect to Gender

	Levene's Test		Gender	Sample	Mean	SD	t-stat	Sig
C	F-stat	Sig	Male	294	3.697279	1.096158	1.465	0.001
	0.352	0.192	Female	129	3.51938	1.263062		

**Levene's Test denotes equality of variance across groups*

The results in the above table reveals Levene's Test for equality of variance, mean, standard deviation, t-stat and associated probability values. The independent sample t-test is carried out with the purpose of locating the mean of perceived 'Culture' among male and female workers in the organization. After securing the equal variance assumption by the means of Levene's Test of equity of variance ($F=0.352, P=.192$), a test of independent samples is carried out. The results further provide evidence that the mean value of males ($x=3.697, SD=1.096$) and the mean value of females ($x=3.519, SD=1.263$) indicates that male employees within the organization believe that employees understand the importance of knowledge, employees are valued for their individual expertise, the benefits of sharing knowledge outweigh the costs, and knowledge about overall culture in the organization. The statistical results of independent sample t-tests reveal that male employees' perceptions regarding employees' knowledge of the importance of knowledge, employees being valued for their individual expertise; that the benefits of sharing knowledge

outweigh the costs, and knowledge about overall culture in the organization, are significantly different from those of female employees ($t=1.465, p<.05$).

Table 4.2.5 Test of Mean Difference of Technology With Respect to Gender

	Levene's Test		Gender	Sample	Mean	SD	t-stat	Sig
	F-stat	Sig						
Tech	F-stat	Sig	Male	294	4.149	.980	2.709	.001
	0.910	0.089	Female	129	3.85271	1.15988		

**Levene's Test denotes equality of variance across groups*

The results in the above table divulge Levene's Test for equality of variance, mean, standard deviation, t-stat and associated probability values. The independent sample t-test is carried out with the purpose of locating the mean of perceived 'Technology' among male and female workers in the organization. After securing the equal variance assumption by the means of Levene's Test of equity of variance ($F=0.910, P=.089$), a test of independent samples is carried out. The results further provide evidence that the mean value of males ($x=4.149, SD=.980$) and the mean value of females ($x=3.852, SD=1.159$) signifies that male employees within the organization realize that Intranets are key within the organization, collaboration technologies are key within the organization, managing technologies are key within the organization, documentary and codification systems are key within the organization, searching technologies are key within the organization, organizational workstations are effectively computerized and there is overall technology development in the organization. The statistical results of independent sample t-tests show that male employees' perceptions regarding Intranets, collaboration technologies, managing technologies, documentary and codification systems, searching technologies are all key within the organization, that organizational workstations are effectively

computerized and that overall technology development in the organization, are significantly different from those of female employees ($t=2.709, p<.05$).

Table 4.2.6 Test of Mean Difference of Competency Development With Respect to Gender

CD	Levene's Test		Gender	Sample	Mean	SD	t-stat	Sig
	F-stat	Sig						
	0.737	0.188	Male	294	3.71088	0.90207	1.178	0.020
			Female	129	3.5969	0.94802		

**Levene's Test denotes equality of variance across groups*

The results in the above table reveal Levene's Test for equality of variance, mean, standard deviation, t-stat and associated probability values. The independent sample t-test is carried out with the purpose of locating the mean of perceived 'Competency Development' among males and females working in the organization. After securing the equal variance assumption by the means of Levene's Test of equity of variance ($F=0.737, P=.188$), a test of independent samples is carried out. The results further provide evidence that the mean value of males ($x=3.710, SD=0.902$) and the mean value of females ($x=3.596, SD=0.948$) indicate that male employees within organization realize that the organization has systems to measure its employees' competencies, remuneration and promotion systems have an influence on the development of competencies, employees possess ideas and knowledge, the firm uses benchmarking techniques to improve its employees' competencies and overall competency development in the organization. The statistical results of independent sample t-tests reveal that male employees' perceptions that the organization has systems to measure its employees' competencies, remuneration and promotion systems have an influence on the development of competencies, employees possess ideas and knowledge, the firm uses benchmarking techniques to improve its

employees' competencies and overall competency development in the organization is significantly different from those of female employees ($t=1.178, p<.05$).

Table 4.2.7 Test of Mean Difference of Innovation with Respect to Gender

	Levene's Test		Gender	Sample	Mean	SD	t-stat	Sig
I	F-stat	Sig	Male	294	3.897959	0.993045	0.695	0.040
	0.782	0.096	Female	129	3.821705	1.135022		

**Levene's Test denotes equality of variance across groups*

The results in the above table divulge Levene's Test for equality of variance, mean, standard deviation, t-stat and associated probability values. The independent sample t-test is carried out with the purpose of locating the mean of perceived 'Innovation' among male and female workers in the organization. After securing the equal variance assumption by the means of Levene's Test of equity of variance ($F=0.945, P=.689$), a test of independent samples is carried out. The results further provide evidence that the mean value of males ($x=3.979, SD=1.061$) and the mean value of females ($x=3.728, SD=1.2103$) signifies that male employees within organization realize that companies always succeed in developing a product which is well-accepted by the market as a result of the company's ability to manage 'knowledge', companies succeed in generating new products/services as the embodiment of the companies' existing knowledge, by ably managing knowledge, companies succeed in improving service provision to the customers, by ably managing knowledge, companies succeed in simplifying activities, hence the administrative process is easier, by ably managing knowledge, companies succeed in carrying out changes in administrative processes, so they are easier to run and, thereby, overall innovation in the organization is greatly enhanced. The statistical results of independent sample t-tests indicate that male employees' perceptions regarding companies' success in developing products that are

well-accepted by the market as a result of the companies' ability to manage 'knowledge', companies' success in generating new products/services as the embodiment of the companies' existing knowledge, by ably managing knowledge, companies succeed in improving service provision to the customers, by ably managing knowledge, companies succeed in simplifying activities, hence the administrative process is easier, by ably managing knowledge, companies succeed in carrying out changes in administrative processes, so they are easier to run and overall innovation in the organization is greatly enhanced, are significantly different from those of female employees ($t=2.143, p<.05$).

Table 4.2.8 Test of Mean Difference of Organizational Performance With Respect to Gender

	Levene's Test		Gender	Sample	Mean	SD	t-stat	Sig
OP	F-stat	Sig	Male	294	4.15986	0.96613	2.293	0.024
	0.827	0.364	Female	129	3.91473	1.11124		

**Levene's Test denotes equality of variance across groups*

The results in the above table reveal Levene's Test for equality of variance, mean, standard deviation, t-stat and associated probability values. The independent sample t-test is carried out with the purpose of locating the mean of perceived 'Organizational Performance' among male and female workers in the organization. After securing the equal variance assumption by the means of Levene's Test of equity of variance ($F=0.827, P=.364$), a test of independent samples is carried out. The results further provides evidences that the mean value of males ($x=4.159, SD=0.966$) and mean value of females ($x=3.914, SD=1.111$) indicate that male employees within organization realizes that the company has a greater market share than its key competitors, the company is growing faster than its key competitors, the company is more profitable than its key competitors, the company has a greater efficiency of operations than its

key competitors, the company has greater-quality services than its key competitors and that the organizational performance of the organization is superior. The statistical results of independent sample t-tests reveal that male employees' perceptions regarding the company's greater market share than its key competitors, the company's faster growth than its key competitors, the company's greater profitability than that of its key competitors, the company's greater efficiency of operations than that of its key competitors, the company's greater quality of services than of its key competitors and the superior, overall organizational performance of the organization, are significantly different from those of female employees ($t=2.293, p<.05$).

ANNOVA

Table 4.3 Mean Analyses of Learning Culture With Respect to Age Group

Age group	N	Mean	SD
25-30 years	70	3.757142857	1.22102018
31-35 years	147	3.80952381	1.0937765
36-40 years	99	4.080808081	1.02695078
41-45 years	58	3.982758621	1.06773049
46 years and above	49	3.93877551	1.2146358
Total	423	3.903073286	1.11328259

The table 4.3 indicates mean analysis of learning culture with respect to different age groups working in organizations. The purpose of executing this analyses captures the systematic and group psychological response of the survey subjects of different age groups regarding how they perceive learning culture in the organization. The mean value (3.7571, $SD=1.2210$) of the age groups (25-30 years) denotes that they tends to agree and profess failures as an opportunity to learn instead a reason to be ashamed of, support the role of knowledge in the firm's success,

improvement in the employees knowledge and skills and overall learning culture whereas, the mean value (3.809, $SD=1.093$) of the age group (31-35 years) reveals that this particular age group tends towards agreement about the prevalent knowledge of learning culture within organization. The results in the above tables further conceives that the mean value of (4.0808, $SD= 1.0269$) of the age group (36-40 years) signifies that this age groups tends toward accords with others age groups and perceives learning culture within organization whereas, the mean value (3.982, $SD=1.067$) of the age group (41-45 years) reveals that the said age groups response toward learning culture are in accords with the other age groups and they profess learning culture within organization. It is evident from the analysis that as compare to other age groups, 36-40 years age groups realizes more regarding learning culture within organization.

Table 4.3.1 Variance Homogeneity Test of Learning Culture Across the Age Groups

Levene's Statistic	df1	df2	Sig.
1.410	4	418	.230

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across age groups. Given the objective, Levene's test is carried out .The Levene's test in the above table indicates that variations in variable (learning culture) is constant ($F_{4,418}=1.410 P>.05$) across the group.

Table 4.3.2 Test of Mean Difference – Learning Culture with Respect to Age Group

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	6.335	4	1.584	1.281	.277
Within Groups	516.691	418	1.236		
Total	523.026	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of learning culture with respect to age groups is executed to statistically locate psychological difference among age groups regarding learning culture. The statistics ($F_{4, 422} = 1.281, P > .05$) denotes that the perceptions of survey subjects across different age groups is constant and there is no statistically significant differences.

Table 4.3.3 Mean Analyses of Trust With Respect to Age Group

Age Group	N	Mean	SD
25-30 years	70	3.757142857	1.09592
31-35 years	147	3.700680272	1.13726
36-40 years	99	3.787878788	0.99255
41-45 years	58	3.672413793	1.19043
46 years and above	49	3.87755102	1.03345
Total	423	3.747044917	1.0906

The table 4.3.3 indicates mean analysis of Trust with respect to different age groups working in organizations. The purpose of executing this analysis captures the systematic and group psychological response of the survey subjects of different age groups regarding how they

perceive trust in the organization. The mean value (3.7571, $SD=1.0959$) of the age groups (25-30 years) denotes that they tends to agree and profess The members are generally trustworthy, members are respectful and understandable to what other members need while they are doing their job, members have reciprocal faith in other's abilities, intensions, and behaviors and overall trust developed in the organization whereas, the mean value (3.7006, $SD=1.1372$) of the age group (31-35 years) reveals that this particular age group tends towards agreement about the prevalent knowledge of trust within organization. The results in the above tables further conceives that the mean value of (3.7878, $SD= 0.9925$) of the age group (36-40 years) signifies that this age groups tends toward accords with others age groups and perceives trust within organization whereas, the mean value (3.6724, $SD=1.0334$) of the age group (41-45 years) reveals that the said age groups response toward trust are in accords with the other age groups and they profess trust within organization. It is evident from the analysis that as compare to other age groups, 46 years and above age groups realizes more regarding trust within organization.

Table 4.3.4 Variance Homogeneity Test of Trust Across the Age Groups

Levene's Statistic	df1	Df2	Sig.
1.218	4	418	.302

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across age groups. Given the objective, Levene's test is carried out .The Levene's test in the above table indicates that variations in variable (Trust) is constant ($F_{4,418}=1.218 P>.05$) across the group.

Table 4.3.5 Test of Mean Difference – Trust With Respect to Age Group

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.646	4	.411	1.344	.848
Within Groups	500.288	418	1.197		
Total	501.934	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of Trust with respect to age groups is executed to statistically locate psychological difference among age groups regarding trust in the organization. The statistics ($F_{4, 422} = 1.344, P > .05$) denotes that the perceptions of survey subjects across different age groups is constant and there is no statistically significant differences.

Table 4.3.6 Mean Analyses of Combinative Capabilities With Respect to Age Group

Age Group	N	Mean	SD
25-30 years	70	3.07143	1.38649
31-35 years	147	3.17687	1.26437
36-40 years	99	3.10101	1.17365
41-45 years	58	3.24138	1.38044
46 years and above	49	2.79592	1.2244
Total	423	3.10638	1.27704

The table 4.3.6 indicates mean analysis of Combinative capabilities with respect to different age groups working in organizations. The purpose of executing this analysis captures the systematic and group psychological response of the survey subjects of different age groups regarding how

they perceive Combinative capabilities in the organization. The mean value (3.07143, $SD=1.3864$) of the age groups (25-30 years) denotes that they tends to agree and profess the know-how about how a threat was identified, know-how about steps taken to respond to a threat, know-how about how to prevent future similar threats, Reasons behind decisions others made in responding to the security threat, Reasons behind involving certain people in the security response, Reasons behind decisions made for not pursuing certain security responses and overall know how about combinative capabilities whereas, the mean value (3.1768, $SD=1.2643$) of the age group (31-35 years) reveals that this particular age group tends towards agreement about the prevalent knowledge of Combinative capabilities within organization. The results in the above tables further conceives that the mean value of (3.1010, $SD= 1.1736$) of the age group (36-40 years) signifies that this age groups tends toward accords with others age groups and perceives Combinative capabilities within organization whereas, the mean value (3.2413, $SD=1.3804$) of the age group (41-45 years) reveals that the said age groups response toward Combinative capabilities are in accords with the other age groups and they profess Combinative capabilities within organization. It is evident from the analysis that as compare to other age groups, 41-45 years age groups realizes more regarding Combinative capabilities within organization.

Table 4.3.7 Variance Homogeneity Test of Combinative Capabilities Across the Age Groups

Levene's Statistic	df1	df2	Sig.
1.905	4	418	.093

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across age groups. Given the objective, Levene's

test is carried out .The Levene's test in the above table indicates that variations in variable (Combinative capabilities) is constant ($F_{4,418}=1.905 P>.05$) across the group.

Table 4.3.8 Test of Mean Difference – Combinative Capabilities With Respect to Age Group

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	6.599	4	1.650	1.012	.401
Within Groups	681.614	418	1.631		
Total	688.213	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of Combinative capabilities with respect to age groups is executed to statistically locate psychological difference among age groups regarding Combinative capabilities. The statistics ($F_{4, 422}= 1.012, P>.05$) denotes that the perceptions of survey subjects across different age groups is constant and there is no statistically significant differences.

Table 4.3.9 Mean Analyses of Leadership With Respect to Age Group

Age Group	N	Mean	SD
25-30 years	70	3.64286	1.02201
31-35 years	147	3.89796	3.35713
36-40 years	99	3.85859	0.75607
41-45 years	58	3.81034	0.86768
46 years and above	49	3.65306	0.92536
Total	423	3.80615	2.10061

The table 4.3.9 indicates mean analysis of Leadership with respect to different age groups working in organizations. The purpose of executing this analysis captures the systematic and group psychological response of the survey subjects of different age groups regarding how they perceive Leadership in the organization. The mean value (3.6428 , $SD=1.0220$) of the age groups (25-30 years) denotes that they tends to agree and profess the leaders support in the processes of acquiring and disseminating of customer knowledge when needed, the leaders encouragement in generation of new ideas and/or suggestions comes from customer, celebration of leaders in result of distinguished achievements and announces them to all customers by organized meetings, leaders provide transparency and openness about ongoing activities to activate customers" participation in decision making and overall leadership in the organization whereas, the mean value (3.8979 , $SD=3.3571$) of the age group (31-35 years) reveals that this particular age group tends towards agreement about the prevalent knowledge of Leadership within organization. The results in the above tables further conceives that the mean value of (3.8585 , $SD= 0.7560$) of the age group (36-40 years) signifies that this age groups tends toward accords with others age groups and perceives Leadership within organization whereas, the mean value (3.8103 , $SD=0.8676$) of the age group (41-45 years) reveals that the said age groups response toward Leadership are in accords with the other age groups and they profess Leadership within organization. It is evident from the analysis that as compare to other age groups, 31-35 years age groups realizes more regarding Leadership within organization.

Table 4.3.10 Variance Homogeneity Test of Leadership Across the Age Groups

Levene's Statistic	df1	df2	Sig.
1.509	4	418	.729

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across age groups. Given the objective, Levene's test is carried out. The Levene's test in the above table indicates that variations in variable (Leadership) is constant ($F_{4,418}=1.509 P>.05$) across the group.

Table 4.3.11 Test of Mean Difference – Leadership with Respect to Age Group

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.527	4	1.132	1.255	.907
Within Groups	1857.577	418	4.444		
Total	1862.104	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of Leadership with respect to age groups is executed to statistically locate psychological difference among age groups regarding Leadership. The statistics ($F_{4, 422}= 1.255, P>.05$) denotes that the perceptions of survey subjects across different age groups is constant and there is no statistically significant differences.

Table 4.3.12 Mean Analyses of Culture With Respect to Age Group

Age Group	N	Mean	SD
25-30 years	70	3.67143	1.13854
31-35 years	147	3.52381	1.2182
36-40 years	99	3.66667	1.09731
41-45 years	58	3.67241	1.20508
46 years and above	49	3.87755	0.99232
Total	423	3.64303	1.15103

The table 4.3.12 indicates mean analysis of Culture with respect to different age groups working in organizations. The purpose of executing this analysis captures the systematic and group psychological response of the survey subjects of different age groups regarding how they perceive Culture in the organization. The mean value (3.6714 , $SD=1.1385$) of the age groups (25-30 years) denotes that they tends to agree and profess Employees understand the importance of knowledge, employees are valued for their individual expertise, benefits of sharing knowledge outweigh the costs, and knowledge about overall culture in the organization whereas, the mean value (3.5238 , $SD=1.2182$) of the age group (31-35 years) reveals that this particular age group tends towards agreement about the prevalent knowledge of Culture within organization. The results in the above tables further conceives that the mean value of (3.6666 , $SD= 1.0973$) of the age group (36-40 years) signifies that this age groups tends toward accords with others age groups and perceives Culture within organization whereas, the mean value (3.6724 , $SD=1.2050$) of the age group (41-45 years) reveals that the said age groups response toward Culture are in accords with the other age groups and they profess Culture within organization. It is evident from the analysis that as compare to other age groups, 46 years and above age groups realizes more regarding Culture within organization.

Table 4.3.13 Variance Homogeneity Test of Culture Across the Age Groups

Levene's Statistic	df1	df2	Sig.
1.545	4	418	.39

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across age groups. Given the objective, Levene's

test is carried out .The Levene's test in the above table indicates that variations in variable (Culture) is constant ($F_{4,418}=1.545 P>.05$) across the group.

Table 4.3.14 Test of Mean Difference – Culture With Respect to Age Group

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.946	4	1.237	1.933	.445
Within Groups	554.151	418	1.326		
Total	559.097	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of Culture with respect to age groups is executed to statistically locate psychological difference among age groups regarding Culture. The statistics ($F_{4, 422} = 1.933, P>.05$) denotes that the perceptions of survey subjects across different age groups is constant and there is no statistically significant differences.

Table 4.3.15 Mean Analyses of Technology With Respect to Age Group

Age Group	N	Mean	SD
25-30 years	70	3.88571	1.18619
31-35 years	147	3.93197	1.08325
36-40 years	99	4.26263	0.89882
41-45 years	58	4.18966	0.94511
46 years and above	49	4.12245	1.05342
Total	423	4.0591	1.04578

The table 4.3.15 indicates mean analysis of Technology with respect to different age groups working in organizations. The purpose of executing this analysis captures the systematic and group psychological response of the survey subjects of different age groups regarding how they perceive Technology in the organization. The mean value (3.8857, SD=1.1861) of the age groups (25-30 years) denotes that they tends to agree and profess that intranets are a key within the organization, Collaboration technologies are a key within the organization, Managing technologies are a key within the organization, Documentary and codification systems are a key within the organization, Searching technologies are a key within the organization, Organizational workstations are effectively computerized and overall technology development in the organization whereas, the mean value (3.9319, SD=1.0832) of the age group (31-35 years) reveals that this particular age group tends towards agreement about the prevalent knowledge of Technology within organization. The results in the above tables further conceives that the mean value of (4.2626, SD= 0.8988) of the age group (36-40 years) signifies that this age groups tends toward accords with others age groups and perceives Technology within organization whereas, the mean value (4.1896, SD=0.9451) of the age group (41-45 years) reveals that the said age groups response toward Technology are in accords with the other age groups and they profess Technology within organization. It is evident from the analysis that as compare to other age groups, 46-40 years age groups realizes more regarding Technology within organization.

Table 4.3.16 Variance Homogeneity Test of Technology Across the Age Groups

Levene's Statistic	df1	df2	Sig.
1.802	4	418	.524

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across age groups. Given the objective, Levene's test is carried out. The Levene's test in the above table indicates that variations in variable (Technology) is constant ($F_{4,418}=1.802 P>.05$) across the group.

Table 4.3.17 Test of Mean Difference – Technology With Respect to Age Group

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	9.766	4	2.442	1.259	.062
Within Groups	451.756	418	1.081		
Total	461.522	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of Technology with respect to age groups is executed to statistically locate psychological difference among age groups regarding Technology. The statistics ($F_{4, 422}= 1.259, P>.05$) denotes that the perceptions of survey subjects across different age groups is constant and there is no statistically significant differences.

Table 4.3.18 Mean Analyses of Competency Development With Respect to Age Group

Age Group	N	Mean	SD
25-30 years	70	3.67143	0.98865
31-35 years	147	3.53741	0.9528
36-40 years	99	3.81818	0.8127
41-45 years	58	3.7931	0.87376
46 years and above	49	3.67347	0.92168
Total	423	3.67612	0.91671

The table 4.3.18 indicates mean analysis of Competency Development with respect to different age groups working in organizations. The purpose of executing this analysis captures the systematic and group psychological response of the survey subjects of different age groups regarding how they perceive Competency Development in the organization. The mean value (3.6714, $SD=0.9886$) of the age groups (25-30 years) denotes that they tends to agree and profess that the organization has systems to measure its employees' competences, remuneration and promotion systems have an influence on the development of competences, ideas and knowledge by the employees, the firm uses benchmarking techniques to improve its employees' competences and overall competency development in the organization whereas, the mean value (3.5374, $SD=0.9528$) of the age group (31-35 years) reveals that this particular age group tends towards agreement about the prevalent knowledge of Competency Development within organization. The results in the above tables further conceives that the mean value of (3.8181, $SD= 0.8127$) of the age group (36-40 years) signifies that this age groups tends toward accords with others age groups and perceives competency development within organization whereas, the mean value (3.7931, $SD=0.8737$) of the age group (41-45 years) reveals that the said age groups

response toward Competency Development are in accords with the other age groups and they profess Competency Development within organization. It is evident from the analysis that as compare to other age groups, 36-40 years age groups realizes more regarding Competency Development within organization.

Table 4.3.19 Variance Homogeneity Test of Competency Development Across the Age Groups

Levene's Statistic	df1	df2	Sig.
1.614	4	418	.065

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across age groups. Given the objective, Levene's test is carried out .The Levene's test in the above table indicates that variations in variable (Competency Development) is constant ($F_{4,418}=1.614 P>.05$) across the group.

Table 4.3.20 Test of Mean Difference – Competency Development With Respect to Age Group

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	5.622	4	1.405	1.683	.153
Within Groups	349.007	418	.835		
Total	354.629	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of Competency Development with respect to age groups is executed to statistically locate psychological difference among age groups regarding Competency Development. The statistics

($F_{4, 422} = 1.683, P > .05$) denotes that the perceptions of survey subjects across different age groups is constant and there is no statistically significant differences.

Table 4.3.21 Mean Analyses of Innovation With Respect to Age Group

Age Group	N	Mean	SD
25-30 years	70	3.84286	1.07185
31-35 years	147	3.78231	1.10116
36-40 years	99	3.9798	0.90328
41-45 years	58	3.87931	1.09348
46 years and above	49	3.97959	0.98931
Total	423	3.8747	1.03763

The table 4.3.21 indicates mean analysis of Innovation with respect to different age groups working in organizations. The purpose of executing this analysis captures the systematic and group psychological response of the survey subjects of different age groups regarding how they perceive Innovation in the organization. The mean value ($3.8428, SD=1.0718$) of the age groups (25-30 years) denotes that they tends to agree and profess that company always succeeds in developing the product which is accepted well by the market as a result of the company's ability in managing the knowledge, company succeeds in generating the new product or service as the embodiment of the company's existing knowledge, By means of the ability to manage knowledge, our company always succeeds in improving service process to the customers, By means of the ability to manage knowledge, our company succeeds simplifying the activities; hence the administrative process is easier, With the ability to manage knowledge, our company succeeds in carrying out changes in administrative processes, so they are easier to run and overall

innovation in the organization whereas, the mean value (3.7823 , $SD=1.1011$) of the age group (31-35 years) reveals that this particular age group tends towards agreement about the prevalent knowledge of Innovation within organization. The results in the above tables further conceives that the mean value of (3.9798 , $SD= 0.9032$) of the age group (36-40 years) signifies that this age groups tends toward accords with others age groups and perceives innovation within organization whereas, the mean value (3.8793 , $SD=1.0934$) of the age group (41-45 years) reveals that the said age groups response toward Innovation are in accords with the other age groups and they profess Innovation within organization. It is evident from the analysis that as compare to other age groups, 36-40 years and 46 years and above age groups realizes more regarding Innovation within organization.

Table 4.3.22 Variance Homogeneity Test of Innovation Across the Age Groups

Levene's Statistic	df1	df2	Sig.
1.845	4	418	.119

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across age groups. Given the objective, Levene's test is carried out .The Levene's test in the above table indicates that variations in variable (Innovation) is constant ($F_{4,418}=1.845 P>.05$) across the group.

Table 4.3.23 Test of Mean Difference – Innovation with Respect to Age Group

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.960	4	.740	1.685	.603
Within Groups	451.400	418	1.080		
Total	454.359	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of Innovation with respect to age groups is executed to statistically locate psychological difference among age groups regarding Innovation. The statistics ($F_{4, 422} = 1.685, P > .05$) denotes that the perceptions of survey subjects across different age groups is constant and there is no statistically significant differences.

Table 4.3.24 Mean Analyses of Organizational Performance with Respect to Age Group

Age Group	N	Mean	SD
25-30 years	70	3.94286	1.14063
31-35 years	147	3.98639	1.03359
36-40 years	99	4.25253	0.90738
41-45 years	58	4.18966	0.94511
46 years and above	49	4.12245	1.05342
Total	423	4.08511	1.01754

The table 4.3.24 indicates mean analysis of Organizational Performance with respect to different age groups working in organizations. The purpose of executing this analysis captures the systematic and group psychological response of the survey subjects of different age groups

regarding how they perceive Organizational Performance in the organization. The mean value (3.9428, $SD=1.1406$) of the age groups (25-30 years) denotes that they tends to agree and profess Company has a greater market share than its key competitors, Company is growing faster than its key competitors are, Company is more profitable than its key competitors, Company has a greater efficiency of operations than its key competitors, Company has a greater quality of services than its key competitors and overall organizational performance of the organization whereas, the mean value (3.9863, $SD=1.0335$) of the age group (31-35 years) reveals that this particular age group tends towards agreement about the prevalent knowledge of Organizational Performance within organization. The results in the above tables further conceives that the mean value of (4.2525, $SD= 0.9073$) of the age group (36-40 years) signifies that this age groups tends toward accords with others age groups and perceives Organizational Performance within organization whereas, the mean value (4.1896, $SD=0.9451$) of the age group (41-45 years) reveals that the said age groups response toward Organizational Performance are in accords with the other age groups and they profess Organizational Performance within organization. It is evident from the analysis that as compare to other age groups, 36-40 years age groups realizes more regarding Organizational Performance within organization.

Table 4.3.25 Variance Homogeneity Test of Organizational Performance Across the Age Groups

Levene's Statistic	df1	df2	Sig.
1.373	4	418	.828

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across age groups. Given the objective, Levene's

test is carried out .The Levene's test in the above table indicates that variations in variable (Organizational Performance) is constant ($F_{4,418}=1.373 P>.05$) across the group.

Table 4.3.26 Test of Mean Difference – Organizational Performance With Respect to Age Group

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	6.326	4	1.581	1.535	.191
Within Groups	430.610	418	1.030		
Total	436.936	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of Organizational Performance with respect to age groups is executed to statistically locate psychological difference among age groups regarding Organizational Performance. The statistics ($F_{4, 422}= 1.535, P>.05$) denotes that the perceptions of survey subjects across different age groups is constant and there is no statistically significant differences.

Table 4.4 Mean Analyses of Learning Culture With Respect to Education Level

Education	N	Mean	SD
Bachelor Degree	209	3.98086	1.03293
Master Degree	138	3.83333	1.16884
Professional Diploma	48	3.8125	1.14216
Others	28	3.82143	1.36228
Total	423	3.90307	1.11328

The table 4.4 indicates mean analysis of learning culture with respect to education level of employees in organizations. The intention of executing this analysis captures the systematic and psychological response of the survey subjects regarding how they perceive learning culture in the organization with respect to their educational. The purpose of the analysis demonstrates the perception of employees in the organization regarding their educational. The mean value (3.9808, $SD=1.0329$) of the Bachelor degree educational indicates that they tends to agree and profess failures as an opportunity to learn instead a reason to be ashamed of, support the role of knowledge in the firm's success, improvement in the employees knowledge and skills and overall learning culture whereas, the mean value (3.8333, $SD=1.1688$) of the Master degree educational level reveals that this particular educational level tends towards agreement about the prevalent knowledge of learning culture within organization. The results in the above tables further demonstrates that the mean value of (3.8125, $SD= 1.1421$) of the Professional diploma educational level signifies that this educational tends toward accords with others educational level and perceives learning culture within organization whereas, the mean value (3.8214, $SD=1.3622$) of the other level of education reveals that the said educational level response toward learning culture are in accords with the other educational level and they profess learning culture within organization. It is evident from the analysis that as compare to other educational level, Bachelor degree educational level realizes more regarding learning culture within organization.

Table 4.4.1 Variance Homogeneity Test of Learning Culture Across the Education Groups

Levene's Statistic	df1	df2	Sig.
1.578	3	419	.063

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across educational levels of employees in the organization. Given the objective, Levene's test is carried out .The Levene's test in the above table indicates that variations in variable (learning culture) is constant ($F_{3,419}=1.578 P>.05$) across the educational levels of employees in the organization.

Table 4.4.2 Test of Mean Difference – Learning Culture With Respect to Education Level

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.516	3	.839	1.675	.568
Within Groups	520.510	419	1.242		
Total	523.026	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of learning culture with respect to educational levels is executed to statistically locate psychological difference among different educational level of employees regarding learning culture in the organization. The statistics ($F_{3, 422}= 1.675, P>.05$) denotes that the perceptions of survey subjects across different educational levels of employees is constant and there is no statistically significant differences.

Table 4.4.3 Mean Analyses of Trust With Respect to Education Level

Education	N	Mean	SD
Bachelor Degree	209	3.80383	1.10279
Master Degree	138	3.71739	1.1073
Professional Diploma	48	3.45833	1.03056
Others	28	3.96429	0.96156
Total	423	3.74704	1.0906

The table 4.4.3 indicates mean analysis of Trust with respect to education level of employees in organizations. The intention of executing this analysis captures the systematic and psychological response of the survey subjects regarding how they perceive Trust in the organization with respect to their educational level. The purpose of the analysis demonstrates the perception of employees in the organization regarding their educational level. The mean value (3.8038, $SD=1.1027$) of the Bachelor degree educational indicates that they tends to agree and profess that the members are generally trustworthy, members are respectful and understandable to what other members need while they are doing their job, members have reciprocal faith in other's abilities, intensions, and behaviors and overall trust developed in the organization whereas, the mean value (3.7173, $SD=1.1073$) of the Master degree educational level reveals that this particular educational level tends towards agreement about the prevalent knowledge of Trust within organization. The results in the above tables further demonstrates that the mean value of (3.4583, $SD= 1.0305$) of the Professional diploma educational level signifies that this educational tends toward accords with others educational level and perceives Trust within organization whereas, the mean value (3.9642, $SD=0.9615$) of the other level of education reveals that the said educational level response toward Trust are in accords with the other

educational level and they profess Trust within organization. It is evident from the analysis that as compare to other educational level, others educational level realizes more regarding Trust within organization.

Table 4.4.4 Variance Homogeneity Test of Trust Across the Education Levels

Levene's Statistic	Df1	df2	Sig.
1.988	3	419	.398

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across educational levels of employees in the organization. Given the objective, Levene's test is carried out .The Levene's test in the above table indicates that variations in variable (Trust) is constant ($F_{3,419}=1.988 P>.05$) across the educational levels of employees in the organization.

Table 4.4.5 Test of Mean Difference – Trust With Respect to Education Level

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	6.118	3	2.039	1.723	.162
Within Groups	495.816	419	1.183		
Total	501.934	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of Trust with respect to educational levels is executed to statistically locate psychological difference among different educational level of employees regarding Trust in the organization. The

statistics ($F_{3, 422} = 1.723, P > .05$) denotes that the perceptions of survey subjects across different educational levels of employees is constant and there is no statistically significant differences.

Table 4.4.6 Mean Analyses of Combinative Capabilities With Respect to Education

Level			
Education	N	Mean	SD
Bachelor Degree	209	2.91388	1.28686
Master Degree	138	3.46377	1.23312
Professional Diploma	48	2.64583	1.15758
Others	28	3.37143	1.06904
Total	423	3.10638	1.27704

The table 4.4,6 indicates mean analysis of Combinative capabilities with respect to education level of employees in organizations. The intention of executing this analysis captures the systematic and psychological response of the survey subjects regarding how they perceive Combinative capabilities in the organization with respect to their educational level. The purpose of the analysis demonstrates the perception of employees in the organization regarding their educational level. The mean value ($2.9138, SD=1.2868$) of the Bachelor degree educational indicates that they tends to agree and the know-how about how a threat was identified, know-how about steps taken to respond to a threat, know-how about how to prevent future similar threats, Reasons behind decisions others made in responding to the security threat, Reasons behind involving certain people in the security response, Reasons behind decisions made for not pursuing certain security responses and overall know how about combinative capabilities whereas, the mean value ($3.4637, SD=1.2331$) of the Master degree educational level reveals that this particular educational level tends towards agreement about the prevalent knowledge of

Combinative capabilities within organization. The results in the above tables further demonstrates that the mean value of (2.6458, $SD= 1.1575$) of the Professional diploma educational level signifies that this educational tends toward accords with others educational level and perceives Combinative capabilities within organization whereas, the mean value (3.3714, $SD=1.0690$) of the other level of education reveals that the said educational level response toward Combinative capabilities are in accords with the other educational level and they profess Combinative capabilities within organization. It is evident from the analysis that as compare to other educational level, Master degree educational level realizes more regarding Combinative capabilities within organization.

Table 4.4.7 Variance Homogeneity Test of Combinative Capabilities Across the Education Levels

Levene's Statistic	df1	df2	Sig.
1.829	3	419	.478

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across educational levels of employees in the organization. Given the objective, Levene's test is carried out .The Levene's test in the above table indicates that variations in variable (Combinative capabilities) is constant ($F_{3,419}=1.829$ $P>.05$) across the educational levels of employees in the organization.

Table 4.4.8 Test of Mean Difference – Combinative Capabilities With Respect to Education Level

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	41.608	3	13.869	1.987	.371
Within Groups	646.605	419	1.543		
Total	688.213	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of Combinative capabilities with respect to educational levels is executed to statistically locate psychological difference among different educational level of employees regarding Combinative capabilities in the organization. The statistics ($F_{3, 422} = 1.987, P > .05$) denotes that the perceptions of survey subjects across different educational levels of employees is constant and there is no statistically significant differences.

Table 4.4.9 Mean Analyses of Leadership With Respect to Education Level

Education	N	Mean	SD
Bachelor Degree	209	3.94258	2.85491
Master Degree	138	3.65217	0.88501
Professional Diploma	48	3.625	0.8411
Others	28	3.85714	0.80343
Total	423	3.80615	2.10061

The table 4.9 indicates mean analysis of Leadership with respect to education level of employees in organizations. The intention of executing this analysis captures the systematic and

psychological response of the survey subjects regarding how they perceive Leadership in the organization with respect to their educational level. The purpose of the analysis demonstrates the perception of employees in the organization regarding their educational level. The mean value (3.9425, $SD=2.8549$) of the Bachelor degree educational indicates that they tends to agree and profess the leaders support in the processes of acquiring and disseminating of customer knowledge when needed, the leaders encouragement in generation of new ideas and/or suggestions comes from customer, celebration of leaders in result of distinguished achievements and announces them to all customers by organized meetings, leaders provide transparency and openness about ongoing activities to activate customers" participation in decision making and overall leadership in the organization whereas, the mean value (3.6521, $SD=0.8850$) of the Master degree educational level reveals that this particular educational level tends towards agreement about the prevalent knowledge of Leadership within organization. The results in the above tables further demonstrates that the mean value of (3.650, $SD= 0.8411$) of the Professional diploma educational level signifies that this educational tends toward accords with others educational level and perceives Leadership within organization whereas, the mean value (3.8571, $SD=0.8034$) of the other level of education reveals that the said educational level response toward Leadership are in accords with the other educational level and they profess Leadership within organization. It is evident from the analysis that as compare to other educational level, Bachelor degree educational level realizes more regarding Leadership within organization.

Table 4.4.10 Variance Homogeneity Test of Leadership Across the Education Levels

Levene's Statistic	df1	df2	Sig.
1.106	3	419	.956

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across educational levels of employees in the organization. Given the objective, Levene's test is carried out. The Levene's test in the above table indicates that variations in variable (Leadership) is constant ($F_{3,419}=1.106 P>.05$) across the educational levels of employees in the organization.

Table 4.4.11 Test of Mean Difference – Leadership With Respect to Education Level

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	8.810	3	2.937	1.664	.575
Within Groups	1853.294	419	4.423		
Total	1862.104	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of Leadership with respect to educational levels is executed to statistically locate psychological difference among different educational level of employees regarding Leadership in the organization. The statistics ($F_{3, 422}= 1.664, P>.05$) denotes that the perceptions of survey subjects across different educational levels of employees is constant and there is no statistically significant differences.

Table 4.4.12 Mean Analyses of Culture With Respect to Education Level

Education	N	Mean	SD
Bachelor Degree	209	3.72727	1.15911
Master Degree	138	3.62319	1.16646
Professional Diploma	48	3.41667	1.04847
Others	28	3.52613	1.17063
Total	423	3.64303	1.15103

The table 4.4.12 indicates mean analysis of Culture with respect to education level of employees in organizations. The intention of executing this analysis captures the systematic and psychological response of the survey subjects regarding how they perceive Culture in the organization with respect to their educational level. The purpose of the analysis demonstrates the perception of employees in the organization regarding their educational level. The mean value (3.7272 , $SD=1.1591$) of the Bachelor degree educational indicates that they tends to agree and profess Employees understand the importance of knowledge, employees are valued for their individual expertise, benefits of sharing knowledge outweigh the costs, and knowledge about overall culture in the organization whereas, the mean value (3.6231 , $SD=1.1664$) of the Master degree educational level reveals that this particular educational level tends towards agreement about the prevalent knowledge of Culture within organization. The results in the above tables further demonstrates that the mean value of (3.4166 , $SD= 1.0484$) of the Professional diploma educational level signifies that this educational tends toward accords with others educational level and perceives Culture within organization whereas, the mean value (3.5261 , $SD=1.1706$) of the other level of education reveals that the said educational level response toward Culture are in

accords with the other educational level and they profess Culture within organization. It is evident from the analysis that as compare to other educational level, Bachelor degree educational level realizes more regarding Culture within organization.

Table 4.4.13 Variance Homogeneity Test of Culture Across the Education Levels

Levene's Statistic	df1	df2	Sig.
1.333	3	419	.802

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across educational levels of employees in the organization. Given the objective, Levene's test is carried out .The Levene's test in the above table indicates that variations in variable (Culture) is constant ($F_{3,419}=1.333 P>.05$) across the educational levels of employees in the organization.

Table 4.4.14 Test of Mean Difference – Culture With Respect to Education Level

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	4.570	3	1.523	1.151	.328
Within Groups	554.527	419	1.323		
Total	559.097	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of Culture with respect to educational levels is executed to statistically locate psychological difference among different educational level of employees regarding Culture in the organization. The statistics ($F_{3, 422}= 1.151, P>.05$) denotes that the perceptions of survey subjects across

different educational levels of employees is constant and there is no statistically significant differences.

Table 4.4.15 Mean Analyses of Technology With Respect to Education Level

Education	N	Mean	SD
Bachelor Degree	209	4.15483	0.95888
Master Degree	138	3.98551	1.12039
Professional Diploma	48	3.97917	1.04147
Others	28	4.14286	1.29713
Total	423	4.0591	1.04578

The table 4.4.15 indicates mean analysis of Technology with respect to education level of employees in organizations. The intention of executing this analysis captures the systematic and psychological response of the survey subjects regarding how they perceive Technology in the organization with respect to their educational level. The purpose of the analysis demonstrates the perception of employees in the organization regarding their educational level. The mean value (4.1548, $SD=0.9588$) of the Bachelor degree educational indicates that they tends to agree and profess Intranets are a key within the organization, Collaboration technologies are a key within the organization, Managing technologies are a key within the organization, Documentary and codification systems are a key within the organization, Searching technologies are a key within the organization, Organizational workstations are effectively computerized and overall technology development in the organization whereas, the mean value (3.9855, $SD=1.1203$) of the Master degree educational level reveals that this particular educational level tends towards agreement about the prevalent knowledge of Technology within organization. The results in the

above tables further demonstrates that the mean value of (3.9791, $SD= 1.0414$) of the Professional diploma educational level signifies that this educational tends toward accords with others educational level and perceives Technology within organization whereas, the mean value (4.1428, $SD=1.2971$) of the other level of education reveals that the said educational level response toward Technology are in accords with the other educational level and they profess Technology within organization. It is evident from the analysis that as compare to other educational level, Bachelor degree educational level realizes more regarding Technology within organization.

Table 4.4.16 Variance Homogeneity Test of Technology Across the Education Levels

Levene's Statistic	Df1	df2	Sig.
1.315	3	419	.269

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across educational levels of employees in the organization. Given the objective, Levene's test is carried out .The Levene's test in the above table indicates that variations in variable (Technology) is constant ($F_{3,419}=1.315 P>.05$) across the educational levels of employees in the organization.

Table 4.4.17 Test of Mean Difference – Technology With Respect to Education Level

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.900	3	.633	1.577	.630
Within Groups	459.623	419	1.097		
Total	461.522	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of Technology with respect to educational levels is executed to statistically locate psychological difference among different educational level of employees regarding Technology in the organization. The statistics ($F_{3, 422} = 1.577, P > .05$) denotes that the perceptions of survey subjects across different educational levels of employees is constant and there is no statistically significant differences.

Table 4.4.18 Mean Analyses of Competency Development With Respect to Education

Level			
Education	N	Mean	SD
Bachelor Degree	209	3.73206	0.90669
Master Degree	138	3.58696	0.96454
Professional Diploma	48	3.60417	0.86884
Others	28	3.62143	0.81892
Total	423	3.67612	0.91671

The table 4.4.18 indicates mean analysis of Competency development with respect to education level of employees in organizations. The intention of executing this analysis captures the systematic and psychological response of the survey subjects regarding how they perceive Competency development in the organization with respect to their educational level. The purpose of the analysis demonstrates the perception of employees in the organization regarding their educational level. The mean value ($3.7320, SD=0.9066$) of the Bachelor degree educational indicates that they tends to agree and profess that the organization has systems to measure its employees' competences, remuneration and promotion systems have an influence on the development of competences, ideas and knowledge by the employees, the firm uses

benchmarking techniques to improve its employees' competences and overall competency development in the organization whereas, the mean value (3.5869 , $SD=0.9645$) of the Master degree educational level reveals that this particular educational level tends towards agreement about the prevalent knowledge of Competency development within organization. The results in the above tables further demonstrates that the mean value of (3.6041 , $SD= 0.8688$) of the Professional diploma educational level signifies that this educational tends toward accords with others educational level and perceives Competency development within organization whereas, the mean value (3.6214 , $SD=0.8189$) of the other level of education reveals that the said educational level response toward Competency development are in accords with the other educational level and they profess Competency development within organization. It is evident from the analysis that as compare to other educational level, Bachelor degree educational level realizes more regarding Competency development within organization.

Table 4.4.19 Variance Homogeneity Test of Competency Development Across the Education Levels

Levene's Statistic	df1	df2	Sig.
1.796	3	419	.147

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across educational levels of employees in the organization. Given the objective, Levene's test is carried out .The Levene's test in the above table indicates that variations in variable (Competency development) is constant ($F_{3,419}=1.796$ $P>.05$) across the educational levels of employees in the organization.

Table 4.4.20 Test of Mean Difference – Competency Development With Respect to Education Levels

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.591	3	.864	1.028	.380
Within Groups	352.038	419	.840		
Total	354.629	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of Competency development with respect to educational levels is executed to statistically locate psychological difference among different educational level of employees regarding Competency development in the organization. The statistics ($F_{3, 422} = 1.028, P > .05$) denotes that the perceptions of survey subjects across different educational levels of employees is constant and there is no statistically significant differences.

Table 4.4.21 Mean Analyses of Innovation With Respect to Education Level

Education	N	Mean	SD
Bachelor Degree	209	3.97431	1.05631
Master Degree	138	3.84783	1.06642
Professional Diploma	48	3.70833	0.98841
others	28	3.90143	0.81325
Total	423	3.8747	1.03763

The table 4.4.21 indicates mean analysis of Innovation with respect to education level of employees in organizations. The intention of executing this analysis captures the systematic and

psychological response of the survey subjects regarding how they perceive Innovation in the organization with respect to their educational level. The purpose of the analysis demonstrates the perception of employees in the organization regarding their educational level. The mean value (3.9743, $SD=1.0563$) of the Bachelor degree educational indicates that they tends to agree and profess that the company always succeeds in developing the product which is accepted well by the market as a result of the company's ability in managing the knowledge, company succeeds in generating the new product or service as the embodiment of the company's existing knowledge, By means of the ability to manage knowledge, our company always succeeds in improving service process to the customers, By means of the ability to manage knowledge, our company succeeds simplifying the activities; hence the administrative process is easier, With the ability to manage knowledge, our company succeeds in carrying out changes in administrative processes, so they are easier to run and overall innovation in the organization whereas, the mean value (3.8478, $SD=1.0664$) of the Master degree educational level reveals that this particular educational level tends towards agreement about the prevalent knowledge of Innovation within organization. The results in the above tables further demonstrates that the mean value of (3.7083, $SD= 0.9884$) of the Professional diploma educational level signifies that this educational tends toward accords with others educational level and perceives Innovation within organization whereas, the mean value (3.9014, $SD=0.8132$) of the other level of education reveals that the said educational level response toward Innovation are in accords with the other educational level and they profess Innovation within organization. It is evident from the analysis that as compare to other educational level, Bachelor degree educational level realizes more regarding Innovation within organization.

Table 4.4.22 Variance Homogeneity Test of Innovation Across the Education Levels

Levene's Statistic	Df1	df2	Sig.
1.148	3	419	.329

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across educational levels of employees in the organization. Given the objective, Levene's test is carried out. The Levene's test in the above table indicates that variations in variable (Innovation) is constant ($F_{3,419}=1.148 P>.05$) across the educational levels of employees in the organization.

Table 4.4.23 Test of Mean Difference – Innovation With Respect to Education Level

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.695	3	.898	1.833	.476
Within Groups	451.664	419	1.078		
Total	454.359	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of Innovation with respect to educational levels is executed to statistically locate psychological difference among different educational level of employees regarding Innovation in the organization. The statistics ($F_{3, 422}= 1.833, P>.05$) denotes that the perceptions of survey subjects across different educational levels of employees is constant and there is no statistically significant differences.

Table 4.4.24 Mean Analyses of Organizational Performance With Respect to Education**Levels**

Education	N	Mean	SD
Bachelor Degree	209	4.12919	0.93929
Master Degree	138	4.21449	1.09401
Professional Diploma	48	3.97917	1.04147
Others	28	4.08571	1.15011
Total	423	4.08511	1.01754

The table 4.4.24 indicates mean analysis of Organizational performance with respect to education level of employees in organizations. The intention of executing this analysis captures the systematic and psychological response of the survey subjects regarding how they perceive Organizational performance in the organization with respect to their educational level. The purpose of the analysis demonstrates the perception of employees in the organization regarding their educational level. The mean value (4.1291 , $SD=0.9392$) of the Bachelor degree educational indicates that they tends to agree and profess Company has a greater market share than its key competitors, Company is growing faster than its key competitors are, Company is more profitable than its key competitors, Company has a greater efficiency of operations than its key competitors, Company has a greater quality of services than its key competitors and overall organizational performance of the organization whereas, the mean value (4.2144 , $SD=1.0940$) of the Master degree educational level reveals that this particular educational level tends towards agreement about the prevalent knowledge of Organizational performance within organization. The results in the above tables further demonstrates that the mean value of (3.97917 , $SD=1.0414$) of the Professional diploma educational level signifies that this educational tends toward

accords with others educational level and perceives Organizational performance within organization whereas, the mean value (4.0857 , $SD=1.1501$) of the other level of education reveals that the said educational level response toward Organizational performance are in accords with the other educational level and they profess Organizational performance within organization. It is evident from the analysis that as compare to other educational level, Bachelor degree educational level realizes more regarding Organizational performance within organization.

Table 4.4.25 Variance Homogeneity Test of Organizational Performance Across the Education Levels

Levene's Statistic	df1	df2	Sig.
1.669	3	419	.571

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across educational levels of employees in the organization. Given the objective, Levene's test is carried out .The Levene's test in the above table indicates that variations in variable (Organizational performance) is constant ($F_{3,419}=1.669$ $P>.05$) across the educational levels of employees in the organization.

Table 4.4.26 Test of Mean Difference – Organizational Performance With Respect to Education Level

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.760	3	.920	1.892	.447
Within Groups	434.176	419	1.036		
Total	436.936	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of Organizational performance with respect to educational levels is executed to statistically locate psychological difference among different educational level of employees regarding Organizational performance in the organization. The statistics ($F_{3, 422} = 1.892, P > .05$) denotes that the perceptions of survey subjects across different educational levels of employees is constant and there is no statistically significant differences.

Table 4.5 Mean Analyses of Learning Culture With Respect to Years of Experience

Experience	N	Mean	SD
1-3 years	50	3.86861	1.95533
4-7 years	161	4.20745	0.17002
8-11 years	142	4.17324	0.12268
12-15 years	38	3.81579	1.18219
15 years and Above	32	3.81875	1.83219
Total	423	3.90307	1.11328

The table 4.5 denotes mean analysis of learning culture with respect to experience level of employees in organizations. The intention of executing this analysis captures the systematic and psychological response of the survey subjects regarding how they perceive learning culture in the organization with respect to their experience level. The mean analysis has been executed across five levels of experience. The purpose of the analysis demonstrates the perception of employees in the organization regarding their experience level. The mean value (3.8686, $SD=1.9553$) of the 1-3 years experience level indicates that they tends to agree and profess failures as an opportunity to learn instead a reason to be ashamed of, support the role of knowledge in the firm's success, improvement in the employees knowledge and skills and overall learning culture whereas, the mean value (4.2074, $SD=0.1700$) of the 4-7 years experience level reveals that this particular experience level tends towards agreement about the prevalent knowledge of learning culture within organization. The results in the above tables further demonstrates that the mean value of (4.1732, $SD= 0.1226$) of the 8-11 years experience level signifies that this experience level tends toward accords with others experience level and perceives learning culture within organization whereas, the mean value (3.8157, $SD=1.1821$) of the 12-15 years experience level reveals that the said experience level response toward learning culture are in accords with the other experience level and they profess learning culture within organization. It is evident from the analysis that as compare to other experience level, 4-7 years experience level realizes more regarding learning culture within organization.

Table 4.5.1 Variance Homogeneity Test of Learning Culture Across the Experience Groups

Levene's Statistic	df1	Df2	Sig.
1.299	4	418	.270

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across experience levels of employees in the organization. Given the objective, Levene's test is carried out. The Levene's test in the above table indicates that variations in variable (learning culture) is constant ($F_{4,418}=1.299 P>.05$) across the experience levels of employees in the organization.

Table 4.5.2 Test of Mean Difference – Learning Culture With Respect to Years of Experience

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	8.377	4	2.094	1.701	.149
Within Groups	514.649	418	1.231		
Total	523.026	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of learning culture with respect to experience levels is executed to statistically locate psychological difference among different experience level of employees regarding learning culture in the organization. The statistics ($F_{4, 422}= 1.701, P>.05$) denotes that the perceptions of survey subjects across different experience levels of employees is constant and there is no statistically significant differences.

Table 4.5.3 Mean Analyses of Trust With Respect to Years of Experience

Experience	N	Mean	SD
1-3 years	50	3.78452	1.1119
4-7 years	161	3.74534	1.1526
8-11 years	142	3.69014	1.09921
12-15 years	38	3.86842	0.96341
"15 years and Above"	32	3.8125	0.85901
Total	423	3.74704	1.0906

The table 4.5.3 denotes mean analysis of trust with respect to experience level of employees in organizations. The intention of executing this analysis captures the systematic and psychological response of the survey subjects regarding how they perceive trust in the organization with respect to their experience level. The mean analysis has been executed across five levels of experience. The purpose of the analysis demonstrates the perception of employees in the organization regarding their experience level. The mean value (3.7845 , $SD=1.1119$) of the 1-3 years experience level indicates that they tends to agree and profess that The members are generally trustworthy, members are respectful and understandable to what other members need while they are doing their job, members have reciprocal faith in other's abilities, intensions, and behaviors and overall trust developed in the organization whereas, the mean value (3.7453 , $SD=1.1526$) of the 4-7 years experience level reveals that this particular experience level tends towards agreement about the prevalent knowledge of trust within organization. The results in the above tables further demonstrates that the mean value of (3.6901 , $SD= 1.0992$) of the 8-11 years experience level signifies that this experience level tends toward accords with others experience

level and perceives trust within organization whereas, the mean value (3.8684, $SD=0.9634$) of the 12-15 years experience level reveals that the said experience level response toward trust are in accords with the other experience level and they profess trust within organization. It is evident from the analysis that as compare to other experience level, 12-15 years experience level realizes more regarding trust within organization.

Table 4.5.4 Variance Homogeneity Test of Trust Across the Experience Groups

Levene's Statistic	Df1	df2	Sig.
1.592	4	418	.081

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across experience levels of employees in the organization. Given the objective, Levene's test is carried out .The Levene's test in the above table indicates that variations in variable (trust) is constant ($F_{4,418}=1.592 P>.05$) across the experience levels of employees in the organization.

Table 4.5.5 Test of Mean Difference – Trust With Respect to Years of Experience

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.211	4	.303	1.253	.908
Within Groups	500.722	418	1.198		
Total	501.934	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of trust with respect to experience levels is executed to statistically locate psychological difference among different experience level of employees regarding trust in the organization. The statistics

($F_{4, 422} = 1.253, P > .05$) denotes that the perceptions of survey subjects across different experience levels of employees is constant and there is no statistically significant differences.

Table 4.5.6 Mean Analyses of Combinative Capabilities With Respect to Years of Experience

Experience	N	Mean	SD
1-3 years	50	3.12486	1.17178
4-7 years	161	3.14907	1.3144
8-11 years	142	3.07746	1.31048
12-15 years	38	3.31579	1.33771
"15 years and Above"	32	2.75318	0.98374
Total	423	3.10638	1.27704

The table 4.5.6 denotes mean analysis of combinative capabilities with respect to experience level of employees in organizations. The intention of executing this analysis captures the systematic and psychological response of the survey subjects regarding how they perceive combinative capabilities in the organization with respect to their experience level. The mean analysis has been executed across five levels of experience. The purpose of the analysis demonstrates the perception of employees in the organization regarding their experience level. The mean value ($3.1248, SD=1.1717$) of the 1-3 years experience level indicates that they tends to agree and profess the know-how about how a threat was identified, know-how about steps taken to respond to a threat, know-how about how to prevent future similar threats, Reasons behind decisions others made in responding to the security threat, Reasons behind involving certain people in the security response, Reasons behind decisions made for not pursuing certain security responses and overall know how about combinative capabilities whereas, the mean

value (3.1490, $SD=1.3144$) of the 4-7 years experience level reveals that this particular experience level tends towards agreement about the prevalent knowledge of combinative capabilities within organization. The results in the above tables further demonstrates that the mean value of (3.0774, $SD= 1.3104$) of the 8-11 years experience level signifies that this experience level tends toward accords with others experience level and perceives combinative capabilities within organization whereas, the mean value (3.3157, $SD=1.3370$) of the 12-15 years experience level reveals that the said experience level response toward combinative capabilities are in accords with the other experience level and they profess combinative capabilities within organization. It is evident from the analysis that as compare to other experience level, 12-15 years experience level realizes more regarding combinative capabilities within organization.

Table 4.5.7 Variance Homogeneity Test of Combinative Capabilities Across the Experience Groups

Levene's Statistic	df1	df2	Sig.
1.550	4	418	.069

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across experience levels of employees in the organization. Given the objective, Levene's test is carried out .The Levene's test in the above table indicates that variations in variable (combinative capabilities) is constant ($F_{4,418}=1.550$ $P>.05$) across the experience levels of employees in the organization.

Table 4.5.8 Test of Mean Difference – Combinative Capabilities With Respect to Experience Groups

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	6.152	4	1.538	1.943	.439
Within Groups	682.061	418	1.632		
Total	688.213	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of combinative capabilities with respect to experience levels is executed to statistically locate psychological difference among different experience level of employees regarding combinative capabilities in the organization. The statistics ($F_{4, 422} = 1.943, P > .05$) denotes that the perceptions of survey subjects across different experience levels of employees is constant and there is no statistically significant differences.

Table 4.5.9 Mean Analyses of Leadership With Respect to Years of Experience

Experience	N	Mean	SD
1-3 years	50	3.86321	0.69985
4-7 years	161	3.95031	1.22839
8-11 years	142	3.64085	0.97006
12-15 years	38	3.73684	0.64449
"15 years and Above"	32	3.90625	0.68906
Total	423	3.80615	2.10061

The table 4.5.9 denotes mean analysis of leadership with respect to experience level of employees in organizations. The intention of executing this analysis captures the systematic and psychological response of the survey subjects regarding how they perceive leadership in the organization with respect to their experience level. The mean analysis has been executed across five levels of experience. The purpose of the analysis demonstrates the perception of employees in the organization regarding their experience level. The mean value (3.8632, $SD=0.6998$) of the 1-3 years experience level indicates that they tends to agree and profess that the leaders support in the processes of acquiring and disseminating of customer knowledge when needed, the leaders encouragement in generation of new ideas and/or suggestions comes from customer, celebration of leaders in result of distinguished achievements and announces them to all customers by organized meetings, leaders provide transparency and openness about ongoing activities to activate customers' participation in decision making and overall leadership in the organization whereas, the mean value (3.9503, $SD=1.2283$) of the 4-7 years experience level reveals that this particular experience level tends towards agreement about the prevalent knowledge of leadership within organization. The results in the above tables further demonstrates that the mean value of (3.6408, $SD= 0.9700$) of the 8-11 years experience level signifies that this experience level tends toward accords with others experience level and perceives leadership within organization whereas, the mean value (3.7368, $SD=0.6444$) of the 12-15 years experience level reveals that the said experience level response toward leadership are in accords with the other experience level and they profess leadership within organization. It is evident from the analysis that as compare to other experience level, 4-7 years experience level realizes more regarding leadership within organization.

Table 4.5.10 Variance Homogeneity Test of Leadership Across the Experience Groups

Levene's Statistic	df1	df2	Sig.
1.827	4	418	.721

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across experience levels of employees in the organization. Given the objective, Levene's test is carried out. The Levene's test in the above table indicates that variations in variable (leadership) is constant ($F_{4,418}=1.827 P>.05$) across the experience levels of employees in the organization.

Table 4.5.11 Test of Mean Difference – Leadership With Respect to Years of Experience

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	7.731	4	1.933	1.436	.783
Within Groups	1854.373	418	4.436		
Total	1862.104	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of leadership with respect to experience levels is executed to statistically locate psychological difference among different experience level of employees regarding leadership in the organization. The statistics ($F_{4, 422}= 1.436, P>.05$) denotes that the perceptions of survey subjects across different experience levels of employees is constant and there is no statistically significant differences.

Table 4.5.12 Mean Analyses of Culture With Respect to Years of Experience

Experience	N	Mean	SD
1-3 years	50	3.5193	1.21638
4-7 years	161	3.6646	1.18819
8-11 years	142	3.5070	1.20723
12-15 years	38	4.0100	0.83827
"15 years and Above"	32	3.9375	0.75935
Total	423	3.6430	1.15103

The table 4.5.12 denotes mean analysis of culture with respect to experience level of employees in organizations. The intention of executing this analysis captures the systematic and psychological response of the survey subjects regarding how they perceive culture in the organization with respect to their experience level. The mean analysis has been executed across five levels of experience. The purpose of the analysis demonstrates the perception of employees in the organization regarding their experience level. The mean value (3.5193 , $SD=1.2163$) of the 1-3 years experience level indicates that they tends to agree and profess that employees understand the importance of knowledge, employees are valued for their individual expertise, benefits of sharing knowledge outweigh the costs, and knowledge about overall culture in the organization whereas, the mean value (3.6646 , $SD=1.1881$) of the 4-7 years experience level reveals that this particular experience level tends towards agreement about the prevalent knowledge of culture within organization. The results in the above tables further demonstrates that the mean value of (3.5070 , $SD= 1.2072$) of the 8-11 years experience level signifies that this experience level tends toward accords with others experience level and perceives culture within organization whereas, the mean value (4.0100 , $SD=0.8382$) of the 12-15 years experience level

reveals that the said experience level response toward culture are in accords with the other experience level and they profess culture within organization. It is evident from the analysis that as compare to other experience level, 12-15 years experience level realizes more regarding culture within organization.

Table 4.5.13 Variance Homogeneity Test of Culture Across the Experience Groups

Levene's Statistic	df1	df2	Sig.
1.991	4	418	.481

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across experience levels of employees in the organization. Given the objective, Levene's test is carried out .The Levene's test in the above table indicates that variations in variable (culture) is constant ($F_{4,418}=1.991 P>.05$) across the experience levels of employees in the organization.

Table 4.5.14 Test of Mean Difference – Culture With Respect to Years of Experience

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	11.341	4	2.835	1.164	.072
Within Groups	547.756	418	1.310		
Total	559.097	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of culture with respect to experience levels is executed to statistically locate psychological difference among different experience level of employees regarding culture in the organization. The statistics ($F_{4, 422}= 1.164, P>.05$) denotes that the perceptions of survey subjects across

different experience levels of employees is constant and there is no statistically significant differences.

Table 4.5.15 Mean Analyses of Technology With Respect to Years of Experience

Experience	N	Mean	SD
1-3 years	50	4.2412	0.95959
4-7 years	161	3.9751	1.11215
8-11 years	142	3.9929	1.06855
12-15 years	38	4.2105	0.93456
"15 years and Above"	32	4.3125	0.7803
Total	423	4.0591	1.04578

The table 4.5.15 denotes mean analysis of technology with respect to experience level of employees in organizations. The intention of executing this analysis captures the systematic and psychological response of the survey subjects regarding how they perceive technology in the organization with respect to their experience level. The mean analysis has been executed across five levels of experience. The purpose of the analysis demonstrates the perception of employees in the organization regarding their experience level. The mean value (4.2412 , $SD=0.9595$) of the 1-3 years experience level indicates that they tends to agree and profess that Intranets are a key within the organization, Collaboration technologies are a key within the organization, Managing technologies are a key within the organization, Documentary and codification systems are a key within the organization, Searching technologies are a key within the organization, Organizational workstations are effectively computerized and overall technology development in the organization whereas, the mean value (3.9751 , $SD=1.1121$) of the 4-7 years experience level

reveals that this particular experience level tends towards agreement about the prevalent knowledge of technology within organization. The results in the above tables further demonstrates that the mean value of (3.9929, $SD= 1.0685$) of the 8-11 years experience level signifies that this experience level tends toward accords with others experience level and perceives technology within organization whereas, the mean value (4.2105, $SD=0.9345$) of the 12-15 years experience level reveals that the said experience level response toward technology are in accords with the other experience level and they profess technology within organization. It is evident from the analysis that as compare to other experience level, 1-3 years experience level realizes more regarding technology within organization.

Table 4.5.16 Variance Homogeneity Test of Technology Across the Experience Groups

Levene's Statistic	df1	df2	Sig.
1.341	4	418	.850

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across experience levels of employees in the organization. Given the objective, Levene's test is carried out .The Levene's test in the above table indicates that variations in variable (technology) is constant ($F_{4,418}=1.341 P>.05$) across the experience levels of employees in the organization.

Table 4.5.17 Test of Mean Difference – Technology With Respect to Years of Experience

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	6.318	4	1.580	1.450	.217
Within Groups	455.204	418	1.089		
Total	461.522	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of technology with respect to experience levels is executed to statistically locate psychological difference among different experience level of employees regarding technology in the organization. The statistics ($F_{4, 422} = 1.450, P > .05$) denotes that the perceptions of survey subjects across different experience levels of employees is constant and there is no statistically significant differences.

Table 4.5.18 Mean Analyses of Competency Development With Respect to Years of Experience

Experience	N	Mean	SD
1-3 years	50	3.76513	0.74396
4-7 years	161	3.68944	0.92355
8-11 years	142	3.90563	0.01728
12-15 years	38	3.60526	0.82329
"15 years and Above"	32	3.57512	1.75134
Total	423	3.67612	0.91671

The table 4.5.18 denotes mean analysis of competency development with respect to experience level of employees in organizations. The intention of executing this analysis captures the systematic and psychological response of the survey subjects regarding how they perceive competency development in the organization with respect to their experience level. The mean analysis has been executed across five levels of experience. The purpose of the analysis demonstrates the perception of employees in the organization regarding their experience level. The mean value (3.7651 , $SD=0.7439$) of the 1-3 years experience level indicates that they tends to agree and profess that the organization has systems to measure its employees' competences, remuneration and promotion systems have an influence on the development of competences, ideas and knowledge by the employees, the firm uses benchmarking techniques to improve its employees' competences and overall competency development in the organization whereas, the mean value (3.6894 , $SD=0.9235$) of the 4-7 years experience level reveals that this particular experience level tends towards agreement about the prevalent knowledge of competency development within organization. The results in the above tables further demonstrates that the mean value of (3.9056 , $SD= 0.0172$) of the 8-11 years experience level signifies that this experience level tends toward accords with others experience level and perceives competency development within organization whereas, the mean value (3.6052 , $SD=0.8232$) of the 12-15 years experience level reveals that the said experience level response toward competency development are in accords with the other experience level and they profess competency development within organization. It is evident from the analysis that as compare to other experience level, 8-11 years experience level realizes more regarding competency development within organization.

Table 4.5.19 Variance Homogeneity Test of Competency Development Across the Experience Groups

Levene's Statistic	df1	df2	Sig.
1.958	4	418	.073

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across experience levels of employees in the organization. Given the objective, Levene's test is carried out. The Levene's test in the above table indicates that variations in variable (competency development) is constant ($F_{4,418}=1.958$, $P>.05$) across the experience levels of employees in the organization.

Table 4.5.20 Test of Mean Difference – Competency Development With Respect to Years of Experience

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.542	4	.636	1.755	.555
Within Groups	352.086	418	.842		
Total	354.629	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of competency development with respect to experience levels is executed to statistically locate psychological difference among different experience level of employees regarding competency development in the organization. The statistics ($F_{4, 422}= 1.755$, $P>.05$) denotes that the perceptions of survey subjects across different experience levels of employees is constant and there is no statistically significant differences.

Table 4.5.21 Mean Analyses of Innovation With Respect to Years of Experience

Experience	N	Mean	SD
1-3 years	50	3.9631	0.9467
4-7 years	161	3.9068	1.0885
8-11 years	142	3.7746	1.0876
12-15 years	38	4.0152	0.9004
"15 years and Above"	32	3.4750	1.8328
Total	423	3.8747	1.0376

The table 4.5.21 denotes mean analysis of innovation with respect to experience level of employees in organizations. The intention of executing this analysis captures the systematic and psychological response of the survey subjects regarding how they perceive innovation in the organization with respect to their experience level. The mean analysis has been executed across five levels of experience. The purpose of the analysis demonstrates the perception of employees in the organization regarding their experience level. The mean value (3.9631 , $SD=0.9467$) of the 1-3 years experience level indicates that they tends to agree and profess that company always succeeds in developing the product which is accepted well by the market as a result of the company's ability in managing the knowledge, company succeeds in generating the new product or service as the embodiment of the company's existing knowledge, By means of the ability to manage knowledge, our company always succeeds in improving service process to the customers, By means of the ability to manage knowledge, our company succeeds simplifying the activities; hence the administrative process is easier, With the ability to manage knowledge, our company succeeds in carrying out changes in administrative processes, so they are easier to run and overall innovation in the organization whereas, the mean value (3.9068 , $SD=1.0885$) of the

4-7 years experience level reveals that this particular experience level tends towards agreement about the prevalent knowledge of innovation within organization. The results in the above tables further demonstrates that the mean value of (3.7746, $SD= 1.0876$) of the 8-11 years experience level signifies that this experience level tends toward accords with others experience level and perceives innovation within organization whereas, the mean value (4.0152, $SD=0.9004$) of the 12-15 years experience level reveals that the said experience level response toward innovation are in accords with the other experience level and they profess innovation within organization. It is evident from the analysis that as compare to other experience level, 12-15 years experience level realizes more regarding innovation within organization.

Table 4.5.22 Variance Homogeneity Test of Innovation Across the Experience Groups

Levene's Statistic	df1	df2	Sig.
1.568	4	418	.068

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across experience levels of employees in the organization. Given the objective, Levene's test is carried out .The Levene's test in the above table indicates that variations in variable (innovation) is constant ($F_{4,418}=1.568 P>.05$) across the experience levels of employees in the organization.

Table 4.5.23 Test of Mean Difference – Innovation With Respect to Years of Experience

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.548	4	.637	1.589	.671
Within Groups	451.811	418	1.081		
Total	454.359	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of innovation with respect to experience levels is executed to statistically locate psychological difference among different experience level of employees regarding innovation in the organization. The statistics ($F_{4, 422} = 1.589, P > .05$) denotes that the perceptions of survey subjects across different experience levels of employees is constant and there is no statistically significant differences.

Table 4.5.24 Mean Analyses of Organizational Performance With Respect to Years of Experience

Experience	N	Mean	SD
1-3 years	50	4.32123	0.8437
4-7 years	161	3.99379	1.09257
8-11 years	142	4.02113	1.04147
12-15 years	38	4.21053	0.93456
"15 years and Above"	32	4.21251	0.7803
Total	423	4.08511	1.01754

The table 4.5.24 denotes mean analysis of organizational performance with respect to experience level of employees in organizations. The intention of executing this analysis captures the systematic and psychological response of the survey subjects regarding how they perceive organizational performance in the organization with respect to their experience level. The mean analysis has been executed across five levels of experience. The purpose of the analysis demonstrates the perception of employees in the organization regarding their experience level. The mean value (4.3212 , $SD=0.8437$) of the 1-3 years experience level indicates that they tends to agree and profess that company has a greater market share than its key competitors, Company is growing faster than its key competitors are, Company is more profitable than its key competitors, Company has a greater efficiency of operations than its key competitors, Company has a greater quality of services than its key competitors and overall organizational performance of the organization whereas, the mean value (3.9937 , $SD=1.0925$) of the 4-7 years experience level reveals that this particular experience level tends towards agreement about the prevalent knowledge of organizational performance within organization. The results in the above tables further demonstrates that the mean value of (4.0211 , $SD= 1.0414$) of the 8-11 years experience level signifies that this experience level tends toward accords with others experience level and perceives organizational performance within organization whereas, the mean value (4.2105 , $SD=0.9345$) of the 12-15 years experience level reveals that the said experience level response toward organizational performance are in accords with the other experience level and they profess organizational performance within organization. It is evident from the analysis that as compare to other experience level, 1-3 years experience level realizes more regarding organizational performance within organization.

Table 4.5.25 Variance Homogeneity Test of Organizational Performance Across the Experience Groups

Levene's Statistic	df1	df2	Sig.
1.314	4	418	.868

Before executing the analysis of variance test (ANOVA), it is pertinent to check whether the variation in the variable of interest is constant across experience levels of employees in the organization. Given the objective, Levene's test is carried out. The Levene's test in the above table indicates that variations in variable (organizational performance) is constant ($F_{4,418}=1.314$ $P>.05$) across the experience levels of employees in the organization.

Table 4.5.26 Test of Mean Difference – Organizational Performance With Respect to Years of Experience

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	6.935	4	1.734	1.685	.152
Within Groups	430.001	418	1.029		
Total	436.936	422			

After capturing the crucial assumption to identical distribution, analysis of variance test of organizational performance with respect to experience levels is executed to statistically locate psychological difference among different experience level of employees regarding organizational performance in the organization. The statistics ($F_{4, 422}= 1.685, P>.05$) denotes that the

perceptions of survey subjects across different experience levels of employees is constant and there is no statistically significant differences.

The brief analysis is done to come across the empirical observations deduced into quantitative results which not only helps the targeted population but at the same time assists in policy making to compete in global arena as well it works as input to resolve the contemporary issues at organizational level and up gradation of organization.

4.1 Factor Analysis

For the purpose of analysis, a valid, comprehensive questionnaire was used in which the items on the said questionnaire are internally consistent and reliable. The data was collected and then analyzed, thereby constituting the first-factor analysis. A Principal Factor Analysis is done which seeks the least number of factors to be accounted for correlation of the aforesaid variables. The questionnaire's survey items are analyzed in such a way that shows the maximum variance extracted from the variables and, secondly, after a calculation of the variances then a calculation of the linear combination was made which inculcates the maximum proportion of the remaining variance finally resulting into uncorrelated factors.

Table 4.6 Communalities of the Survey Items

Items	Initial	Extraction
1. Projects managers consider failures as an opportunity to learn instead a reason to be ashamed of	1	0.719
2. Project managers clearly support the role of knowledge in the firms success	1	0.796
3. Projects managers make efforts to improve the employees knowledge and skills	1	0.817

4. Project members are generally trustworthy	1	0.649
5. Project members are respectful and understandable to what other members need while they are doing their job	1	0.630
6. Project members have reciprocal faith in others abilities, intensions, and behaviors	1	0.647
7. Know-how about how a threat was identified	1	0.533
8. Know-how about steps taken to respond to a threat	1	0.741
9. Know-how about how to prevent future similar threats	1	0.838
10. Reasons behind decisions others made in responding to the security threat	1	0.798
11. Reasons behind involving certain people in the security response	1	0.637
12. Reasons behind decisions made for not pursuing certain security responses	1	0.826
13. My leaders support the processes of acquiring and disseminating of customer knowledge when needed	1	0.745
14. My leaders encourage generation of new ideas and\or suggestions comes from customer	1	0.672
15. My leaders provide transparency and openness about ongoing activities to active customer participation in decision-making	1	0.712
16. My leader always celebrates distinguished achievements and announces them to all customers by organized meetings and a big celebration	1	0.911
17. Employees understand the importance of knowledge	1	0.853

18. Employees are valued for their individual expertise	1	0.759
19. The benefits of sharing knowledge outweigh the costs	1	0.873
20. Intranets are a key within the organization	1	0.641
21. Collaboration technologies are a key within the organization	1	0.699
22. Managing technologies are a key within the organization	1	0.664
23. Documentary and codification systems are a key within the organization	1	0.698
24. Searching technologies are a key within the organization	1	0.740
25. Organizational workstations are effectively computerized	1	0.706
26. The organization has systems to measure its employees competences	1	0.911
27. Remuneration and promotion systems have an influence on the development of competences, ideas and knowledge by the employees	1	0.823
28. The firm uses benchmarking techniques to improve its employees competences	1	0.826
29. Our company always succeeds in developing the product which is accepted well by the market as a result of the company's ability in managing the knowledge.	1	0.698
30. Our company is able to generate improvement or improvisation out of the existing product or service	1	0.576
31. Our company succeeds in generating the new product or service as the embodiment of the company's existing knowledge	1	0.818

32. By means of the ability to manage knowledge, our company always succeeds in improving service process to the customers	1	0.486
33. By means of the ability to manage knowledge, our company succeeds simplifying the activities; hence the administrative process is easier	1	0.437
34. With the ability to manage knowledge, our company succeeds in carrying out changes in administrative processes, so they are easier to run	1	0.788
35. Company has a greater market share than its key competitors	1	0.826
36. Company is growing faster than its key competitors	1	0.733
37. Company is more profitable than its key competitors	1	0.715
38. Company has a greater efficiency of operations than its key competitors	1	0.507
39. Company has a greater quality of services than its key competitors	1	0.676

Extraction Method: Principal Component Analysis

4.2 Findings

Communality is the quantity to which the items are connected with all other items. Superior communalities are superior. If communalities for a scrupulous variable are minute (between 0.0-0.4) then that variable will progress sadistically to load considerably on any factor. In the table above, the communalities are clarified in terms of classification of low values in the "Extraction" column. Initial communalities are an evaluation of the discrepancy in each variable reported for by all instruments or characteristics. Extraction Communalities are estimations of the variation in each variable reported for by the features (or mechanisms) in the explanation of the factor.

Lesser values indicate variables that do not strongly figure in the factor solution, and should possibly be thrust from the analysis. The table reveals communalities before and after extraction. Principal Component Examination works on the assumption that all dissimilarities are general; accordingly, before extraction, the communalities are all 1. The communalities in the column extraction duplicate the common dissimilarity in the data's knowledge. For example, we can say that a 71% of variance related with question 1 is reciprocated or is 'common' variance. Communalities principally delegate the amount of variation clarified in a variable that is reported for by the features taken mutually. The size of the communality is a cooperative directory for estimating the how much variation is reported for by the factor explanation. The higher the communalities value indicates that a greater amount of variation in the variable has been extracted by the factor elucidation. Though no arithmetical route of accomplishment accurately points out what is 'big' or 'little', reasonable consideration declares a level of lower than .50 in the analysis. After the extraction, some of the characteristics are surplus and some information is omitted. In the analysis, the variables which are carried forward for further analysis are very finely explained and, in fact, none of the variables are pushed after extraction. All of the questions' somewhat high communalities indicate that there is larger quantity of dissimilarity in the variables. For example, question no. 25 shows an explained variance of .911 which is quite high and all of the other variables have communality values of more than .50. However, considering the significance of these variables, we maintain them in our data set. Hence, as we carry on with additional analysis, it will give way a more significant result.

Table -4.7: Total Variance Explained

Component	Initial Eigen-values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	14.6326	38.5068	38.5068	14.6326	38.5068	38.5068	4.97871	13.1019	13.102
2	3.65175	9.60986	48.1166	3.65175	9.60986	48.1166	4.70203	12.3738	25.476
3	2.22583	5.85746	53.9741	2.22583	5.85746	53.9741	4.36512	11.4872	36.963
4	1.77306	4.66596	58.64	1.77306	4.66596	58.64	3.32412	8.74769	45.71
5	1.51458	3.98573	62.6258	1.51458	3.98573	62.6258	3.02746	7.96699	53.677
6	1.35148	3.55653	66.1823	1.35148	3.55653	66.1823	2.90947	7.6565	61.334
7	1.2129	3.19186	69.3741	1.2129	3.19186	69.3741	2.19514	5.77669	67.111
8	1.05206	2.76857	72.1427	1.05206	2.76857	72.1427	1.91218	5.03204	72.143
9	1.02145	1.76245	73.9051	1.02145	1.76245	73.9051	1.81540	4.17612	73.9051

Extraction Method: Principal Component Analysis

4.3 Results and Interpretation

It is significant to investigate the measurement instrument's validity and reliability for dissimilar causes. For instance, it supplies assurance that the empirical conclusions precisely replicate the anticipated constructs. Also, the empirically-authenticated scales can be utilized directly in other studies in the field for dissimilar populations and for longitudinal studies. As previously mentioned, the scale was factor-scrutinized by the Principal Component Analysis. As in the above table, the Eigen-value for the first factor is 14.63 which explains 38.50% of the variance, whereas the second factor explains 9.6% which has an Eigen-value of 3.65. The third factor explains 5.85% of variance with an Eigen-value 2.22. The fourth factor demonstrates the 4.66%

of variance with the Eigen-value of 1.773. The initial Eigen-value 1.51 of the fifth factor reveals 3.98% of variance in these factors. Similarly, the extraction sum of squared loading is explained in the table. The first factor indicates the 38.50% of variation with the Eigen-value of 14.63.

Table -4.8: Rotated Component Matrix of Survey Items and Their Convergence (Part-1)

Items	1	2	3	4	5	6	7	8	9
Item 1	0.88								
Item 2	0.83								
Item 3	0.65								
Item 4		0.65							
Item 5		0.63							
Item 6		0.63							
Item 7			0.62						
Item 8			0.84						
Item 9			0.80						

Extraction Method: Principal Component Analysis

Table -4.9: Rotated Component Matrix of Survey Items and Their Convergence (Part-2)

Items	1	2	3	4	5	6	7	8	9
Item 10			0.77						
Item 11			0.77						
Item 12			0.69						
Item 13				0.42					
Item 14				0.43					
Item 15				0.83					
Item 16				0.79					
Item 17					0.79				
Item 18					0.77				
Item 19					0.66				
Item 20						0.56			
Item 21						0.81			
Item 22						0.81			
Item 23						0.73			
Item 24						0.68			

Table -4.10: Rotated Component Matrix of Survey Items and Their Convergence (Part-3)

Items	1	2	3	4	5	6	7	8	9
Item 25						0.84			
Item 26							0.85		
Item 27							0.73		
Item 28							0.53		
Item 29								0.44	
Item 30								0.81	
Item 31								0.80	
Item 32								0.76	
Item 33								0.72	
Item 34								0.67	
Item 35									0.67
Item 36									0.78
Item 37									0.45
Item 38									0.56
Item 39									0.51

The above tables demonstrate the rotated component matrix of the survey items of the study. Factor loadings, in either the un-rotated or rotated factor matrices, signifies the amount of association of each variable with all of the other factors. The loadings acquire on an input point in clarification of the factors, chiefly if they are used in ways that require characterization as to the substantive meaning of the factors. In these circumstances, the rationale of the factor

analysis is to exploit the association of each variable with the single other factor several times throughout the rotation of the factor matrix. The factor loadings are distributed for the clarification of each factor and knowledge in the place of variables. As expected, the first factor reports for the largest amount of variance in the table. The second factor is to some extent of a general factor with all of the variables having high loadings. Several factors have also slightly higher loadings in the table. Based on this factor loading outline with a comparatively huge number of loadings on factors 1, 2, 8 and 25, explanation develops into hard and hypothetically less significant. Therefore, the study proceeds to rotate the factor matrix to transfer the variance from the preceding factors to factors that follow. Rotation should, in consequence, evolve into a straightforward and certainly more significant factor pattern.

4.4 Correlations

Table: 4.11 Correlations

		KIC	KMP	INV	OP
KIC	Pearson Correlation	1	.592**	.636**	.722**
	Sig. (2-tailed)		.000	.000	.000
	N	450	450	450	450
KMP	Pearson Correlation	.592**	1	.572**	.818**
	Sig. (2-tailed)	.000		.000	.000
	N	450	450	450	450
INV	Pearson Correlation	.636**	.572**	1	.749**
	Sig. (2-tailed)	.000	.000		.000
	N	450	450	450	450
OP	Pearson Correlation	.722**	.818**	.749**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	450	450	450	450

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

The above-mentioned table elucidates the correlation among the study variables of Knowledge Integration Capacity (KIC), Knowledge Management Practices (KMP), Innovation (INV) and Organizational Performance (OP). Pearson correlation depicts the correlation exists between the understanding incorporation potential and advancement. Bless and Kathuria (1993) stated that the Pearson correlation declares the level of correlation among the variables and strength of the existing connection. Boyd, Westfall and Stasch (1985) as well as Bryman and Cramer (1990) proclaimed that methods of connection indicate both the durability and route (+ or -) of the connection between the two variables.

The above table shows 100% correlation in connation of Knowledge Integration Capacity (KIC) and Knowledge Integration Capacity (KIC) as if there is 1% change in Knowledge Integration Capacity (KIC) the 100% effect of change will be seen in the same direction and the cause and effect relationship is signified.

The Knowledge Integration Capacity (KIC) shows positive and strong correlation with the Knowledge Management Practices (KMP) and the value is close to 1. The Knowledge Integration Capacity (KIC) signifies 59% correlation with the Knowledge Management Practices (KMP) and further signifies that if there is 1% change in Knowledge Integration Capacity (KIC) there will be 59% effect of change will be seen in the same direction and the cause and effect relationship is signified.

The Knowledge Integration Capacity (KIC) shows positive and strong correlation with the Innovation (INV) and the value is close to 1. The Knowledge Integration Capacity (KIC) signifies 63% correlation with the Innovation (INV) and further signifies that if there is 1%

change in Knowledge Integration Capacity (KIC) there will be 63% effect of change will be seen in the same direction and the cause and effect relationship is signified.

The Knowledge Management Practices (KMP) shows positive and strong correlation with the Innovation (INV) and the value is close to 1. The Knowledge Management Practices (KMP) signifies 57% correlation with the Innovation (INV) and further signifies that if there is 1% change in Knowledge Management Practices (KMP) there will be 57% effect of change will be seen in the same direction and the cause and effect relationship is signified.

The Knowledge Integration Capacity (KIC) shows positive and strong correlation with the Organizational Performance (OP) and the value is close to 1. The Knowledge Integration Capacity (KIC) signifies 72% correlation with the Organizational Performance (OP) and further signifies that if there is 1% change in Knowledge Integration Capacity (KIC) there will be 72% effect of change will be seen in the same direction and the cause and effect relationship is signified.

The Knowledge Management Practices (KMP) shows positive and strong correlation with the Organizational Performance (OP) and the value is close to 1. The Knowledge Management Practices (KMP) signifies 82% correlation with the Organizational Performance (OP) and further signifies that if there is 1% change in Knowledge Management Practices (KMP) there will be 82% effect of change will be seen in the same direction and the cause and effect relationship is signified.

The Innovation (INV) shows positive and strong correlation with the Organizational Performance (OP) and the value is close to 1. The Innovation (INV) signifies 75% correlation with the Organizational Performance (OP) and further signifies that if there is 1% change in

Innovation (INV) there will be 75% effect of change will be seen in the same direction and the cause and effect relationship is signified.

The SPSS determined the Pearson Correlation Co-Efficients (r) and differs between -1 and +1. The more closer the value of r is to 0, the more weak correlation and as more closer to 1 (- or +), the more strengthen the correlation among the variables. In conclusion, the indication of the Pearson Correlation Co-Efficient indicates the route of the correlation, and its total value indicates the durability, with bigger total principles showing more powerful interactions. In this research, connection co-efficients signifies the characteristics of the correlation between understanding Developing Potential and Advancement, whereby a co-efficient of above 0.8 signifies a strong correlation, a co-efficient of between 0.5 and 0.8 signifies an average correlation, and a co-efficient below 0.5 signifies a weak correlation (Devore & Peck, 1993). The value if indicates 0 then there will be no association among the variables.

The precise relevance (p -level) of the outcomes symbolizes a reducing catalog of the excellence of an outcome. The greater the ' p -level', the less we can believe that the noticed regards between factors in the example is a trusted sign of the regards between the specific factors related to the inhabitants. The ' p -level' symbolizes the prospect of mistake that is engaged in recognizing the noticed outcome as legitimate, that is, as a consultant of the inhabitants (MacColl, 2004).

The process to analyze the precise relevance of the speculation in this research is as follows: If the pc-produced ' p -value' is less than the stage of relevance (α) of 0.01, the Specialist will reject the zero speculation. The specialist then indicates that there is a precise considerable and positive/negative connection between the factors under the study. If the ' p -value' is greater than the stage of relevance of 0.01, then the Specialist will fail to reject the zero speculation and

consider that there is no precise considerable and positive/negative connection between the factors (Sekaran, 2000). It is significant to specify whether the analysis is one-tailed or two-tailed. A one-tailed analysis is used when there is a particular route to the speculation being examined, while a two-tailed analysis is used when a connection is predicted, but the route of the connection is not predicted (Field, 2000). Due to the characteristics of the speculation of the present research, the two-tailed analysis was used.

The above table shows the strong and positive correlation amongst the study variables which further signifies that Knowledge Integration Capacity (KIC), Knowledge Management Practices (KMP), Innovation (INV) and Organizational Performance (OP) have positively strong effects on each other and if there will be change in any one of them the overall performance will be effected in the direction of change in variable.

4.5 Regression

Table 4.12: Regression Weights: (Group Number 1 – Default Model)

	Paths	Estimate	S.E.	C.R.	P-Value	Label
Combinative Capabilities	<--- KI_C	1.00			.000	
Trust	<--- KI_C	.606	.335	4.758	***	
Learning Culture	<--- KI_C	.720	.873	3.114	.002	

4.6 Results and Interpretation

The above table reveals the significance values, critical ratio and regression estimates of the variables in the study. The results of the table indicate that knowledge-integration capabilities have a significant impact on the combinative capabilities of the organization and account for

100% amplification in the combinative capabilities of the organization. The critical ratio confirms that knowledge-integration capability is an important determinant of the combinative capabilities of an organization.

The results of the table further reveal that knowledge-integration capabilities have a positive impact on the level of 'Trust' in the organization. Knowledge-integration capabilities report 60% intensification in 'trust' in the organization. The high critical ratio of knowledge-management practices reveals that it is an important factor of innovation in an organization.

The table further shows that knowledge-integration capabilities have a positive impact on the 'learning culture' of an organization. Knowledge-integration capability reports a 99% intensification in 'learning culture'. This high critical ratio of knowledge-integration capability divulges that it is an important factor of the learning culture that is developed in an organization.

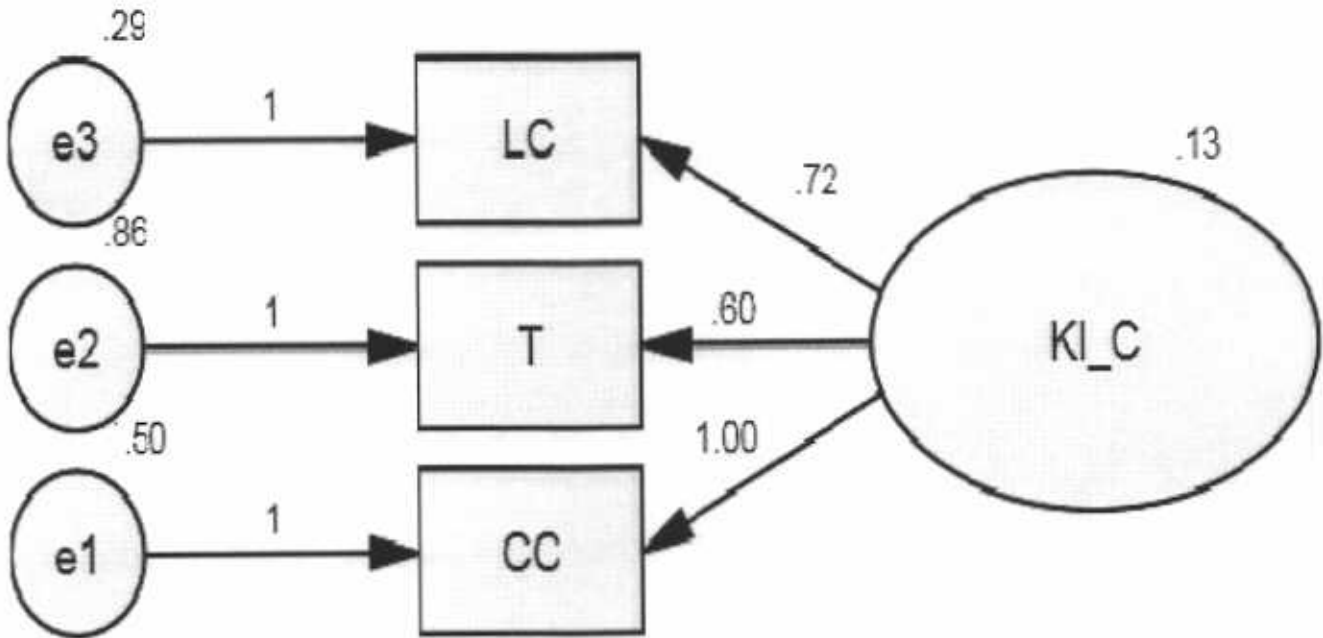


Table -4.13: Regression Weights: (Group Number 1 - Default Model)

		Estimate	S.E.	C.R.	P	Label
Competency Development	<--- KM_P	1.00			***	
Technology	<--- KM_P	.116	.087	12.656	***	
Culture	<--- KM_P	.767	.079	9.733	***	
Leadership	<--- KM_P	.977	.144	6.790	***	

The results of the table indicate that 'knowledge-management practices' have a significant impact on competency development within the organization and account for a full 100% amplification in the competency development of the organization. Such a high, critical ratio exhibits that knowledge-management practices are an important determinant of the competency development of an organization.

The results of the table further reveal that knowledge-management practices have a positive impact on 'Technology' used in the organization. Knowledge-management practices report 11% intensification in 'technology'. The high critical ratio of knowledge-management practices divulges that it is an important factor of technology in organization.

The results of the table also indicate that knowledge-management practices have a significant impact on the organizations' 'culture' and account for a 76% amplification in the 'culture' of the organization. This high, critical ratio confirms that knowledge-management practices are an important determinant of culture in the organization.

The results of the table further reveal that knowledge-management practices have a positive impact on 'leadership' in the organization and, as such, report an 11% intensification in

'leadership'. The high critical ratio of knowledge-management practices divulges that it is an important factor of 'leadership' in an organization.

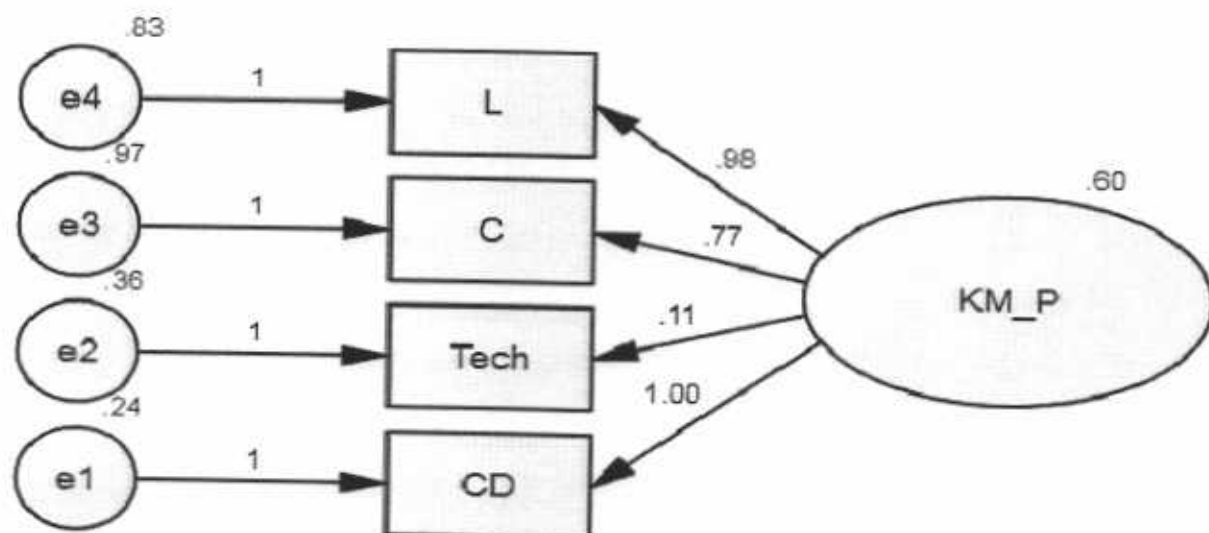


Table 4.14: Regression Weights: (Group Number 1 - Default Model)

			Estimate	S.E.	C.R.	P	Label
Innovation	<---	KMP	.726	.037	19.451	***	
Innovation	<---	KIC	.322	.044	7.363	***	

The results of the table indicate that knowledge-management practices have a significant impact on 'innovation' in the organization and account for a 72% amplification in the 'innovation' in the organization. This high, critical ratio exhibits that knowledge-management practices are an important determinant of 'innovation' in the organization.

The results of the table further reveal that knowledge-integration capabilities also have a positive impact on 'innovation' in the organization. Knowledge-Integration capabilities report shows

32% intensification in innovation. The high, critical ratio of knowledge-integration capabilities reveals that it is an important factor of innovation in an organization.

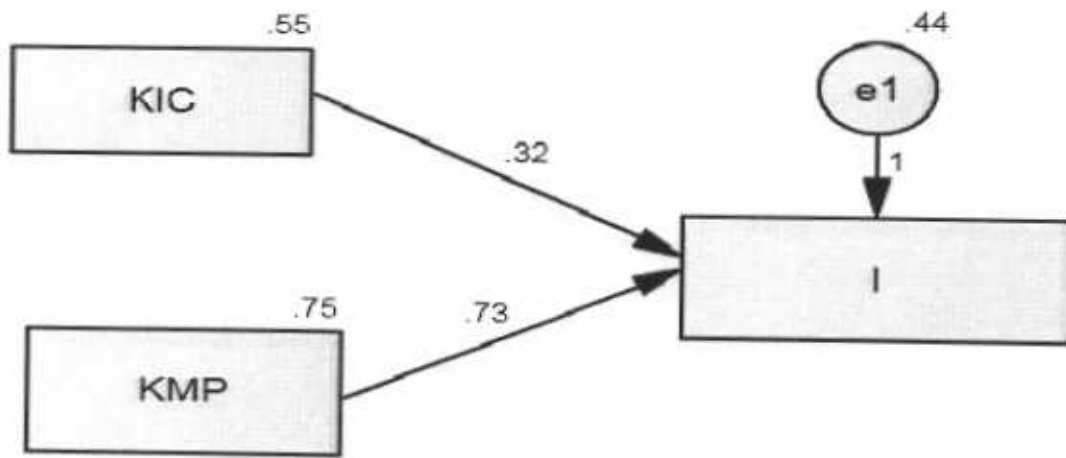


Table 4.15: Regression Weights: (Group Number 1 - Default Model)

		Estimate	S.E.	C.R.	P	Label
Organizational Performance	<--- KMP	.819	.031	26.106	***	
Organizational Performance	<--- KIC	.279	.037	7.608	***	

The results of this table indicate that knowledge-management practices have a significant impact on the 'organizational performance' given by the company and account for an 81% amplification in the degree of 'organizational performance' of the company. The critical ratio indicates that knowledge-management practices are an important determinant of the 'organizational performance' given by a firm.

The results of the table further reveal that knowledge-integration capabilities also have a positive impact on the 'organizational performance' in the firm. Knowledge-Integration capabilities report shows 27% intensification in organizational performance. This ratio of knowledge-

integration capabilities divulges that it is an important factor regarding the 'organizational performance' given by the company.

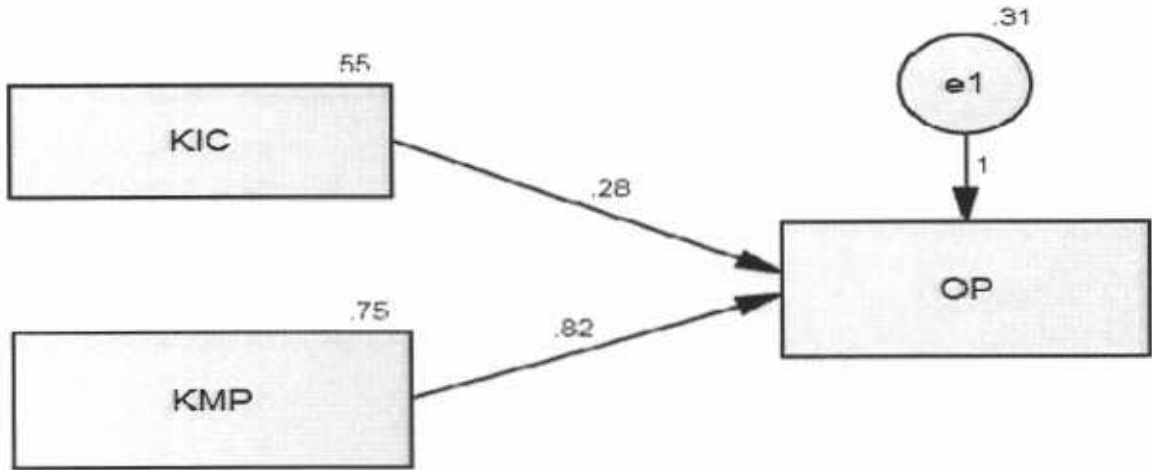


Table -4.16: Model-Fit Summary

			Estimate	S.E.	C.R.	P	Label
Innovation	<---	KIC	0.322	0.044	7.363	***	
Innovation	<---	KMP	0.726	0.037	19.451	***	
Organizational Performance	<---	I	0.650	0.041	4.945	***	
Organizational Performance	<---	KIC	0.300	0.039	7.721	***	
Organizational Performance	<---	KMP	0.866	0.043	20.109	***	
Organizational Performance	<---I<---	KIC	0.200	0.724	3.621	***	
Organizational Performance	<---I<---	KMP	0.407	0.843	2.109	***	

4.7 Summary Modulation and Interpretation

The results of the table demonstrate that knowledge-integration capabilities have a positive impact on 'innovation' in the organization. Knowledge-Integration capabilities report a 32% intensification in 'innovation'. This ratio of knowledge-integration capabilities reveals that they are an important factor of 'innovation' in the organization.

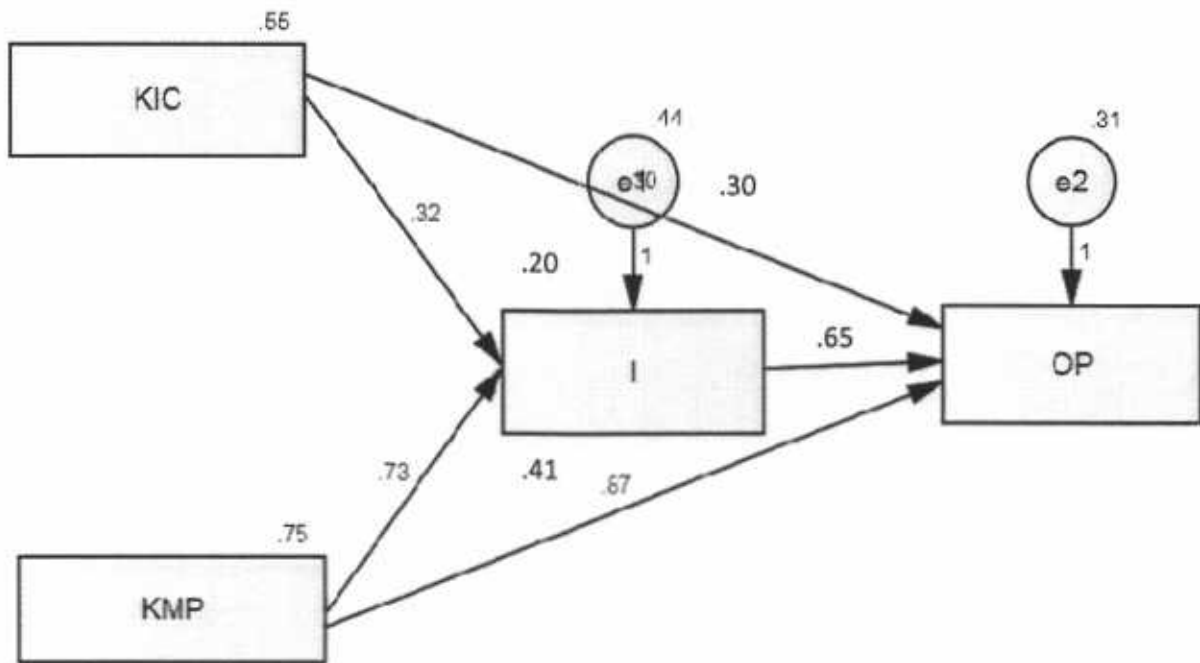
The results of the table strongly indicate that knowledge-management practices have a significant impact on 'innovation' in the organization, accounting for a 72% amplification in the 'innovation' in the organization. The high, critical ratio confirms that knowledge-management practices are an important determinant of 'innovation' in the organization.

The results of the table also indicate that 'innovation' in an organization has a significant impact on the 'organizational performance' demonstrated by the organization and accounts for 65% strengthening of the 'organizational performance' demonstrated by the firm. The critical ratio indicates that 'innovation' is an important determinant of the 'organizational performance' demonstrated by the company.

The results of the table further divulge that knowledge-integration capabilities have a positive impact on the 'organizational performance' of the organization. Knowledge-integration capabilities report a 30% escalation in 'organizational performance'. This ratio of knowledge-integration capabilities reveals that it is an important factor of the 'organizational performance' of an organization.

The results of the table designate that knowledge-management practices have a significant effect on the 'organizational performance' demonstrated by an organization and account for an 86% intensification in its organizational performance. This high, critical ratio exhibits that

knowledge-management practices are an important determinant of the 'organizational performance' that is demonstrated by an organization.



4.8 Discussion

This research provides conformity amongst the strong contrivance between the variables and their significant impacts and their assistance in proving the hypothesis is significant. The empirical confirmation regarding 'knowledge-integration capacity' constituted with certain characteristics of 'learning culture', 'trust' and the 'combinative capabilities' of the organization favors 'innovation'. There is a strong relationship between the employees' capabilities combined with organizational vision and global contemporariness whereby employees are entrusted to exercise their powers in the continuous learning culture that is integral with the knowledge, skills and abilities associated with potential for innovativeness. The results of the research not only permitted the verification of the positively-significant relationship between knowledge-

integrating capacity and innovativeness, but also throws light on the detailed relationship on the integrated-knowledge capacity of an organization to absorb the demanded change factor from the external environment and embedded knowledge as per the requirement of change that necessitates heightened innovativeness.

The capacity of knowledge integration is sought out only if the learning culture prevails inside the organization where the activists and critical-role personnel are involved in manipulating and changing knowledge states required for innovating the processes and practices. Teece (1998) and Alavi and Leidner (2001). Knowledge-sharing and integration-capacity of vision achievement would be possible with the deliberation of knowledge in the organization whereas, Dierickx and Cool (1989) and Deed (1999) proved knowledge integration through combined activities in a learning culture where the organization's stock of knowledge and its repositories forms accumulated knowledge assets directed towards innovation.

The development of existing knowledge and the enhancement of preceding knowledge is done through the activists having strong influences on the impacts of the innovation in the organization. The results of the research support the hypothesis H1 – knowledge-integrating capacities have a positively-significant effect on innovation. Zahra *et al.*, (1999) proved that the knowledge-integrating capacity of a firm needs to adapt and acquire new knowledge for its consistent development. The results of Zahra's study verify the significant effect of knowledge integration on innovation. Again in 2002, Winter and Zolo proved knowledge integration to be one of the most significant factors towards innovation. The adaptation and integration of knowledgeable resources and collaboration can give a new sort of knowledge exploitation which affects the innovational attitudes of the organization (Von Hippel & Katz, 2002).

From the perspective of the 'learning culture' of an organization, the results of the current study elucidates that management tiers dealing in a knowledge-oriented culture have a significant affect on the capacity of integrated knowledge, which enhances the innovativeness and effects the overall performance of the organization. A 'Learning Culture' has a 72% influence on an organization becoming one that is knowledge capacity-integrated, which further modulates innovation with a positively-significant effect on organizational performance. Many social scientists have proved that the 'learning culture' plays a pivotal and active role in the enhancement of integrated capacities of knowledge at the firm level (Maxwel, 1997, York, 1991; Lew, 2006 and James & Bal, 2003). Hence, it is proved that a 'learning culture' upholds the assimilation, dissemination, acquisition and transfer of knowledge to enhance the integration of knowledge capacity. The earning culture leverages the strong contrivance through continuous learning activity among the employees and activists to continuously incorporate knowledge in the organization. Many studies are in support of these results such as Lee (2008), Battor (2008), Currie & Kerrin (2003) and Gibson *et al.* (2006).

The findings of this research indicate that knowledge-integrated capacity has a significantly positive effect on 'innovation' and which is strongly supported by previous research done by Harvey *et al.* (2004), Hanvanich *et al.*, (2006), Sense (2007), Rhodes *et al.* (2008), Ruiz-Mercader *et al.* (2006), Theriou & Chatzoglou (2008) and Yang (2007). Innovation in the organization sets the organizational pace towards a continuous change paradigm which is strongly associated with progression in organizational performance. Results of the research point towards a positive significance between innovation and organizational performance. Lastly, as with the previous research of Afiouni (2007) and the study done by Bansal (2007), it has been proven that 'innovation' has positively-significant effects on organizational performance. The

results of the studies carried out by Choi *et al.* (2008), Lee (2007), and Zhang *et al.*, (2006) are positively significant and in support of the relationship between innovation and its effects on organizational performance.

Employees are the 'blood circulation' for any organization. Empowering employees with the realization of their compatible futuristic opportunities not only retains them, but also builds their trust in the organization, which strongly influences the knowledge-integrating capacity. This research highlights the positively-significant relationship between 'trust' and the capacity of knowledge integration. Previous bodies of research are also in strong support of this study. Bijlsma-Frankema and Van de Bunt (2003) found a positive relationship between trust and the knowledge-integration capacity of an organization. More results from the prior studies of Zand, (1972), Cook & Wall, (1980), Boon & Holmes, (1991), McAllister, (1995), Mayer *et al.*, (1995), Creed & Miles, (1996), Lewicki *et al.*, (1998), Whitener *et al.*, (1998), Rousseau *et al.*, (1998), Gillespie, (2003), Armitage & Connor, (2001), Albrecht and Travaglione, (2003) and Dietz, (2005) all proved this result as supportive.

Combinative capabilities play a significant role in the integration with knowledge capacity to enhance the innovation trends of an organization. The system, coordination and socialization capabilities are necessarily embedded with the knowledgeable resources of the organization to integrate with the capacity for the attainability of innovation. The previous studies of Kogut and Zander (1992) referred to 'combinative capability' as the aptitude and facilitation from the viewpoint of organizational knowledge integration. Halfat and Peteraf (2003) bridge the gap in their study regarding the timely provision of the 'right' knowledge to exercise action at the 'right' time and solution of vagueness and finally 'forces' the organization to initiate its own competitive-advantage flows towards innovation. Pan *et al.* (2006) proved that combinative

capability is embedded into the system to promulgate towards the augmentation of conventional strategy.

Knowledge-integration capacity empirically shows a positive effect on innovation as the integration of knowledge capacitates with multi modifications of knowledge. The results and findings of this study are in coalition with the research results of Polyani, (1966), Brown, (2001), Herrgard, (2000), Nonaka and Takeuchi, (1995), Hamel, (1991), Spender, (1993, 1996) and Winter, (1987). The effect of the integration capacity of knowledge on innovation is confirmed through the studies of de Boer *et al.*, (1999) and Baden, (1995). The fact that innovation can never be detached from the integrative capacity of the people involved in the process of knowledge integration is substantiated with the studies of Ghoshal, (1998) and Leonard, (1995). Knowledge-Integration capacity in an organization has significantly positive effects on innovation and creates continuous competitive advantages that persistently upgrade the company's organizational performance. Knowledge integrative capacity facilitates the role of integrative experiences in the development of the firm and this connection to innovation is authenticated with the study results of Szulanski, (2000) and Hippel, (1994). The continuous role of creating competitive advantage for the firm in terms of innovation requires continuous and incremental integrations (Grant, (1996), Stalk *et al.*, (1992) and Cohen & Levinthal, (1990).

Knowledge-management practices are the key features of the augmentation of innovation in an organization, which efficiently and effectively further shores up the firm's organizational performance. Knowledge Management within a firm is a unique sort of resource management that directs the company towards innovation and competitive advantage. This study provides empirical insight into the incorporation of knowledge-management practices to ensure the element of functional innovation in the firm. Knowledge is approximately 70 percent significant

in creating innovation and synergy in the firm as it develops in due course 'right' strategies as well as effective policy implementation. The results of this study are empirically supportive and valid as, in the past, research has proven the effect of knowledge-management practices on innovation reported as positively significant Leonard-Barton, (1995), Levinthal, (1997), Alavi & Leidner, (1999) and Massey *et al.*, (2002). Knowledge-Management practices not only equip integrated solutions, as well, they hedge with synergy which creates the milieu of sustainability and continuous development. Knowledge integration, personalization and a collaboration culture (Holland and Miller, 1991; Sherif & Mandviwalla, 2000; Scott 2000; El Sawy and Bowles, 1997; McElroy, 2003; Snowden, 2002) in the organization also proved to be positively significant and result-oriented.

The effective management of 'knowledge' paves the way towards 'innovation' in the organization. This study conveyed the resultant value of leadership and leading behaviors to cope with contemporary issues of the internal and external environments. Leadership traits have a positive attitude of significance towards knowledge-management practices in the organization. The leadership has a covenant in connection with the effect of knowledge management to effectuate the continuation of the innovation related to the particular organization. This study illuminates the all-important status of leadership and its fusing effect on knowledge imbueement and implementation, both of which are significant to innovativeness. Leadership has a strong relationship with the dissemination and collaboration of knowledge and keenly affects the practices of knowledge management within the organization. Past studies support the current results of this study and prove that leadership significantly affects the knowledge-management practices (Merritt, 2003; Barling, Weber & Kelloway, 1996; Barling & Helleur, 2000; Bass, 1998, 2000). Leadership converts the employee's ability to concentrate on the firm's vision and

enhances the capacity of development and the striving that are necessary to achieve competitive advantage and continuous innovation (Wyatt, 2003; Wellins & Weaver, 2003).

Knowledge-management practices illustrate a significant level of intervention with culture. The 'culture' of an organization not only plays a major role in its performance, but also couples with innovation and continuous 'answers' towards the changing dynamics. In prior studies, Howard, (1998) and Whipp, Rosenfeld, and Pettigrew (1989) proved the positive effects of culture on knowledge-management practices. 'Culture' is mainly an imperative factor as it is constituted by diversified people, talents, backgrounds and educational profiles and, in dealing with it all simultaneously, affects the company's innovation and organizational performance. Organizations craft knowledge-sharing and adaptive culture (Artail, 2006; Riege, 2005) to initiate innovation culture ultimately and top management supports this knowledge-oriented culture as it is a critical factor to the success of the organization with an optimum level of performance (Zairi, 2003; Hariharan, 2005; Davenport *et al.*, 1998; Wong, 2005; Hasanali, 2002; Mathi, 2004).

Technology is inevitably required for any organization to keep itself aware and strive with continuous global change (Ardichvili, Maurer, Stuedemann, Li, & Wentling, 2005). Global cultures rapidly penetrate into local organizations and to maintain the organization's survival, it is beneficial to keep in touch with technology. It (technology) confirms that it has a positive and significant effect on knowledge-management practices. Technology infusion becomes a survival issue and organizations include it as a major investment as was proven by the prior studies of (Alazmi & Zairi, 2003; Davenport *et al.*, 1998; Artail, 2006; Golet, 2006; Hasanali, 2002; Hariharan, 2005; Wong, 2005) confirming that KM, in the form of technology, further facilitates the implementation of knowledge-management practices.

'Innovation' has a significant effect on organizational performance. This has been theoretically and empirically proven in this study through the perspective of Knowledge Management. Knowledge-Management practices and knowledge-integration capacities have significantly positive results and their contribution towards innovation is imperative for continuous organizational performance in order to cope with changing managerial practices and to keep the organization on an uphill course.

Knowledge Management is performed to develop the insight of an organization through the integration of knowledgeable personnel and knowledge assets to create new knowledge that can be readily utilized, as needed. The integration of 'knowledge' within the hierarchal patterns as well as knowledge-sharing patterns in the organization develops the fundamentals of a learning environment in an alliance of trust where employees can easily intensify their knowledge and contribute towards the performance of the organization. This study shows supportive results in the continuation of the relationship between knowledge-integration capacity and organizational performance. Findings of the research show links between the integrative capacity of knowledge and organizational performance and these are positively significant. Prior studies highlight the significance of knowledge integration in view of an organization's ability to build a 'learning culture' and an entrusted environment in order to cope with the dynamism and in the company's responsiveness to change by employing the capabilities for the building and re-configuration of internal and external competencies to address the organizational performance (Teece, Pisano & Shuen, 1997).

Knowledge-absorbing capacity and its integration among the managers from top line to bottom as well as the intervention of knowledge from outside the organization, develops a learning culture where the environment of trust and empowerment contributes to make use of the

capabilities as per their unique nature where learning could be experienced to explore new dimensions and 'cash in on' opportunities. Knowledge-integration capacities have significant effects on organizational performance and previously it was confirmed with the results of the studies of Teece and Pisano, (1997) and Bowman & Ambrosini, (2003). The effects of knowledge integration in the field of organizational resource deployment and in developing strong inducement of a learning culture, experimentation surrounding knowledge and capabilities have referred to learning as a specific type of capabilities combination to explore and experience new opportunities, and its effect on the overall performance of an organization are significant. These same results are confirmed with the current research: that knowledge-integration capacity has significant effects on organizational performance and continuous striving for the incorporation of knowledge and the creation of new knowledge at every step of the way, over and over again, integrates learning with experience towards new opportunities has strong effects on organizational performance (Zott, 2003; Eisenhardt & Martin, 2000; Winter, 2003)

Knowledge-sharing and collaborative activities are the central concerns of enhancing organizations in terms of innovation and their effects on the overall performance. It was found by Mahoney (1995) and Zollo & Winter (2002) that knowledge-integration capacities significantly affects innovation and trusted employees work enthusiastically to do their best and search for new opportunities where learning and expertise could be experienced to constructively contribute towards organizational performance. Achieving a competitive advantage is the characteristic which ensures the survival of the organization and knowledge prolongation within the organization to set up a 'learning culture' that lays the ground for innovation (Verona and Ravasi, 2003). Innovation is the gateway to achieve organizational performance.

Balance in the knowledge-integration capacity is based on the organization's contingency and an appropriate set of knowledge-integration capabilities is to be decided by top level managers who decide which set of integrative and collaborative knowledge is preferred to generate innovation and institutionalize the performance of organization Cepeda & Vera, (2005) and Vera & Crossan, (2003). On the other hand, knowledge integration among the management tiers stimulates human resources to support the collective activities and are significant in achieving the desired performance through innovation applied to procedures and processes (Prieto and Smith, 2006).

Knowledge-Management practices demonstrate a strongly-positive impact on organizational performance. The knowledge 'population' that is inside the organization is controlled in a knowledge-based environment and the learning culture shares and distributes 'knowledge' among the integrated departments and personnel where knowledge mutation and cross-over come together to establish a connection with the managerial decision. The knowledge-intensity and the diversification-interactions among insiders and outsiders are deemed to be set up with the Manager's leading capacities. The 'leader ecology' develops competency and technological interactions during the knowledge-intensification process. Knowledge-Management practices have combinative effects to craft innovation for apprehending the competitive advantage and have positive effects on organizational performance. The significant results are supported by this research and previously so by the studies of Smith (1995), Becerra-Fernandez and Sabherwal (2001); Alavi and Leidner (2001), Gold et al. (2001) and Pelham (1997).

Results of this study reveal that knowledge integration capacity account for 30% change in organizational performance, whereas it reports a 32% variation in innovative practices in the organization.. As regards to the knowledge management practices, the results indicate 86%

change in the organizational performance which are exceptionally significant and variation in innovation accounts for 72% which is again exceptionally well. Innovative practices in knowledge based organization has indicated change in organization performance by 65% which demonstrates that core competency development significantly enhances organizational performance and makes the organization a competitive entity. These results are in line with the results accrued on the similar variables and studies done by other scholars: hence, validation and authentication of the knowledge integration capacity is well within the range of studies across the board

Hence, Hypotheses 1 through 7 (i.e. H1, H2, H3, H4, H5, H6, H7) were proven with the findings and results of this research and in light of the discussions contained in the afore-mentioned previous bodies of research.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

Though it is commonly-renowned belief that Knowledge Management (KM) plays a vital role in sustaining a firm's competitiveness, the techniques and effect of the execution of understanding control (KM) on business efficiency still continues to be a blend matter that needs further discovery. Knowledge Management (KM) has become a unique support function in the ever-changing conditions. The functionality of companies to incorporate their perceptive resources on their primary capabilities is the key to maintainable, aggressive advantage in the market.

Management styles have improved due to the technical slow upgrades in the past. The dependency on technological innovation has increased the diversities, but the relevance is man and his knowledge. 'Knowledge' is a stalk resource, so organizations must improve their level of it. It is a great deal more complicated to defeat a simple, targeted technique that is well- carried out. Companies have to bring their collective 'knowledge' up to date and change their diversities so as to effectively use their current resources and buy and maintain new ones as well. It was stated by Harrison and Leitch in 2000 that in order to stay available, companies must consistently update their knowledge base. The easy access to information and the wide choice of products is driving professionals to think diversely, guaranteeing effective resource utility as a condition of strategy. In a 'learning organization', control remains tight regarding foreseeing problems and presenting solutions. The organization produces strategies to improve necessary skills as these are essential for the growth of the company. In the same way, different group features have an impact on the desired results for innovation and business efficiency. It is therefore, crucial to

assess the effect of group features on the knowledge-control system, degree of innovation and the company's efficiency.

The purpose of this research is to analyze the different amounts of knowledge management and the general effect on innovation, with the result being to be able to determine the connection between the two. It examines the connection between various knowledge-integration capabilities and its influence on innovation and, lastly, its effect on the efficiency of business that is carried out in Pakistan.

This study endeavors to discover how knowledge-management practices and knowledge-integration capacity enhance innovative capabilities in an organization. This research also ferrets out as to how innovative methods improve a company's efficiency. This research analyzes the impact of knowledge-integration capacity and knowledge-management methods on innovation and examines the impact of innovation on the efficiency level attained by a company. It also analyzes the mediating impact of innovation between knowledge-integration capacity and company efficiency as well as the mediating impact of innovation on knowledge-management methods and company efficiency. Ascertain the effects of demographic characteristic segment practice, and encourage innovation. It is understood that this issue will capture growing research concentration in the future and more firms will recognize the benefit of, and develop, knowledge-management (KM) practices as strategic forces for the innovation and improvement in the business' efficiency. Knowledge-Management (KM) practices are strategically-driven forces for firms and, therefore, organizations should develop and maintain knowledge management (KM) practices and their knowledge-integration capacity as these will increase the innovativeness of firms, which leads to enhanced organizational performance. Knowledge-

integration capabilities have a significant impact on the combinative capabilities of the organization and account for a 100% amplification in the combinative capabilities of the organization. This critical ratio indicates that knowledge-integration capability is an important determinant of the combinative capabilities of the organization.

In creating an environment, knowledge-giving needs consideration as a socio-economic factor, emotional aspect and human control methods. Job design, recruiting and coaching, route and socializing plans, assessment, payment and compensation, open and credulous traditions and selection methods that assist in developing an effective knowledge management is recommended. Adya and O'Neill 2007 recommend that the increase in staff members' passion to spread knowledge might very well rely on the recognized equity compensation that the firm rewards for the giving/sharing of knowledge. Winning development expertise gives rise to recognizing the basic perceptive expectations of individuals and organizations. The social value ability, culture describes decides knowledge giving conduct. It should be prestigious, also change in that perceptive expectations between nations around the world and even within nations around the world, as a concept. Knowledge Management (KM) is seen as an important approach to management in a new era of advanced economies. Firms that use knowledge-management (KM) practices may achieve higher performances through innovation. It is believed that innovation serves the organization's lifeline for both constant survival and higher profitability. It is important that managers and researchers consider the factors that contribute to innovative organizations. The study demonstrates that knowledge-management (KM) practices and knowledge-integration capacity increase innovation, which leads to higher organizational performance. It is essential to ascertain the major factors of contribution in organizational performance and to meet the demand of diversified functions of products and practices. It is,

therefore, vital to determine those essential factors, analyze their outcome and put the same into practice for achieving the desired results of the organization's growth through innovative practices. Many organizations have implemented knowledge management in general, yet not many of them have flourished in their knowledge management practices in particular.

According to conventional thought, 'trust' has a direct relationship with knowledge integration capacity and this study finds that 'trust' has a positive effect on knowledge-integration capacity.

The benefits of trust and its role in alleviating some of the risks and dilemmas that are associated with knowledge integration were supported by the study. Knowledge-integration capabilities have a positive impact on 'trust' in the organization. Knowledge-integration capabilities report a 60% intensification in the level of trust in the organization. The high critical ratio of knowledge-management practices divulges that it is an important factor of innovation within the organization.

The integration process appearance features parts of the industry potential of integration, which impacts the business framework and is necessary due to variations in knowledge types and forms. This, in turn, requires specific needs in the integration expertise. The degree of expertise integration represents the wider expertise and skills between the firm's abilities. Knowledge-integration capabilities also have a positive impact on the 'learning culture' in the organization. Knowledge-integration capability reports a 99% intensification in the learning culture. The high critical ratio of knowledge-integration capability divulges that it is an important factor of the learning culture that is developed in an organization. An intelligence of assurance and experience provides motivation for workers, know-performance. An inspiring and helpful atmosphere encourages staff members to convey their knowledge and to share with each other. In addition,

there is the lure of benefits received for the giving of knowledge--a crucial device to encourage workers to share information and data. This increases not only the knowledge base of companies, but it also creates a team 'soul'. It also helps workers to understand where they are in the combined aspect of the office.

This study also shows that a 'learning culture' has a positive effect on knowledge-integration capacity. A firm that is devoted to learning seeks a full knowledge of its internal atmosphere. This recommends that innovative activity in itself is a learning process that facilitates the attainment of new thoughts and the integration of knowledge in order to solve problems and find innovative solutions so as to make innovative products that have importance in the market. Through a learning culture, employees learn and build upon new talents as well as contribute to the existing body of knowledge, both of which are central for optimal organizational performance.

KM is an initiator for companies that want turn enterprise culture frustration into opportunity. Applying the knowledge will bring changes to your enterprise and the application of your company's combined knowledge by developing and spreading it, can be achieved through 'knowledge management'.

The results of the study with regards to the positive effect of trust and learning culture on knowledge-integration capacity give confidence to scholars in management to put the knowledge base analysis into practical fields such as innovation. For that cause, it is not surprising that 'knowledge management' is progressively observed as prerequisite for developing successful and innovative firms.

Knowledge-Management practices have a significant impact on the development of competency within the organization and account for a 100% amplification in the overall competency development of the organization. The critical ratio indicates that combined knowledge-management practices are an important determinant of developing the level of competency that exists in an organization.

The study investigates how knowledge can be shared inside and outside the firm through the development of culture within the organization. The culture should bring together the organization's knowledge, its assets and its effective utilization of core competencies in order to achieve the desired goals and results of the firm. It is required to develop a culture where staff members can share their knowledge and experience without any fear and can formulate better strategies for its implementation. In a competently indistinct universal situation where only transformation is positive, there is a constraint for knowledge to be transformed for the development of competencies and the formulization of strategies. Knowledge- Management practices have a significant impact on the 'culture' of the organization and account for a 76% amplification of the culture within the organization. The critical ratio indicates that knowledge-management practices are an important determinant of culture in the organization.

Technology has the functionality to develop what workers in the company can understand from adjusting progress to technological innovation. This can help them in gathering information and new thoughts. In an interesting discovering culture, in which individuals are accountable for their own exercising and assistance to understand from each other, well-planned and well-supplied technological innovation improves the experience gained by the personnel in the company. Conversely, in companies where individuals fight the acquisition of knowledge and new

thoughts. In both types of societies, technological innovation upgrades what already prevails. Information Technology (IT) systems allow for the integration of details and knowledge in the company as well as the development, move, storage and safe-keeping of the company's knowledge source. Technology tools such as intranets, data source, etc., or non-technological means, such as suggestions and relationships, are good for a company and help it to apply knowledge, paving the way for endless possibilities of innovation. For the modification of acted-upon knowledge in precise companies, they provide ample opportunities for the giving of knowledge, with the result being innovative developments that improve efficiency. Information control motivates innovation by helping the boss in the state of each other and search for appropriate details and knowledge together. Business Resource Planning, effective technical tool integration best methods and transactions them to ownership companies by human relationships. Knowledge management methods have a positive effect on technological innovation in the company. Knowledge management methods indicate 11% intensification in technology. The high critical rate of knowledge management methods divulges that it is an important aspect of technology in a company.

The study reveals a significant relationship between leadership and knowledge-management practices. It is clear from the study that 'emotional intelligence' plays an important role in improving the leadership of an organization which in turn contributes towards more superior knowledge-management practices. This relationship enables the organization to determine the influence of human resource management in accomplishing the goals and objectives of the organization. Organizational culture is, however, comprehensive and multifarious. It consists of several factors that are entrenched within a firm's environment of norms, values, attitudes and conventions. The literature also presents a framework for explaining the relationship between

culture and knowledge-management practices by recognizing that culture is an important factor in the successful implementation of these knowledge-management practices.

Management helps 'common' people to achieve outstanding results. They help others to create an interest in their work and produce higher self-esteem. Studies have shown that leadership is a major factor in initiating the commitment of staff and customers alike and makes the firm successful in the field of business. An effective process of leadership development allows companies to be 'results-oriented', to rely on human leaders, to increase efficiency, retain team spirit and produce desired results.

Managers integrate the knowledge potential of the policy implementers by developing the abilities of the staff members to advance the intake of knowledge as well as distribute it to create brief, clear, targeted action plans. Professionals involved a learning culture is in an ongoing trend of modification and deal with the changing characteristics with enhanced prioritization of resources to improve the overall innovativeness in the company. From the perspective of dealing with daily modifications, knowledge enablers in the company would make a 'conversation-for-change' program whereby all staff members are expected to provide reviews in direction-setting.

Knowledge-Management practices have a positive impact on leadership in the organization, as these practices report a 11% intensification in leadership. The high critical ratio of knowledge-management practices reveals that it is an important factor with regards to leadership in the organization. The excellent role played the progression of experience in boosting the success of organizations has seized the attention of college students. The scientists suggested that experience progression is the key that is in control of the company. Unfortunately, scientists have often been doubtful regarding the perception of progression of skills and, therefore, the strict

attention paid by management towards experience progression was not completely converted into the educational world, leading to a lapse between supposition and statement.

5.2 MANAGERIAL IMPLICATIONS

This study presents a model constituted by hybrid capabilities, skills and competencies which link knowledge-management strategy directly to business policies that attain an optimum level of performance, thereby affording the organization a distinct competitive advantage. Managers display their competencies and deploy capabilities so as to put forward the best performances possible from their source point. At the same time, they align the team in a learning culture that is interactive with technological changes and their utilization in such a way that the members feel a secure professional foundation and feel encouraged to make timely innovations that are 'right on track.' Such an innovative environment combines the keen knowledge-management practices of the top-line managers with the knowledge-integration capacity of the firm, making for a unique result that is as articulate as a fingerprint. The distinctive value of the methods used by the management makes a quality and oneness of purpose within the company and an atmosphere in which the organization and its people can be successful. A organization performs more efficiently when it has mutually-beneficial relationships, designed on a perception in, and a providing of knowledge and development, with its workers. A firm's efficiency is maximised when it is based on the management and the giving of knowledge within a culture of ongoing learning, innovation and enhancement.

The full prospective of a company's individuals is best published through distributed principles and a culture of believe in and power, which motivates the engagement of every employee. Companies perform more successfully when all inter-related actions are comprehended and

consistently maintained and options concerning present functions are thought out. Innovative developments are made by using straight answers that encompass the stakeholders' views. High quality will depend on controlling and addressing the needs of all concerned stakeholders (including the individuals employed, clients, providers in additions to the community in common as well as those with financial relationships to the organization). The consumer is one more arbiter of product and service quality, and customer investment, storage space and business income are best enhanced through a clear concentrate on the needs of current clients and clients.

This study outlines that top management and the employees will set the enterprise's direction based on impacts and/or direct knowledge about clients' needs, product styles, technological innovation developments, competition demands, owners' goals, financial efficiency.. Management, by itself, cannot change the company's direction without the employees. Often, major changes in direction are necessary and, without the support of and the activity engaged in, by the employees, in the same direction, visions will not be realized. Management leaders modify the way they lead; different styles and methods are being used to generate the necessary activity. To strive towards an objective to which the whole company can connect involves social factors. The entire employees should be able to immediately affect Senior Professionals and Professionals in direction-setting. Individuals "at the fossil fuel face" are most likely to be on track regarding clients' needs, competition position, enterprise difficulties, value-blockers, source specifications and technological-innovation developments. It is the people at the 'front-line' who have the alternatives and who know where the potential alternatives are available. The professionals need programs that are geared to paying attention to employees and to tap into the wide base of knowledge that prevails. But the company needs to go a step further: the personnel

should be motivated to verbally express their opinions (good as well as bad), in the style of visibility.

Managers integrate the knowledge capacity of the policy implementers by integrating the capabilities of the personnel for advancing their assimilation as well as their dissemination to devise clear, focused and concise action plans. Managers who operate within a learning culture are in a continuous wave of change and tackle the changing dynamics with an improved prioritization of resources to upgrade the innovativeness of the organization. In the context of coping with everyday change, knowledge enablers in the organization would create a 'conversation for change' a programme whereby all workers are requested to provide feedback at the sessions held on direction-setting.

In the new financial climate, the power of workers is a key issue and management is starting to understand the value and the power of visibility. It can be unpleasant at times, to talk about issues in the open that have stayed hidden for a very long time but, at some point, it creates a belief liability. Everyone knows that they play a role at some point along the route and it is everybody's liability to lead. It is not just 'management' that determines a lengthy run of the firm.

For large companies, creating a sense of unity can be difficult. However, every effort should be made to interact with people from different geographic regions and societies. Use your technology to talk, and talk about the company's perspective. All parts of the company can become a community by using tele-conferencing and other collaborative tools; personnel should not feel separated due to being placed some distance away from the company's Headquarters. A 'marriage' of the members of the entire company should occur in discussions as, creating a

firm's perspective is vital and each employee should be motivated in contributing towards this activity.

On a greater issue, the knowledge of the perspective will only come about through getting into the individuals' 'psychological side'. Management will need to learn how to obtain that. Control conduct does not work when the purpose is to create a 'common' perspective. The concerned authorities will have to provide a perspective by means of creating pleasure, informing testimonies in order to attract invigorating and impressive individuals towards a typical goal.

In conclusion, it comes down to the managers employing the personnel to figure out a future perspective, in addition to the other components that generally affect the establishment of a perspective. Opening internal email programs, promoting a no-blame culture, enjoying all levels of the company and the individual workers at all levels, are some of the key components of a powerful company. The people in the company must be able to discuss the perspective, believe in the practices of a wise direction, take possession of the distributed goals and experience which play a role in success (or failure) of the company. Gain-sharing by the workers and personnel will motivate them to experience their 'place' in the company and they will be motivated to interact with other workers in reaching the common perspective of the company.

The methods that are designed need to ensure that 'people capital' is used and that the draw out is imbedded in the plans and techniques of the company. Also, the techniques should have versatility, so that they can be modified and implemented according to new discoveries and new thoughts growing from the position and computer file of the company. The 'Top Control' must activate. Its responsibility is to provide ideal instructions, to motivate discovery and to make sure

there are systems in place for the switching of training to show the individuals that they are capable of attaining more and that they should never be fulfilled with where they are currently.

A greater insurance plan's effects would be to determine innovation and discover a 'culture' within the company. The new products of the future are 'living' in the individuals' brains. Give them a route to research. An atmosphere that is conducive to 'discovery' is essential to innovation within the company. Youth need time to investigate and question. Joining a training course is a minimal investment against the possible greatness that can result.

Much 'discovering' occurs as one stands by the coffee maker or joins a workshop or attends a retail 'get-together'. Tacit change is possible and demonstrates as one of the main reasons for the occurrence of 'discovering'. This needs to be considered when creating guidelines and techniques. This should include 'softer' concerns such as aspects related to household concerns, operating at home, providing therapy services, etc. Distressed, over-worked employees who do not have the firm's support or the time to attend to the household will not remain effective as workers on the job.

In addition, an examination needs to be made of those activities, tasks and duties that no longer hold value for the company. Numerous times the writer has inquired "Why was this review produced?" only to be informed "Because we have always done it." By discontinuing the performance of 'no-value' tasks, valuable time and energy cease to be wasted.

Techniques should also involve greater opportunities for the growth of the personnel. In other terms, leave it to the person to create new abilities and to set a profession route. A company can play an important part in assisting in the personnel development; this is particularly true in a

'learning company', where personnel are motivated to understand that classes are only a part of discovering. Learning has many elements and a 'right' culture should be designed to nurture continual discovery.

In conclusion, KM techniques must be arranged with the business perspective in mind and control and must ensure that the personnel are clearly 'on board'. They must comprehend why knowledge is important and chiefs must practice what they teach. They must have programs for conversation and allow a circulation of thought. Reviews that must be given and, above all, believed in, must be designed between the professionals and the employees. Divide the KM application into controllable units--think big, but begin small.

The provision of resources for knowledge will lead to faster and more intelligent client alternatives. The switch in developing partners is clear in knowledge the economic climate. These include providers, customers and even the competition. Reliance on the company products, a value string is an important factor Illustrations of partners are financial institutions that offer vehicles for sale to the community, telecoms and IT organizations that create WAP alternatives, management consultancies and IT-assistance organizations that offer customers 'total solutions', wireless TV and the pleasure industry that offer entertaining TV (video on demand...etc). Why the partnerships? In reality, it is to obtain leverage on knowledge and to provide top-quality assistance. Clearly, for such partners to succeed, 'knowledge' needs to be re-located and be made available to the key parties.

The greater the relationship between the provider and the consumer, the better the product/service, in addition to reduced progression expenditures. Be careful of individual software companies that offer "complete, out-of-the-box alternatives." It is very unlikely that all

KM concerns can be resolved by just one source, in particular IT providers. The state of mind should be: produce an appropriate remedy and comprehend the knowledge/information string required to satisfy the relationship's specifications. An examination of KM would be suitable at the beginning to comprehend 'Where', 'What' and 'How' the comprehension prevails as related to its being is used in the company. The examination should be performed for the complete details of the string and should not stop at due the firm's limitations. By comprehending the details, specifications and procedures should be customized in accordance with the relationship and offer an effective progression of alternatives. The CRM is one example of a service/product that could cut across a firm's limitations and provide/share client details between the companies that are comprised within the relationship.

Terms such as 'B2B' (Business to Business) are becoming common. For example, companies want to use website/IT with their clients and providers not only to provide intelligent alternatives, as described above, but also to generally decrease the cost. The B2B will use IT to involve process incorporation, understand stores and product/service exchange where appropriate. To obtain this, a clear knowledge examination is required to figure out the specifications and incorporation with individuals, procedures and technological innovation.

BP Discovery is perhaps one of the best illustrations of inner options put to good use in a large organization. Online Group System used video conferencing and relationship technological innovation and information systems. Online groups were able to tackle problems with employees located all over the world and made up of not only inner personnel but also third-celebration installers. This is a great example of tacit to tacit knowledge exchange. New procedures were presented and new technological innovation was used successfully. Furthermore, the use of the

'right' individuals to take care of difficulties, served the purpose fantastically. A key to the venture was the beginning of the knowledge that individuals will need to perform diversely. In addition, they recognized that working methods and habits would need to change. BP sensed that having a network in itself recommended little and could not be pressed upon the employees.

Professionals have to create and launch the knowledge and full prospective of individuals at the personal, team-based level as well as the organization-wide level, and strategize these actions in order to aid its insurance plan and technique and the effective function of its procedures. The required changes will most likely affect deep-based social therapy. To allow individuals into knowledge-centric companies is possibly the most challenging process of all. Those individuals are the key members of the success. It is due to individuals that new 'discovering' occurs, new procedures are designed and old ones improved upon, and that the new products/services are designed through the culture of innovation and testing. The 'person' is the entity that produces the modification and the company merely assists with the process. The quicker that the company can create and accommodate modifications then greatly enhanced are the possibilities of success. Wide knowledge generally prevails in any company in both the precise and tacit varieties. If individuals cannot believe in or comprehend a benefit for giving this knowledge, then the company is doomed to fail.

People's development issues are mostly social. Techniques, procedures and technology can all allow but they cannot make change happen. Only with the appropriate social environment will personnel succeed and increase their own potential. Effective speed in the provision of alternatives, goods and services will be essential to success in order to maintain the competitive advantage. Individuals will need to respond quickly to changing conditions and will require

resources and assistance to meet the needs. New abilities in problem-solving and team operation will be necessary. Compensational systems for knowledge-giving should be designed, whereby personnel are paid for giving tacit and precise knowledge. The giving of knowledge, as well as the exchange, needs to identify all events as services and individuals. Companies are presenting knowledge-sharing rewards in various patterns and sizes. They identify that knowledge-sharing should be paid just like when a person's stays additional time at work and is paid in the long run for the additional hours. Future knowledge management will not lead groups but assist them; a whole new way of operating is necessary in a knowledge-centric company. The focus is moving away from the old-style control and into more 'assistance' and 'create'. Today, salaries/incomes are based on duration of service, age and the opportunity of liability but, in the future, the reward will likely be based on 'know-what' and 'know-how', the ability to deal with a variety of jobs, the variety of acquired abilities and the amount of knowledge that has been distributed. Be ready to re-engineer the firm's societies and operating designs, and be careful that the ordered components will not actually generate the best benefits.

Individuals who actually do perform (as compared to a Manager) have essential passionate knowledge; they know the competition and the clients very well. They comprehend the procedures and methods of their workplace. The key is to tap into the knowledge and allow personnel to consider the process/service/product changes. The control procedure is to pay attention to the store ground. As changes are recommended and applied, they should be acknowledged and paid accordingly. Professionals will also need to consider whether these ideas/suggestions may have greater effects and perhaps could be implemented in other places of the organization. Some new thoughts could also mean new goods and solutions. Key concerns to consider are the firm's efficiency methods, which should be more than just monetary. Bottom-

line results are typically seen as symptoms of good results. The focus in an knowledge-centric organization has moved to a much greater area as now they are regarded to be centered on clients, procedures, people and the use of technological innovation..

5.3 RECOMMENDATIONS

In recent years, having a "learning culture" has become more desirable in organizations for many reasons. An organization which focuses on learning can provide a system that is being improved, promote customer satisfaction, improve innovation and creative a competitive advantage. Customer satisfaction is greater and organizations require more and more knowledge and skillful people. If the organization adapts to changes quickly and wisely, it must learn that the central component of its strategy is for survival and growth. If managers and the employees of the organization are learning all the time and at a quicker rate than its competitors and are applying appropriate strategies at the right time, then the organization will be more efficient. It is commonly acknowledged that for a firm to be sustainable in the current situation, it is necessary that it should be prepared to acclimatize on a frequent basis. Change is positive if it is adapted by the learning culture. It is not only firms that need to study about being 'changeable', but also the individual employees.

Technology has the capability to expand upon what the organization's employees can learn from adapting the advanced technology. This can help them in gathering information and creating new ideas. In an exciting learning culture, in which people are responsible for their own training and support learning from each other, well-planned and well-supplied technology enhances the staff members' experience in the organization. In those companies where people resist the knowledge and new ideas, where leaders talk about things, knowing that it

sounds good (or even offer to teach a class). In both types of cultures, technology speeds up what already exists.

Typically, organizations that operate with a high level of cultural trust are likely to produce high-quality products and services at lower prices because they can attract and retain highly motivated and skillful employees. These workers are more likely to enjoy their work, take the time to do their work properly, make their own decisions, take risks, innovate, squeeze the vision of the organization, mission and values and reflect organizational good-citizenship behaviors (e.g., helping colleagues in trouble). The leaders in such organizations are then free to perform additional tasks. As trust is a mutual process, leadership is an important factor in creating it in an organization. When trust is certain and it is obviously observable that the individual being trusted is performing their tasks in a trustworthy way, it guarantees the supposition that 'trust' will augment in the organization.

It is important for management to recognize the value of trust and how to promote trust in their organizations. Proficiency, sincerity, and employees' relationships are a few of the aspects that establish trust in an organization. However, the mysterious nature of trust makes it one of the most complicated attributes to maintain. The organization requires the staff members to feel that they are respected, trusted, and have them consider that the firm is performing with honesty in their best interests. Latest procedures in the corporate world have made it complicated for organizations to maintain trust. Trust begins with the management because they are the initiators of trust. It is very significant that all of the members of management recognize the significance of trust, how to encourage trust within the organization, and their function in

structuring trust. Honesty, good relationships with the staff and proficiency play a significant role in developing trust in organizations.

If the inside culture of the organization does not support organizational learning and growth within, then leadership is essential. Leaders are the drivers of the organization; they must play the role as trustworthy champions for employees of the organization. Otherwise, both they and their employees will lose trust in the day-to-day life. The leaders must converse in terms of vision, principles and honesty. Furthermore, even when the leader does not participate in part of the business strategy, he or she should know who stands for values and integrity. Focusing only on what employees need in connection with a particular task, leaders actually allot their time effectively, so that only what is needed to be given time to saves time in the long-run. Leaders help the common people to accomplish marvelous results. They help others to develop enthusiasm and passion for their work and they enhance higher self-esteem. Research shows that leadership is a decisive factor in shaping the motivation of employees, fostering customer loyalty and driving the success in business. An effective process of leadership development enables organizations to become 'results-oriented', to focus on human leaders, increase productivity, preserve morale and deliver final results.

The outstanding role played by competency development in augmenting the success of organizations has stretched the concentration of scholars. The researchers argue that competency development is the main factor in managing the organization. Unfortunately, researchers have often been cynical towards the concept of developing competencies and therefore the tough administrative concentration on competency development was not completely converted into the educational world, leading to a break between assumption and observation.

- a. An organization to focus learning system to improve and promote best practices through innovative and creative practices for attaining competitive advantage.
- b. To enhance organizational performance, it is imperative to remain viable entity in resource constraints society and attain competitive advantage through embracing employees with current practices.
- c. Organizations to adapt holistic approach through innovative practices for enhancement of organizational performance.
- d. Competent employees shall withstand organization to measure up to the challenges practices; therefore, skill development to remain priority of an organization

5.4 THE LIMITATIONS OF THE STUDY

This study was conducted on the basis of survey in the field and respondents could contribute according to how they perceive the reality. Moreover, the fact that knowledge-integration capacities and knowledge-management practices influence innovation and contribute to organizational performance was ascertained after these attributes had been fully effectuated in particular organizations. Merely commenting on how these variables contribute to organizational performance is a matter of perception. Similarly, the linkage between innovation and organizational performance also relates to the opinion of employees without realization of the outcome in a real sense. The sample size taken in this study could be another factor which could be further enhanced in futuristic work of a similar nature.

Even though the model of the study was tested and empirical results of the study are largely supportive, since the respondents of the study provided the empirical data, possibly there might

be differences or preferences due to different personal experiences, familial and educational backgrounds as well as occupational backgrounds. This study was conducted in the corporate sector and NGO's in the capital area. Due to time and cost constraints it could not be further explored in the different provincial areas. Hence, the present results should not be taken as representative or an embodiment of the common case. However, it may offer a essential referrals for the companies situated in other places or nations whose conditions are just like those in Pakistan.

5.5 THE FUTURE LINE OF STUDY

This study guides towards the future line of research with the same variables within the consultancy industry and integrating the model with their mechanisms and operations. The transfer of knowledge and retention by the concerned employees at appropriate destinations and with people outside the company assistance and obtain further achievements in the advancement process. In the future, this study will be expanded by applying it in multi-national companies along with Information Technology and electronic process-handling aspects that would be added to augment these skills and operate globally.

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Survey Questionnaire

Dear participant,

Assalam o Alaikum,

Please cooperate to fill in the questionnaire on "Impact of Knowledge Management System on Organizational Performance with mediating effect of Innovation". It is assured that the information provided would remain absolutely confidential.

Personal Information		
1.	Gender	1. Male 2. Female
2.	Age	1. 25 to 30 2. 31 to 35 3. 36 to 40 4. 41 to 45 5. 46 to Above
3.	Education	1. Bachelor's Degree 2. Master's Degree 3. Professional Diploma 4. Others
4.	Experience	1. 1 to 3 years 2. 4 to 7 years 3. 8 to 11 years 4. 12 to 15 years 5. 15 and Above
5.	Management Level	1. Top Level Management 2. Middle Level Management 3. Lower Level Management
Organization Information		
1.	Your organization belongs to	

Please choose the answer that best matches your perceptions. Be sure to mark only one answer for each question

1. Strongly Disagree	SD
2. Disagree	D
3. Neutral	N
4. Agree	A
5. Strongly Agree	SA

A. Learning Culture

Projects managers considers failures as an opportunity to learn instead a reason to be ashamed of	SD	D	N	A	SA
Project managers clearly support the role of knowledge in the firm's success	SD	D	N	A	SA
Projects managers make efforts to improve the employees knowledge and skills	SD	D	N	A	SA

B. Trust

Project members are generally trustworthy	SD	D	N	A	SA
Project members are respectful and understandable to what other members need while they are doing their job	SD	D	N	A	SA
Project members have reciprocal faith in other's abilities, intentions, and behaviors	SD	D	N	A	SA

C. Combinative Capabilities

Know-how about how a threat was identified	SD	D	N	A	SA
Know-how about steps taken to respond to a threat	SD	D	N	A	SA

Know-how about how to prevent future similar threats	SD D N A SA
Reasons behind decisions others made in responding to the security threat	SD D N A SA
Reasons behind involving certain people in the security response	SD D N A SA
Reasons behind decisions made for not pursuing certain security responses	SD D N A SA

D. Leadership

My leaders support the processes of acquiring and disseminating of customer knowledge when needed	SD D N A SA
My leaders encourage generation of new ideas and/or suggestions comes from customer	SD D N A SA
My leader always celebrates distinguished achievements and announces them to all customers by organized meetings and a big celebration	SD D N A SA
My leaders provide transparency and openness about ongoing activities to activate customers " participation in decision making	SD D N A SA

E. Culture

Employees understand the importance of knowledge	SD D N A SA
Employees are valued for their individual expertise	SD D N A SA
The benefits of sharing knowledge outweigh the costs	SD D N A SA

F. Technology

Intranets are a key within the organization	SD D N A SA
Collaboration technologies are a key within the organization	SD D N A SA
Managing technologies are a key within the organization	SD D N A SA
Documentary and codification systems are a key within the organization	SD D N A SA
Searching technologies are a key within the organization	SD D N A SA
Organizational workstations are effectively computerized	SD D N A SA

G. Competency Development

The organization has systems to measure its employees' competences	SD D N A SA
Remuneration and promotion systems have an influence on the development of competences, ideas and knowledge by the employees	SD D N A SA
The firm uses benchmarking techniques to improve its employees' competences	SD D N A SA

H. Innovation

Our company always succeeds in developing the product which is accepted well by the market as a result of the company's ability in managing the knowledge	SD D N A SA
Our company is able to generate improvement or improvisation out of the existing product or service (the product or service that have been improved where the characteristics are different from the previous ones) as the embodiment of the ideas that	SD D N A SA

the employees have	
Our company succeeds in generating the new product or service as the embodiment of the company's existing knowledge	SD D N A SA
By means of the ability to manage knowledge, our company always succeeds in improving service process to the customers	SD D N A SA
By means of the ability to manage knowledge, our company succeeds simplifying the activities; hence the administrative process is easier	SD D N A SA
With the ability to manage knowledge, our company succeeds in carrying out changes in administrative processes, so they are easier to run	SD D N A SA

I. Organizational Performance

Company has a greater market share than its key competitors	SD D N A SA
Company is growing faster than its key competitors	SD D N A SA
Company is more profitable than its key competitors	SD D N A SA
Company has a greater efficiency of operations than its key competitors	SD D N A SA
Company has a greater quality of services than its key competitors	SD D N A SA