Professional Learning Behavior

A Knowledge Management Approach

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Effects of Dynamic Persuading and Nurturing the Professional Learning Behaviour of the University Students: A Knowledge Management Approach.

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Declaration of Originality

- It is declared that this research complies rules of University regarding plagiarism.
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Khan, Rehman & Dost

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In the name of All Mighty Allah the most Merciful and Omnipotent Who Taught Men the most significant use of pen and taught men what he knew not. We being a humble student bestows and prostate before Him for completion of this endeavor. Without His Mercy and Help this could not have been materialized.

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Dedication

This study is dedicated to our families and teachers for their adore, good wishes, encouragement and incessant prayers without which this objective would have been remained a dream.

Abstract

The implication of globalization has rare societies to be occupied by knowledgeable societies. Transformation and evolution process of societies from knowledge less to knowledge based economies has been perceived as the only remedy to avoid them from becoming dependent on knowledge able societies. Consequently, KBE concept has captured attention of decision maker and think tanks of colleges and universities being the prime source of knowledge building to put more efforts in providing knowledgeable students to the society instead of just robots. To fulfill this social responsibility this study was conducted with the objective to investigate the effects of diverse dynamics and predictors persuading and development the professional learning behavior of university students through knowledge management approach during their academic tenure. To observe the impact of predictors selected in questionnaire for examination of learning through knowledge sharing behavior in students five point Likert- Scale tool for development of questionnaire was employed. Observations thereafter were analyzed by applying varied quantitative technique. The sample of research comprised of 1000 students belonging to 52 different departments of ten different public and private Universities of Lahore, Pakistan out which 753 students provided the complete information. Outcome demonstrated that factors which bend learning process through knowledge sharing behavior among the students are trust, absorption capacity, motivation, willingness to share, perceptions about knowledge sharing and technology. Results also illustrated that learning behavior and perception about knowledge, willingness to share and absorption capacity, motivation and technology are direct positively related. No systematic association between (learning through knowledge sharing behavior and trust) has been seen. To facilitate the learning process through knowledge sharing practices among the students last part of the study contains recommendations.

Keywords: Knowledge Management, learning through knowledge sharing behavior, trust, absorption capacity, perceptions about knowledge sharing, willingness to share, motivation and technology.

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Chapter 1

INTRODUCTION

1.1   BACKGROUND

Plato (427-347 B.C.) the father of epistemology, according to (Wellbourne, 2001), is the first accepted philosopher of the Western world who expressed the significance and importance of knowledge. Plato sensitized the awareness, perception and reasoning of knowledge. He declared that first step of knowing of objects is priority for acquiring knowledge. Further Francis Bacon (1561-1626) declared knowledge as power. Rene Descartes (1596-1659) articulated knowledge as material world of senses a new dimension epistemological perspective in the modern philosophy (Williams, 2001).   The modern knowledge theory develops a link between knowledge and understanding. There is a long discussion still ongoing from philosophers mentioned above through the debates of Locke, Locke (1632-1704) viewed that sensory organs after sensitized with ideas reflect into new ideas through experience. He further divided knowledge onto intuitive, demonstrative and sensitive knowledge (Winter, McClellard & Stewart, 1981). Hegel (1770-1831) developed a theory absolute idealism. Sherman Kent (1903-1986) named as father of intelligence analyzed intelligence as knowledge. The analogy of intelligence is being used as tool by management in shape gathering information from printed materials and using it to develop knowledge (Agrell, 2002), (Polanyi, 1958) & (Nonaka, 1998). As research continues its discussion opens new vitas regarding distinction between implied and explicit knowledge. Since inception of importance of Knowledge and strategically accepted as source of global power, knowledge has been recognized a tool in global dynamics for ruling the world. Societies round the globe irrespective of being small or big, developed, developing or under developed are more and

more diverting their resources ranging 1.8% to 6.8% of their respective GDP (OECD, Fact book, 2006).

Continual increasing effort with focused attention by individuals, organizations and governments is required to develop this new pattern on development of knowledge base societies. Further knowledge cannot be acquired without the process of knowledge sharing, because heart of knowledge management is knowledge sharing. Human intellectual is based on the intellectual experience and there by transforming this blend of intellectual experience and knowledge to the next generations for further profound and refined knowledge and more creative minds. All this is possible through development and learning (Polanyi, 1958). The work of (Karl Popper, 1902-1994) in knowledge theory divided the world into three categories. World 1 is of physical objects, world 2 is peoples mental and world 3 is of human mind's products. The symbol of knowledge revolves around the relationship world 1 and world 2.

The basic source of knowledge is data, when data undergoes clear understanding relation it becomes information. When understanding patterns are developed information transform into knowledge which afterwards with understanding principles translates into wisdom. This simple process of starting from data and reaching wisdom seems easy but not that simple in actual. It needs a lot of effort on the part of every individual being part of society. According to the work (Bellinger, 1997), we need to differentiate between information sharing and knowledge sharing. Nonaka (1998) opines that knowledge in application of information which in return depends on the personal interoperating and understanding capabilities of individuals.

Since the early ages of knowledge sharing process as we cross through the corridors of history we find one unique character mostly held responsible for a successful completion of knowledge. World recognizes this personality with the name of teacher. Interestingly man has only relied on the natural talent of teachers for transformation process of knowledge sharing. No tools had been developed by man who can make an average person capable of educating students with the same competence as held by natural teacher (Peter Duker). This concept is considered as sharing knowledge, as (Sange, 1998), came up with the view that knowledge sharing is not what we give or share with the people rather knowledge sharing is what we get

from others. In true sense knowledge sharing is developing new brains with the capacity to create new knowledge through learning process. Knowledge sharing is a social action which completes by receiving, processing, and absorbing a particular knowledge preferably tacit knowledge transferred with the help of communication and mutual understanding between the individuals (Al-Hawamadeh, 2003).

Knowledge is stored in various repositories; about 26% knowledge is stored in paper documentation, 20% saved in electronic documentation, 12% hidden in electronic knowledge base and 42% is said to possessed by brains of individuals(The Delphi Group, Inc.,2000). Universities and colleges are considered to be the hub this knowledge which is called tacit knowledge. Other dimension of knowledge is known as explicit knowledge which is stored in documents and electronic sources available for users in codified form. Researchers are yet in the process of finding ways and processes that can transform tacit knowledge into explicit knowledge. This process is named as knowledge management which results through knowledge sharing. (Nonaka, 1996) work presented four modes of knowledge conversion. Knowledge transform through socialization i.e. process of creation of common tacit knowledge through shared knowledge, externalization means process of understanding knowledge through concepts and diagrams, analogies etc, combination means process of gathering innovative and existing explicit knowledge into systemic knowledge and ; internalization stands for process of embodying knowledge into tacit knowledge.

Knowledge is delineated as a vindicated credence that augments an individual' or entity's capability for valuable accomplishment (Huber, 1991) & (Nonaka, 1994). If analyzed from numerous angles Knowledge can be; an individual's brainpower or condition of intelligence or object or process enabling competence or entrée to information. Knowledge is portrayed as a condition or actuality of knowing. Knowing is a stipulation of acceptance achieved during practice, study or experience, also may be gained, professed, revealed, or learned during occurrence of any episode (Schubert et al, 1998). It is a human elucidation of precise discipline of particular significance acquired through incessant experience and study (Awad & Ghaziri, 2004). A rare source, a delicate and subtle asset besotted by any human being. According to the work of (Leng, 2009) such sort of belonging is not threatened to face any danger of loss in process of giving out or sharing it with other persons. In course of a

swap, there emerges no dwindle in propagator's own knowledge. Yet knowledge is further alienated into tacit and explicit knowledge, as (Polanyi, 1967) argues that the entire knowledge is basically tacit, and yet explicit knowledge is entrenched in tacit practice. Though, tacit knowledge is basically not possibly being eloquent. This inspiration is also propagated by other philosophers like (Kuhn, T. 1962), (Prosch, H. 1986), (Gelwick, R. 1987), (Hodgkin, R. 1991), (Scott, D. 1995) & (Goguen, 1997). As stated by (Nonaka, 1998), peculiarity between tacit and explicit knowledge that is often cited in the literature on knowledge management. "Knowledge is alive because it changes continuously…transferred through human interaction" (Nonaka, 1994). According to him, explicit knowledge is a knowledge that is without difficulty articulated, captured, stored and retrieved. It can be expressed as data which is found in databases, messages, and manuals. For (Nonaka, 1991), explicit and tacit knowledge is not detached rather reciprocally and balancing entities. Both work together with each other in the imaginative behavior of human beings. Nonaka (1998) portrays the relations of these two types of knowledge as knowledge exchange process. (Huang, 1997) & (Teece, 1998) fundamentally considers that, implicit and tacit knowledge is expressible, but it is complicated process. Main disadvantage of the explicit / tacit discussion is complexity in explaining tacit knowledge, if tacit knowledge is in expressive, or rigid to eloquent, then this phase merely n ot workable. Thus modus operandi of knowledge management is to trying and managing tacit knowledge explicit.

Knowledge cannot be shared without knowledge management. The concept of Knowledge management is defined as "collection of process that governs the creation, dissemination and utilization of knowledge" (Brain Newman). The process of incessant renewal of the organizational knowledge base by construction of supportive organizational structures assisting organizational members, arranging instruments of information technology blended with importance on teamwork and dispersal on knowledge can truly be declared as knowledge management (Thomas Bertels). In other words knowledge management is the systematic process of finding, selecting, organizing, distilling and presenting information in a way that improves an employee's comprehension in a specific area of interest. The mechanism of transformation tacit knowledge explicit is called knowledge management. Tacit knowledge is knowledge which individuals possess or divined for doing various things which

also increases with experience. Tacit knowledge when allowed to save in any form to be used by other individual or organizations for their benefit is called explicit. The saving media can either be a piece of paper or a most sophisticated computer hardware or software. In our research this phenomenon is focused that how the college and university managements through there available resources with the help of faculty, infrastructure, and other facilities transform this vital tacit knowledge into explicit knowledge. This is a two way process. It includes both teachers and students interacting into a sophisticated environment. This milieu includes a vital role of trust as independent variable which widely discussed in literature. If trust is prevailing among the teachers and students the process of transformation takes place. The research is conducted to find out this relationship. Interestingly trust has not been found through our endeavor that students do not consider trust an important element. Willingness to share knowledge is also taken as significant variable which helps to transfer knowledge from tacit to explicit. This variable is considered important to share knowledge. Absorption capacity is selected from literature as another element which has positive impact sharing knowledge. The research has also supported that Absorption capacity is positively important variable and helpful in learning through knowledge sharing. Technology is another input playing a role in transforming process of knowledge from tacit to explicit. Research also supports that student's verdict and declared technology as significant variable. Motivation as mentioned in literature plays a key role in converting tacit knowledge into explicit knowledge. Perception and awareness about the knowledge acquisition is also one of chief variable in transformation process of tacit knowledge to explicit knowledge. Without awareness of students about what is been taught, why students are sitting in classroom, how students are going to use this knowledge in future are some important points of awareness which help in the transformation process.

Carlsson et al. (1996) argues that there are diverse views of knowledge management, if knowledge is examined as an article, or is associated with information access, and then knowledge management ought to concentrate on organizing and building knowledge accumulation. If process is knowledge, then indirect knowledge management focal point is on knowledge processes of design and flow, distribution, and division of knowledge. If observation of knowledge is a competence, then literature recommends a knowledge

management viewpoint axis on making core capabilities, considering tactical advantage of proficiency, and generates academic resource. Key suggestion of different origins of knowledge gives each perspective put forwarding a diverse approach for supervising knowledge.

1.2 PROBLEM FORMULATION

Higher education (knowledge base economy) is considered as an important element in the social development process. Such transformation of society in knowledge base economy is relied on the higher education providing institutions. All such nations that fail develop well-managed and efficient learning environment will be forced to become colonies of such nations who excel in knowledge.

Education system of any country is responsible to produce intellectuals who could participate in the development of individuals and society as a whole. The education system of Pakistan is based on British system which focused on producing government functionaries. Due to changing milieu and emergence of science and technology, applied sciences, business skills and entrepreneurship the colleges and universities have to bridge the knowledge gap. With the increase in the number of students joining bachelors, masters and higher education programs it becomes imperative for college and university management to address issues of students and identify predictors which contribute in the knowledge building process in the education system.

Students join college and university to get a degree which is required to satisfy societal as well as individual need, whereas, employers want that a student graduating from institution must possess knowledge and ideas which they contribute in shape willingness to learn, their ability and flexibility to deal in changing environment, their problem solving abilities, critical analysis abilities and innovative ideas. Therefore students look colleges and universities as source of such knowledge. Student's ability to work in modern pressurized environment, stress management, independently able to meet deadlines, self confidence, tolerance and above all leadership qualities is an outcome of knowledge which they acquire.

In this research effort is made to highlight independent variables like trust, motivation, absorption capacity, and willingness to share, technology perception which directly or indirectly affect learning through knowledge sharing.

History reveals that education systems revolved around handful of special individuals who educated minorities. Although these systems were successful but restricted to a few individuals. An example Greek empire which stood 2500 ago, University of Nanjing in China 258 BC, institutions of Baghdad, Cairo and Istanbul founded in 859 AD one of the oldest degree awarding institutions.

1.3   PURPOSE STATEMENT
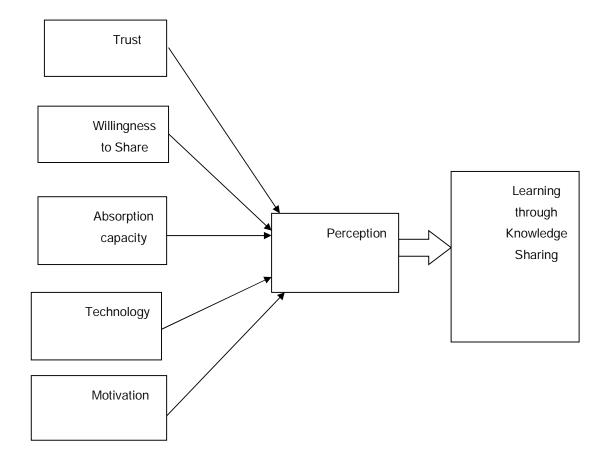
The purpose of this endeavor is to find out any link and relationship between trust, willingness to share, absorption capacity, perception, motivation and technology with learning through knowledge sharing behavior through a rigorous survey of 1000 students studying in educational programs of three different levels i.e. less than 14 years / more than 14 but less16 years and more 16 years in ten different colleges and universities of Lahore, Pakistan. The study is imperative as it would surely identify what variables are more significant which impact the dependent variable learning through knowledge sharing.

1.4   SIGNIFICANCE OF STUDY
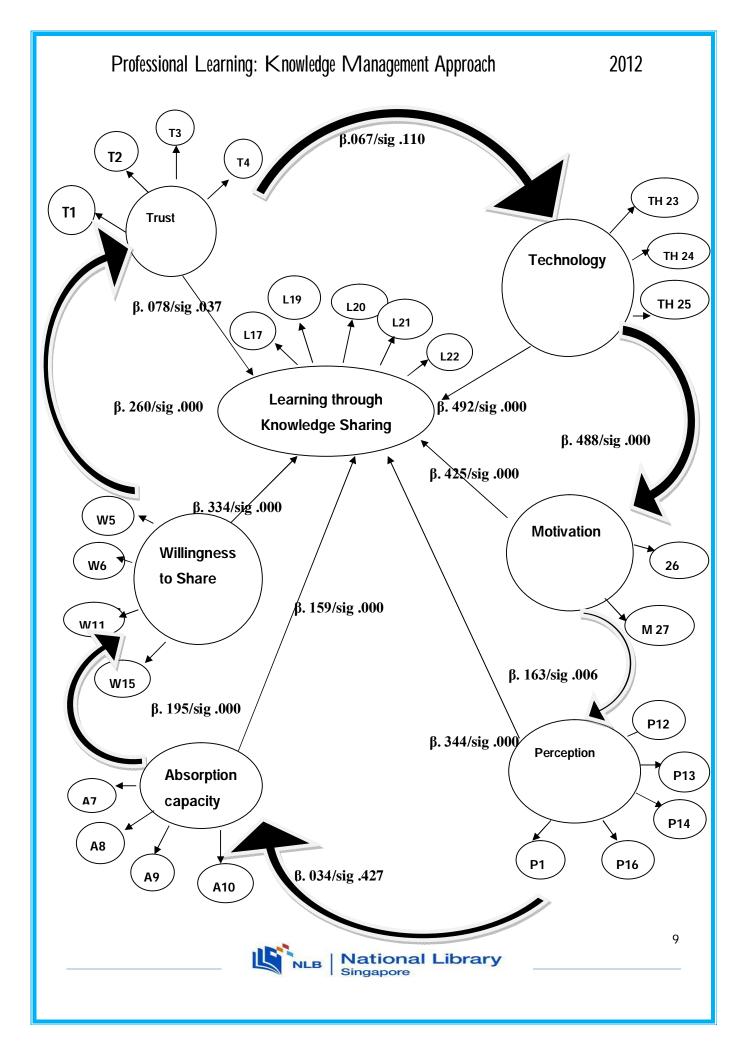
This research is significant with respect to its focus on Pakistani scholarly circles. No previous studies are conducted with respect to variables selected for this study. These variables are carefully selected from literature and used in the local setting. Total eight variables are studied in this research. Were as, previous studies in body of knowledge had literature of four to five variables. Further, sample size is reasonably large to get better results which can be generalized. The data was collected from participants of related field. Various data analysis quantitative techniques were used including descriptive statistics, bar charts, frequency polygons, and histograms, scatter plots, linear regression line/quadratic regression line.

1.5 *THEORETICAL FRAMEWORK*

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┌─────────────┐
│    Trust    │
└─────────────┘

┌─────────────┐
│ Willingness │
│  to Share   │
└─────────────┘
                        ┌──────────────┐      ┌──────────────┐
┌─────────────┐         │              │      │  Learning    │
│ Absorption  │────────▶│  Perception  │ ───▶ │  through     │
│  capacity   │         │              │      │  Knowledge   │
└─────────────┘         └──────────────┘      │  Sharing     │
                                              └──────────────┘
┌─────────────┐
│ Technology  │
└─────────────┘

┌─────────────┐
│ Motivation  │
└─────────────┘
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1.7   RESEARCH OBJECTIVES (MAIN AND SUB OBJECTIVES)

The purpose of this study is to conduct cross sectional analysis of varied predictors and dynamics which have tendency to influence learning through knowledge sharing among students studying in various colleges and universities. The results generated from this endeavor can be helpful to decision making authorities at institutional as well as national level to draft workable policies for a swift knowledge management from knowledgeable teachers to knowledge seekers i.e. students. Further these results can also assist to create an environment scientifically integrated and blended in a coherent design to provide opportunity for students to interact with teachers in process of knowledge management.

1.8   RESEARCH QUESTIONS AND HYPOTHESIS

1.8.1   MAIN RESEARCH QUESTION

The main research question of the study is:

How do Learning through knowledge sharing is possible in the learning process of university and college students.

And the sub-questions are:

1. *The factors which affect student's willingness to share knowledge?*
2. *The role of Trust in learning through knowledge sharing?*
3. *What is the role of perception in learning through knowledge sharing?*
4. *What is the function of willingness to share in the process of knowledge sharing?*
5. *How technology plays a vital role in the process of learning through knowledge sharing?*
6. *Is motivation an imperative factor affecting the process of knowledge sharing?*
7. *Why absorption capacity is significant for the learning process through knowledge sharing?*

The rationale of this endeavor is also to investigate the association and relationship between learning through knowledge sharing as dependent variable and independent variables like trust, perception, willingness to share, absorption capacity, motivation and technology.

1.8.2   Hypothesis

H$_1$: Trust has significant positive effect on learning of students.

H$_2$: Perception has significant positive effect on learning of students.

H$_3$: Willingness to share has significant positive effect on learning of students.

H$_4$: Absorption capacity has significant positive effect on learning of students.

H$_5$: Technology has significant positive effect on learning of students.

H$_6$: Motivation has significant positive effect on learning of students.

1.9   STRUCTURE OF THE THESIS

In the first chapter the topic of study is discussed with background of the study, problem formulation with special reference of previous studies, the deficiencies of the study and present day importance and significance of the study with regard to theoretically, practically and methodologically. Overall picture of the study in presented in shape of theoretical frame work and model of included in this chapter. Further, objectives of the research, research questions and hypothesis are also included for which are answered in the following chapters.

The second chapter includes overview of the literature review with the introduction, literature flow diagram, linkage of dependent variables with independent variables with the help of varied theories and discussing relationship benefits gained from learning through knowledge sharing. Mentioning and pointing out problems and issues arising out of presence or absence of trust, absorption capacity among the students of the colleges and universities. Role of technology in developing awareness among students to harness their capabilities required for future professional life. In this chapter discussion on Motivation as a catalyst also includes in learning process inculcated by teachers to enhance the learning abilities through

knowledge sharing. Finally in this chapter the methodology is exhaustively discussed. Especially with regard to discussion on qualitative and quantitative methods, survey method is elaborated which is selected by the researcher for conducting this study. Effort is made to explain methodology with its significance and weak areas side by side.

In the third chapter methodology of the research is discussed in length. The research paradigm being the most important factor is discussed in detail. Research paradigm is a set of basic beliefs that deal with ultimate or first principle. "Paradigm" is derivative of "*paradeiknyai*" from Greek, which means idea of mental picture of thoughts, sample, example of anything (Shatarkshall, 2004). An effort is made to discuss research paradigm by the responses of following fundamental questions i.e. on the ontological questions, epistemological questions, axiological questions, rhetorical questions, and methodological questions, strategies of inquiry and methods and instruments of data collection. Different steps taken for research design were discussed such as sampling plan, methodology sample is selected from population, and procedures are adopted for estimation of reliability of population from which the sample data and estimates are obtained. Prime issue of "Reliability", while conducting qualitative research is also discussed to achieve accuracy and stable data. Further, "Validity", concerns produced from research is discussed. The concepts of measurement, internal, external and ecological validity is explained and their impact on research. The concerns of sample selection, sample size and survey media are elaborated. Issue of types of Type I error and Type II error are discussed arising during data collection. The research site selection and sample population problem is included in this chapter.

In chapter number four the analysis of data so obtained was presented in the form of tables and diagrams. Descriptive statistics, histogram, frequency polygons, scatter plots, Pearson Correlation and Regression analysis Quadratic regression was performed to discover the relationship of dependent variables with identified independent variables. One Sample Test was also applied to witness as to what degree the target population has responded to our questions.

In chapter five difficulties faced in transformation of the variables of trust, willingness to share, absorption capacity, learning through knowledge sharing, perception, technology and motivation is discussed with the help of carefully designed self-administrated questionnaire

the researcher could acquire the required information and extract the results with the help of latest statistical tools and techniques. The research specifies that knowledge about a particular subject makes a teacher an ideal teacher for the students. The more the capability and potential of teacher to know subject the better command will a teacher get to communicate his knowledge and experience clearly. The university authorities must ensure that the teaching faculty in order to develop trust and motivation among students must reply and give proper explanations to questions asked by students. The use of technology is strongly recommended in the process of knowledge sharing. Teachers using variety of teaching instruments, tools, facilities and teaching methods add willingness to share knowledge and boosts trust of students. Trust has been found showing negative relationship with dependent variable. Further research studies can include more detailed dimensions of trust by exploring ability to trust, benevolence, and integrity and trustors propensity. These proposed dimensions of trust can help to study learning through knowledge sharing with a different perspective.

The study has only focused on one dimension of knowledge sharing. Yet there are many more constructs i.e. sharing open knowledge, sharing indirect knowledge, using open knowledge, and using indirect knowledge (Holste, 2003) can be used.

The research has only pointed out students as part of study but parents are also an important factor playing a major role in the learning process of students through knowledge sharing. The researcher feels the future researcher must take into consideration the role of society, government, parents and organizations as well.

Chapter 2

LITERATURE REVIEW

2.1   INTRODUCTION

Knowledge is explained as a vindicated credence for priceless achievement that augments an individual' or entity's potential it may be studied from many approaches as brainpower, intelligence, an object, a process, entrée to information or competence. It has been represented as a form or authenticity of knowing, a requirement of understanding accomplished during practice, study or experience, also may be increased, professed, revealed, or learned during occurrence of any incident. Knowledge is human explanation of a particular discipline of particular importance that has been attained through nonstop study and experience. It is a typical resource, a fragile and subtle asset possessed by any person or entity. This kind of asset is not menaced of any danger of losing possession in course of spreading of transformation process also the person giving knowledge dose not decrease rather it multiplies. Knowledge is a disclosure on human-beings when a particular field of study is continuously and rigorously explored then significant results are obtained in shape of knowledge. To craft something novel to the body of knowledge varied persons are required to share knowledge by interacting in a classified manner there by jointly create new thoughts which is then named knowledge. Knowledge management has turn out to be an important concern for last few decades. It is considered as a use full instrument considered by societies to develop a competitive advantage over rest of world by commanding knowledge transformation to maintain eminent status in globe. The outcome of this development results into intellectual capital mental power. Knowledge sharing depends upon absorption capacity, perceptions about outcomes of knowledge sharing, trust on fellows, and learning habits. Personal experiences, expertise, motivation, personal interpersonal relationships and

professional backgrounds also cannot be overlooked while studying knowledge sharing behavior.

In epistemology, clear and well defined use of a language is imperative aspect and instrument required for knowledge sharing and information sharing as to convert implicit into explicit manner. Sharing operates persistently as core element in knowledge conversion process. It necessitates the course and direction of knowledge sharing and also constitutes responsibility as tool which reciprocally allows and systematizes communication (Nemati et al., 2002).Further   in case of colleges and universities teachers and students mostly swap their explicit knowledge only (Nemati et al., 2002). Scott, D (1995) in his work suggests that knowledge can be articulated by mixed arrangement of developing a mechanism or system with the help blending methods, objects, symbols, rules, equations with each other and above all language. This inspiration is also propagated by other philosophers like (Kuhn, T. 1962), (Prosch, H. 1973), (Gelwick, R. 1987) & (Hodgkin, R. 1991). The peculiarity of tacit and explicit knowledge is often cited in literature of knowledge management as provided by (Nonaka, 1991). "Knowledge is alive because it changes continuously…transferred through human interaction" (Nonaka, 1994). According to Nonaka's research, knowledge which can swiftly and easily articulated, captured, stored and retrieved is explicit knowledge. It can be expressed as data which is found in databases, messages, and manuals. For (Nonaka, 1991), tacit and explicit knowledge are not detached but reciprocally and balancing units. Both work together with each other in the imaginative behavior of human beings.

Nonaka (1998) portrays the relations of these two types of knowledge as knowledge exchange process. Huang (1997) fundamentally considers tacit knowledge is expressible, rather it is complicated process doing so. Complexity in explaining tacit knowledge is a main disadvantage of tacit/explicit discussion but if tacit knowledge is in expressive, inarticulate able above mentioned phase merely will work. Thus prime approach of knowledge management is to trying and managing tacit knowledge explicit.

Knowledge management does not have precise definition up till 1990 on occasion it is called technology and sometimes it called information i.e. passing of information from one person to another. This is "information management" not "knowledge management". This all misinterpretation can be cleared by the following definition. Knowledge management is an

approach when one manages to confer appropriate consideration to the value of knowledge. If an organization able to understand how much knowledge is worth needed to manage a company, to manage a team or a project differently as compare to others by doing things differently by different management, is knowledge management. It is knowledge of need to learn before doing any particular job, need to learn after doing a job and knowledge about the account able ownership. Knowledge management is basically application of some common principles on diversified disciplines i.e. the people, process and technology. The individuals and organizations need to understand the true values of the knowledge. If true value is realized it changes the way of management by delivering the value and that is Knowledge management.

Safety management is the closest analogy to the knowledge management in management disciplines. It is the management with intangibles. It requires cultural change, doing things differently and so far it has been tried and proved successful. Safety management has attained success and revolutionized various sectors in the last few years.

Carlsson et al. (1996) in his work points out that there are diverse views of knowledge management, if knowledge is examined as an article, or is associated with information access, then knowledge management ought to concentrate on organizing and building knowledge accumulation. If process is knowledge, then indirect knowledge management focal point is on knowledge processes of design and flow, distribution, and division of knowledge. If observation of knowledge is a competence, then literature recommends a knowledge management viewpoint axis on making core capabilities, considering tactical advantage of proficiency, and generates academic resource. Key suggestion of different origins of knowledge gives each perspective put forwarding a diverse approach for supervising knowledge.

Awad & Ghaziri (2004) states that knowledge is a human revelation in a particular field of study of scrupulous significance obtained during a continuous and rigorous exercise through incessant study and experience. On the other hand knowledge sharing is a practice where persons communally exchange knowledge jointly creating innovative thoughts and craft something new to taxonomy of knowledge (van den Hooff, 2003). At university level knowledge sharing among students is important feature as this particular way of learning

facilitates transformation of information in to knowledge and also enhances student's learning capacity (A. A. Lising 2001). Leng (2009) propounds that knowledge is a fragile and subtle talent possessed by any individual. It is a scarce ingredient not easily found in abundance. Such a gift is safe from any danger of theft and loss during the process of sharing and transformation from one person to another rather it increases or gets more strength. Interestingly as the knowledge is passed on an on to others its volume is not decreased in the hands of disseminator rather the knowledge finds more and more strength. Knowledge management has turn out to be an important concern and declared as a command to persuade exchange of knowledge and its designing in the societies to distinguish their competitive edge, intelligence, analytical or logical capital (Liebowitz, 2001). Sharing knowledge is reliant on performance of the persons, trust on fellows, perceptions, absorption capacity and learning practice. This learning process needs some other crucial factors supporting this process. If these factors are not present at time of such transformation then such an exchange would not be possible. The factors include individuals i.e. knowledge seeker and knowledge givers relations supported by trust between them, experience of both parties, experience of knowledge sharing persons with special respect to professional back ground of knowledge and motivation to share knowledge, (Clegg, 2007). Knowledge flow is a task comprised on the following elements, stock's value as a basic element, motivational character of source component, continuing affluence of communication channel, enthusiasm and nature of end part and target audience absorptive capacity, (Govindarajan, 2000). Using of a language completes method of sharing of information, awareness and knowledge in clear manner. Sharing always plays a central operator and is tools that equally permits and systematize communication and necessitates flow of knowledge (Caraca & Carrilho, 1996). Nemati et al., (2002) states that when academic institutions environment is studied the students and faculty is found engaged in sharing explicit knowledge only. This sharing is primarily supported by using varied languages with help of symbols, rules, formulas, equations or objects. This exchange process is also maintain and supported by written procedures, experimental and quantifiable data, set of general principles and mathematical models.

Trust arises from optimistic prospect about another person's intent towards us (Lewicki & Bunker, 1994) & (Boon & Holmes, 1991). Trust is considered to be belief,

enthusiasm, the words, dealings and assessment of numerous another on behalf of others (Yamagishi, 1994). McAllister (1995) affirms that growth of trust depends on anticipation and clear perception of other individual's deeds with respect exclusive extent to which they become visible. Hints can be used while assessing sincerity of the other party with the help of our opinion of their dependability, certainty; generosity and degree of have mutual objectives as researched by (Devinney & Pillutla, 1998). The indications mentioned construct trust swiftly as people are persuaded with our first impersonation of the other individual (Kramer, 1994).

Trust assists one to accomplish vital goals, but trust will rarely be the viewed as decisive purpose (Bakker, 2006). Emerson, (1962) stated that trust is the prime ingredient of swap over. The study conducted by (Nahapiet & Ghoshal, 1998) suggested that mutual trust supports the intellectual capital sharing. Sharing of implicit knowledge is an obligation of tacit knowledge sharing and trust is echelon among knowledge holder and receiver. It is main feature that maneuvers rationale to share tacit knowledge. The study states that students imitate a positive approach toward knowledge sharing and also approve its significance in search learning. Many students look for their job after their studies. Constructive approach towards sharing knowledge would help to gather their qualities in an additional useful manner when they join any organization.

The essential role trust plays in making social exchange relationships while determining behavior of individuals encountering risk and uncertainty (Battacharya et al., 1998). Trust reduces uncertainty about the prospective conduct of other party, particularly by plummeting apprehensions of misbehavior and mishandling by other party. The indications recognized by scholars can enhance trust as it boosts capacities to precisely evaluate likely actions of other party (Sheppard & Sherman, 1998). The research entails that when other people are recognized as trustworthy and with such intent in our mind, our danger is minimized.

The idea of absorption capacity was initially acknowledged in the work of (Cohen and Levinthal, 1990), as they argued that absorption capacity is any individual's ability to distinguish, recognize, and employ knowledge from the trivial environment. According to (Cohen and Levinthal, 1990), an individual must always obtain, absorb and generate new

knowledge. Absorptive capacity is a self-motivated prospective in understanding and using knowledge which allows the individual's ability to gain and maintain competitive advantage (Zahra and George, 2002). Cummings (2003) accomplishment of knowledge sharing engrosses complete learning processes rather than a mere simple communication processes. Swift progression in linking of individuals through computer with help of networking facilities with aid of internet technology, now students residing at distant places studying in varied universities working in different businesses situated at far away locations. This facility has provided access to educate students with support of modern technology sharing knowledge by softening barricades of time and space. These facilities provide opportunity for students and teachers with controlled on-line educational for teamwork and evaluation (Soller, 2004). The work of (Palincsar & Brown, 1989) stated that arranged group effort dully controlled by respective authorities in classroom has acknowledged as a flourishing and remarkably powerful learning technique. IT facilities all around globe are reshaping knowledge sharing process crossing all barriers of time and distance. (Cabrera, 2002) suggests in his research, however, unproductive communication and pitiable knowledge of each other's issues, is a barrier to critical knowledge sharing. The range of particular knowledge has a wider notion and it includes a variety of elements such as social, political and aspects.

Knowledge sharing is assessed as increase in recipient's knowledge on yearly basis. This acknowledgement is reliant on quantity of sharing. Motivation level of recipient's attitude towards knowledge sharing is necessary to establish associations with class mates and teachers. The work of (Bock and Kim, 2003) is founded on varied theoretical perspective and agreed to the analogous results. They unequivocally found that motives for knowledge sharing and establish outcome from their field examination that theoretical individual participation in the association was the chief variable of individual's mind-set in sharing of knowledge. Therefore, optimistic philosophy to share knowledge escorts to optimistic intention to share knowledge.

To ascertain the motivation as an essential independent variable (Kelman, 1953) theory of Social Influence, Herzberg (1966), Maslow theory of (1968), (Alderfer, 1972), (Ryan & Deci, 1995) theory of self determination, (TRA) Theory of Reasoned Action and its successor, (TPB)Theory of Planned Behavior, (Ajzen, 1998) about the thought process and

varied aspects of people behavior, SET theory by (Constant, Sproull & Kiesler, 1994), and further motivation is illustrated by (Jarvenpaa &Staples, 2000) as important in information and knowledge sharing.

Connectivity is the capability for members of a public to get in touch with each other unequivocally (van den Hooff, Elving, Meeuwsen, & Dumoulin, 2003). Technology can be considered to be having significant contribution to connectivity since it provide long distance communication facility through virtual set up. In addition, technology can act as a catalyst to support and sustain knowledge sharing by building knowledge sharing easier and more useful through different ways (Riege, 2005).   Han & Anantatmula (2007) in their work recommended that there is a optimistic relation among technology and knowledge sharing.

(Petrides, 2002)In the beginning of 1990s, knowledge management concentrated on the management of data based resources. Consequently technology was playing the role of an instrument creating and shortening data into information. Today, the formation, transition and organization knowledge is considered as the crucial concern in knowledge management. Analysis revealed that technology was being used only for to organize, administer, manage and handle data for knowledge sharing as suggested by (Hedeline & Allwood, 2002). Technology plays important role in integrating effortless knowledge dispersal surge of chattels (Ware and Degoey, 1998). Loudon and Loudon (1997) determines that computer-aided facilities and structure has facilitated formulation and creation of   knowledge and sharing to interested sections of society respectively for knowledge. Technology facilitates all these stake holders to share knowledge irrespectively how far these individuals and groups are living apart or distance from source of knowledge in most synchronized way (Hansen et al. 1999). The prime focus of technology is to produce a practical conducive setting for the individuals and group joining hands although living at distance for sharing knowledge. Bulletin boards, white-boards, multimedia, voice amplifiers, video- cameras, e-mails, video-conferencing and tele-conferencing all these faculties are provided by technology to complete knowledge sharing process. The study of (Santosus, 2001) suggests that emotions, real life inter- personal feeling of interaction is not available in such knowledge sharing process. Mostly it becomes difficult for people feel and understands emotional values which could only be possible in face to face and physical process of knowledge sharing (Bender and Fish,

2000). Whereas the work of (Warkentin et al. 1997) suggest that virtual communication is as powerful and effective as face to face method of knowledge sharing.

2.2   LITERATURE REVIEW

2.2.1 Knowledge Sharing

Sharing knowledge among the students at university level is more vital as this meticulous method of learning make possible the rebuilding of information in to knowledge and also develops student's learning ability and aptitude. Corosen et al., (1999) opined about varied stages of learning process. In the first stage precognizant recognition of event takes place. It is called Intuiting. It is eminence of a personality to predict the consequences devoid of looking into the causal relationship of predictors; (Corosen et al., 1999) further affirms that this characteristic is typically innate or achieved during personal experiences. This feature of intuiting only manipulate the individuals own personality. People living nearby such individual are only pretentious when these people work together with intuitive individual. There is a different aspect which needs understanding of this unique feature of intuiting. It is a characteristic of an individual concerning his aptitude of illuminating thoughts by way of words or actions. The conclusion of preverbal and verbal process results into Language. Integrating is an additional feature incorporated in this learning process. The Process engrosses adjustment, coordination, and understanding of mutual knowledge to share between various individuals. Coordination among these predictors is recognized as significant structured discussion of combined actions to build up shared understanding.

Research work of (Chen, 2010) concludes that knowledge exchange emerges into involvement of shared character which guide to an enlarged resemblance in the cognitive illustrations and identification of interacting members. Contemporary research and experience further states that knowledge sharing engages complete learning processes rather than mere communication practice (Cummings, 2003).

2.2.2   *Willingness to Share Knowledge*

The relationship between willingness to share and knowledge sharing has been acknowledged by varied studies. The research work of (Jacobs, 1958) opined that, in a society, individual's relations help to augment level of trust and strengthens cooperation and shared efforts. The social capital concepts comprise of network and the assets which are mobilized through networking where community depends on such a system to accept transformation or knowledge sharing. (Nahapiet & Ghoshal, 1998) defined social capital as the summation of real and prospective assets established resulting from network of relationships possessed by a social unit or a person. Further it includes resources available in network and asset that may be marshaled during set of relations. In process of knowledge sharing, knowledge is a vital predictor playing an imperative role in development of venture. Knowledge possibly can be swapped through intranet, extranet or Internet (Darr & Kurtzberg, 2000). The research further explains that with knowledge sharing processes individuals increase their knowledge by learning and understanding other person's point of view. During progression of knowledge sharing associations have a chance to augment their competence or yield. Sometimes it is difficult to share knowledge because it is possible that some members hesitate to divulge or reveal their experiences and information while sharing their knowledge.

The significance of knowledge sharing is renowned by institutes, societies and organizations, somehow it is observed by researcher that because of non supportive or non accommodating behavior is an obstacle to a professional sharing in organizations due to non cooperative attitude of employees. It is found through research that at times when employees are eager and enthusiastic to share their knowledge organization obtain rewards in shape of increased production capacity or productivity in their respective organizations. Thus knowledge sharing is truly declared as a significant asset and life blood flowing in companies. In literature the researchers have pointed out numerous impediments that influence employees on sharing knowledge. In companies employees assume knowledge as source of power and they vacillate to share knowledge because they presume a negative effect in their standing in company. The work of (Davenport & Prusak, 2000) explains that obstruction of cognition aspect of employees is categorized by following hurdles such as; trust deficiency, diversity in

values, different vocabularies, varied suggestion, time scarcity, different grading and rewarding systems of companies, absorptive capacity deficit in beneficiary, a belief that knowledge belongs to special groups. Szulanski (2000) states if trust is prevailing among employees then they are not interested in sharing their knowledge. Coincidently, by evaluation of research, dissimilarities in standards prevailing in organizations also manipulate efficiency of knowledge sharing. Alteration of implied knowledge into explicit knowledge is the base of organizations knowledge formation. Explicit knowledge is knowledge that "can be expressed in words and numbers, and easily communicated and shared in the form of rigid data and methodical formula. Some examples of explicit knowledge are chemical formulae, market forecasting, operations procedures, product stipulation and technological principles (Nonak, 1991).

Wasko & Faraj (2000) pointed out that knowledge sharing emerge when individuals are enthralled and given access to networks, process of questioning, choice to select questions to answer, take time, select modus operandi, prepare proper answer and send a suitable answer. Further by reviewing previous studies individual motivations through reputation and enjoy helping. Social exchange theory states that persons, who possess the attribute of being more social often, get more advantage and benefit in shape of recognition and enjoy better social status. To enrich and augment their repute, (Wasko & faraj, 2000) uttered that individual's benefit from contributing their knowledge with others. Helping one other and feel happy and satisfied is found in research by (Kollock, 1994).

2.2.3 Trust

The work of researchers has contributed different meanings of Trust in literature. According to work of (Inkpen & Currall, 1998), trust is the dependence on each other if there is vagueness or risks. Another reason of shaping this tactical coalition is minimizing that risk occurring during mistrust or decreases the chances of loss. It is possible that such alliances might result into flow of technology from one organization to other organizations. Keeping in view this discrepancy trust is tried to develop among parties to avoid any negative outcomes. Trust is mutual understanding of parties that either any of the persons tries to get any advantage from other party because of other individual's incompetency to solve any particular

problem and then try get monetary advantage. (Sable, 1993) argues that trust is directly associated to organizations exposure. In a form, there are members having different perception levels with respect to their trust present among them with a confidence that other member's intention is not take any financial or other advantage by manipulating to get gains or any advantage from short comings.

Giebels (1998) reviews the central point's pertaining to trust. Trust is very much connected to the indecision as the chance of probability or doubt of any risk of happening of awful incident which results into split of trust prevailing among parties. Trust appears to be valuable when there is a likelihood of arising difference between actual outputs from anticipated output. Trust also opens risks to lose some valuable things as well. Meaning of trust is leaving the initiative of scheming other members of an association by allowing limited liberty to reposing trust. Argote et al., (1995) opined that knowledge sharing relies on features of knowledge and relations of individuals and group members. McAlister. D. (1995) claims that relationships involving organizational work groups affecting knowledge sharing and depending on level of trust. Trust among group members underlines the magnitude of trust within the members of the organization. It is also considered in research that when people trust one other in a particular way and depend on other people (Mayer et al., 1995). Yet, there are two vital problems first, trust has to face the danger of ambiguity and vagueness and secondly, trust is about tolerance and susceptibility (Ross, 1996).

Trust is an apparatus that permits individuals to assess the liking of happening of loss in particular circumstances and alter the possibility in to advantage (Luhmann, 1988). For anybody trust is believed to be condition of doubt with an entrenched constituent of supposed hazard. Newell et al., (2002) points out these dangers as self-esteem, financial resources and reputation etc. Trust is "the extent to which one is willing to ascribe good intentions to and have confidence in the words and actions of other people"(Cook & Wall, 1980). Development of mutual trust is needed to facilitate individuals working collectively and efficiently (Mayer et al., 1995). The research of (Szulanski et al., 2004) states that trust augments magnitude of information required to be transformed. Trust assists facilitates swift decision making process and easier by exchanging and gathering information (McEvily et al., 2003). Trust decreases transaction cost arising out of augmented two parties and organization (Nooteboom, 2003).

Trust is a significant feature for emergent firms' seeking broad knowledge base among working groups by allowing them to contact each other in process of knowledge sharing further research reveal that trust boosts in general knowledge swap (Tsai & Ghoshal, 1998). Also it augments probability that knowledge shared is adequately exchanged (Mayer et al., 1995). Environment is also imperative in the process with respect to sharing and responsive to tacit knowledge. Most significant predictor for upholding a association is trust between members. So member can co-operate each other and without difficulty attain their objects (Morgan & Hunt, 1994).

It is suggested Business literature and personal experience that if there is an element of trust among them then their working relations while working together leads to flourishing knowledge sharing, as they trust more and more organizations benefit for a longer period of time in working environment. Further trust expands coordination among workers to effectively share knowledge and transfer information. Regular interaction is a key element for development of trust among them. (Lewicki and Bunker 1995).There exist healthy relations and ties among workers which helps to swap of knowledge. These strong relations and ties are because of absence of trust among workers. Also it is observed that strong ties lead to sharing of valuable knowledge. As the individuals with strong ties know that the people having same ideas and concepts have the similar knowledge. People feel that weak ties problem can be solved by developing social networks to share knowledge. Therefore weak ties are considered better and more beneficial as compare to strong ties. Concluding ties are more important irrespective of weak or strong in order to share knowledge effectively. There must be presence of trust no matter how strong or weak ties are (Lewicki & Bunker 1995). Each time when people talk or discuss about trust normally it is considered as benevolence-based trust in which it is assumed that people will not harm intentionally to each other if they trust each other. Another type of trust is competency-based trust which demonstrates connection among individuals thinking about another person being more competent person possessing more knowledge, skill and information about a specific subject or field as compare to other person. The highlights of the study is that trust is the most important motive for effective knowledge sharing instead of strong or weak ties. In factual, trust can be built among workers even if there is no consistent relation individually or collectively. It is possible that an effective

knowledge sharing can take place with relations and ties. Elevated trust amplifies enthusiasm to go into reasonable deals in milieu of cooperation, to suggest other party precise acquaintance about inclination. Further social capital scholars like (Tsai & Ghoshal, 1998) work recognized that visible honesty and trust augment the swapping of knowledge, information and wherewithal. On contrary, little trust augment's our concern that how other people will apply such knowledge and information and depict self-protective behavior by ambiguous or caricature our disliking and liking.

In order to accomplish essential goals and objectives trust is helpful but it can hardly be declared and observed as final objective (Marloes Bakker, 2006). The work of (Emerson, 1962) uttered that trust is the most important feature of exchange. (Nahapiet & Ghoshal, 1998) assumed that trust among persons can a key element during the process of sharing of cerebral capital. Trust is considered an essential prerequisite for the conversion and sharing of implicit knowledge into tacit knowledge. The trust level between knowledge owner and the beneficiary key feature which influence the reason to share and distribute tacit knowledge. Majid (2007) wraps up that students reproduce a positive approach towards knowledge sharing and they were also approving its implication in rake learning. Since students are expected to look for in acquisition and hunt of employment after the finishing of their studies, a constructive approach towards knowledge sharing would assist to compose their qualities in an additional useful manner when they join any organization.

Trust is considered to play a vital and significant role for member of group who choose to work jointly or not and irrespective or not they contribute to knowledge sharing or hide knowledge within the concepts of organization transversely as team associate. From the viewpoint of workers and employees, trust is a characteristic of excellent nature for others that can be shown to colleagues, peers or administration (Wall & Cook, 1980). Peculiarity among trust in management and colleagues takes the working environment based on thoughtfulness. Knowledge sharing inside group means trust between social groups is prevailing and trust is working as critical factor among colleagues (Carley, 1991).

Nevertheless, whilst people are concerned in knowledge sharing practice with people working in exterior environment stationed at distant places or remote work groups or organization, trust becomes more vital in administration of such business relations. Rousseau

et al., (1998) research points out external knowledge sharing engages people who are not members of the working group or organization rather they enter into contract for a shorter time period and as soon as the assignment is over the groups separate.

2.2.4. *Motivation*

The research of (Pinder, 1998) delineates work-motivation as an arrangement of energetic attitudes of the employees that prompt them to start work associated performance and to discover its design, style, reflection and duration. The notion of 'intention' and 'motivation' is same. Proceeds and enticement are interrelated with motivation too. Booty and incentive activate workers and employees to work with more consciousness. Usually two kinds of motivation theories are famous in literature i.e. content theory and theory of Maslow. Content theory suggests that inducements and booty are major and key issues suggested in literature to motivate behavior of employees. Further this theory establishes categories of dynamic which induce human behavior, usually devoid of focusing how this energetic modus operandi operates.

One of the examples of such theories is Maslow theory (1968). This theory recognizes the reality of many desires and requirements of individual. These needs are divided into five categories i.e. need for security, need for belongingness, physiological needs, self-actualization, position and authority and, need for recognition. Further it states a chain of command standard and these requirements are connected one another.

Alderfer (1972) seconded the theory of Maslow that on the foundation of general research these five needs should be three folded i.e. intensification, existence and relatedness. The theory points out that typically people desire safety for their continued existence through food, protection, job and proceed from jobs (first two needs of Maslow), meaningful relation of individual with other persons through community links, respect and closeness (third need of Maslow), and to nurture and foster their aptitude, by self-actualization and realization (fourth and fifth needs of Maslow). Needs for participation and involvement, for authority and for accomplishment are the most significant motivating aspects in operational life of the employees (McClelland, 1987). Kelman (1958) researched that an individual or a

person may be aggravated by rewards or to avoid punishments in the course of external incentives (Kelman, 1958) theory of Social Influence.

Knowledge sharing is inclined by option to receive acknowledgment, or since the annual appraisal is reliant on quantity of sharing knowledge. Though, meticulous etiquette or approach of a person might be motivated by necessity of establishing or maintaining relations with different individuals and other people for need of admiration as an imperative characteristic. Herzberg (1966), distinguished among hygiene, motivators and sanitation dynamic. In his research Herzberg acknowledged that all the dynamics do not behave in a similar manner and dose not possess the similar purpose. Most elements in fact determine conduct, while rest others elements establish impose or create obstacles. According to Herzberg there is divergence among motivation factors and hygiene factors for work motivation. Factors contribute in motivation but also lead to dissatisfaction. Herzberg states that motivators are duty, respect, supporting prospects, operational autonomy and challenge of work. Hygiene factors include are excellent compensation and high-quality interpersonal associations.

Ryan (2000) work constructed a theory of self determination which propounded two diverse kinds of motivation i.e. intrinsic motivation and extrinsic motivation the theory suggests that if individuals and people are fundamentally motivated then they can perform their job productively and can face any sort of challenges because of their internal commitment towards respective organization. Malhotra & Galletta (2003) research pedestal on the assumption and study of (Kelman, 1958), (Deci, 2000) measured the different kinds of motivation in a health care institute. They highlighted vital role of motivation in the procedure of sharing knowledge. Also motivation is imperative for knowledge management system. The research proposed two different models dealing two varied facts. The term commitment was given by (Kelman, 1958) and the term motivation was considered by (Deci, 2000). Both consequently examined and did not articulate the connection of both.

Kelman-type data uncovered through factor analysis where researcher observed that, obedience motivation is achieved by the result of maximizing support to workers. Therefore employees felt threat of losing credits and consequently espouse approach to acquire many credits, instead of policy of sharing their knowledge. The work of (Bock & Kim, 2003) is

pedestal on varied theoretical perspective, agreed to the analogous results. They unequivocally established the motives for sharing knowledge and found the outcome from their research and examination that individual's participation in any work place was key element to judge of the individual's mind-set regarding sharing knowledge. Therefore, it is concluded that optimistic philosophy and thinking to knowledge sharing guides to encouraging intention of knowledge sharing.

Process theories state how necessities, enticement, anticipation and objective guide towards performance and actions. Social Exchange Theory and Expectancy Value theories and are vital theories of exchange. Expectancy Value theories are pertinent in several practical investigators (Vroom, 1964) and (Thierry, 1998). Purpose and primary view of these theories is to function in a specific mode where it should appeal of definite rewards, but also on the conviction that such performance of knowledge sharing results as an elegant out come.

The objectives of people is what they actually want, what they can do and what the surroundings allow them to do usually becomes the behavior of people i.e. (TRA) Theory of Reasoned Action and its successor, (TBA) Theory of Planned Behavior (Ajzen, 1998) are good examples about the thought process and varied aspects of people behavior. The behavior of people is also influenced by public pressure in which an individual is functioning and performing in a meticulous way. (SET)The Social Exchange Theory developed by (Kelly & Thibaut, 1978) spotlighted on motivation in relationships. Further, Game theory is very convoluted and quantifies adaptation of SET as it pedestals on human communication exchange of resources and People deem to bear operating cost, time and plunder. SET theory was completed by (Sproull & Kiesler, 1994), and further it was illustrated by (Staples & Jarvenpaa, 2000) by including knowledge sharing. In SET it is convoluted that exchange depends on aspects opinionated by culture. The research of (Constant et al, 1994) established a theory, entitled Information Sharing Theory which portrays that information sharing is embellished by coherent self-interest including social and organizational framework.

2.2.5 Absorption Capacity

The idea of absorption capacity was initially acknowledged in the work of (Cohen and Levinthal, 1990), as they argued that absorption capacity is any person's ability to identify,

recognize, and use knowledge from the environment. According to (Cohen and Levinthal, 1990), an individual must always obtain, absorb and generate new knowledge. Absorptive capacity is the self-motivated prospective in developing skill and utilizing knowledge which allows persons talent to gain and maintain a competitive advantage (Zahra and George, 2002). The work of (Cummings, 2003) states that according to contemporary research knowledge sharing success is hidden in involvement of an individual into complete learning processes instead of simple communication processes. With rapid progression in internet technology, networking facilities, students either living faraway places from the source of knowledge creating units i.e. universities and companies are now able to contact, inform, train and educate themselves with new developments by overcoming the barricades of time and space causing hindrance in the process of knowledge producing and knowledge sharing. Useful team works can be developed and evolved with the help of controlled on-line educational activities and facilities (Soller, 2004). In the classroom environment to promote knowledge sharing, pre-approved group effort has been accepted as a successful and remarkably powerful learning method (Brown and Palincsar, 1989). Information technology and telecommunication also serving in sharing of knowledge transversely overcoming distance and time barriers as (Cabrera, 2002) suggests in his research, though, unsuccessful communication and meager knowledge of each other's concerns, is a blockade to vital knowledge sharing (Valerie A. Martin, 2005). The extent of particular knowledge has a broader notion and it includes different elements such as political, cultural and social aspects as well.

2.2.6 Technology

Connectivity is the capability for members of a public to get in touch with each other unequivocally (van den Hooff, Elving, Meeuwsen, & Dumoulin, 2003). Technology can be considered to be having significant contribution to connectivity since it provides long distance communication facility through virtual set up. In addition, technology can act as a catalyst to support and sustain knowledge sharing by building knowledge sharing easier and more useful

through different ways (Riege, 2005). Han & Anantatmula (2007) in their work suggested that there is a optimistic relation among technology and knowledge sharing.

According to the work of (Petrides, 2002), in the beginning of 1990s, knowledge management concentrated on the management of data based resources. Consequently technology transformed into an instrument creating and shortening data into information. Today, the formation, transmission and organization knowledge is considered as the crucial concern in knowledge management. Analysis revealed that technology was being used only for to organize, administer, manage and handle data for knowledge sharing as suggested by (Hedeline and Allwood, 2002). Technology is increasingly integrating effortless knowledge dispersal surge of chattels (Ware and Degoey, 1998). (Loudon and Loudon, 1997) determine that computer-aided facilities and structure has facilitated formulation and creation of knowledge and sharing to interested sections of society respectively for knowledge. The research of (Ruggles, 1997) have declared internet as a constructive and positive instrument for communication of information. Study of (Flanagin, 2002) also addresses the potential advantage of technology as catalyst for knowledge sharing and information sharing process. Technology is an important or essential component of knowledge management that not only collect classifies or summarizes data but also assists in swift transmission of data from one person to another person.

(Bloodgoog Salisbury, 2001) stated that technology can provide facility to support knowledge management in a significant manner relying on the fundamental vista of information. Technology has following abilities with respect to knowledge i.e. codifying knowledge and structuring networks and it can capture, store and distribute information or knowledge. Technology is extensively used for designing and evolving laws and procedures consistently by automating various processes to achieve certainty. Further through useful mechanism of technology exact results are obtained immediately extracted from facts and data from a particular set of knowledge and information through database of management information systems. These results are then able to be transferred efficiently and unambiguously without any mistake to all those people who are interested to enhance their cerebral capital. Technology as stated by the work of (Daft and Lengel, 1986) as a facilitator to expose and render highly personal and deep rooted knowledge of individual brains

available to general public. This codified and hidden capital could never been possible to be revealed without help of technology. Therefore all efforts are focused to deliver such an important task helpful in process of knowledge sharing in most efficient and cost effective manner. E-mail, internet and intranet are developed as most reliable and tilting methods by which knowledge sharing of information and knowledge becomes easy and suitably fit for almost all type of individuals and people sharing knowledge in shape of groups. Technology facilitates all these stake holders to share knowledge irrespectively how far these individuals and groups are living apart or distance from source of knowledge in most synchronized way (Hansen et al. 1999).He further suggests that the prime focus of technology is to produce a practical conducive setting for the individuals and group joining hands although living at distance for sharing knowledge. Bulletin boards, white-boards, multimedia, voice amplifiers, video- cameras, e-mails, video-conferencing and tele-conferencing all these faculties are provided by technology to complete knowledge sharing process.

The study of (Santosus, 2001) suggests that emotions, real life inter- personal feeling of interaction is not available in such knowledge sharing process. Mostly it becomes difficult for people feel and understands emotional values which could only be possible in face to face and physical process of knowledge sharing (Bender and Fish, 2000). Whereas the work of (Warkentin et al. 1997) suggest that virtual communication is as powerful and effective as face to face method of knowledge sharing. Knowledge sharing happens due efforts of individuals sharing joint temperament of participation which ushers to a magnified similarity in the cognitive designs and recognition with interrelating associates (Chen, 2010). Research of (Brown & Palincsar, 1989) suggests that thriving knowledge sharing engross complete learning procedure instead of simple communication processes. Speedy internet technology with light speed data transmitting devices, knowledge sharing has surpassed all dimensions of time and space. Soller (2004) in his research points out that group endeavor, in classroom is acknowledged itself as a successful and remarkable superior learning system. The research of (Cabrera, 2002) suggests a barrier critical to knowledge sharing in shape of futile communication and modest knowledge of each other's issues. Whereas (Valerie A. Martin, 2005) opines that technology in broader spectrum has a capacity of extending particular knowledge has a broader perception and it include diverse elements of political, cultural and

social aspects because learning also revealed through knowledge sharing which is mainly reliant on trust amongst students.

2.2.7 Knowledge Management

Knowledge is outlined as a justified authority that augments an individual' or entity's capability for valuable accomplishment (Nonaka 1994). If analyzed from numerous angles Knowledge can be; an individual's brainpower or condition of intelligence, an entity, a procedure, a competence or entrée to information. Knowledge is portrayed as a condition or actuality of knowing. Knowing is a stipulation of acceptance achieved during practice, study or experience, also may be gained, professed, revealed, or learned during occurrence of any episode (Schubert et al. 1998). Knowledge is individual elucidation of a precise regulation of particular significance that has been acquired with incessant learning and practice (Awad & Ghaziri, 2004). It is a rare source, a delicate and subtle asset besotted in individuals. This concept of belongingnes experience no danger and fear of loss while giving out or sharing with others. In process of this swap no dwindle in the propagator's own knowledge emerges (Leng, 2009).

Knowledge is explained as an exact credibility for invaluable accomplishment that enhances an individual' or entity's potential it may be studied from many approaches as brainpower, aptitude, an object, a process, reception to information or competence. It has been represented as a form or genuineness of knowing, a prerequisite of understanding accomplished during practice, study or experience, also may be increased, professed, revealed, or learned during occurrence of any incident. Knowledge is human explanation of a particular discipline of particular importance that has been attained through nonstop study and experience. It is a atypical resource, a fragile and subtle asset possessed by any person or entity. This kind of asset is not menaced of any danger of losing possession in course of spreading of transformation process also the person giving knowledge dose not decrease rather it multiplies**.** Knowledge is a disclosure on human-beings when a particular field of study is continuously and rigorously explored then significant results are obtained in shape of

knowledge. To craft something novel to the body of knowledge varied persons are required to share knowledge by interacting in a classified manner there by jointly create new thoughts which is then named knowledge.

Knowledge management has now been assumed as a tool to build a competitive advantage on any society over other society. World powerful nations are spending their time, human resource, finances to build their cerebral and intellectual capital to maintain their supremacy over knowledge less societies. Knowledge management is useless without a complete process of knowledge sharing. Distinguished societies are working on two fold aspects. One these societies are focusing on creating new knowledge and secondly devising ways to share this tacit knowledge to make implicit. Knowledge sharing conceivably is measured as an instrument used by societies to establish a competitive advantage by getting command over knowledge swap and conception, which in return provides a these societies distinguished status. Such development results into a unique power i.e. the mental power or cerebral capital. The research on Knowledge sharing and knowledge management fields has established varied predictors responsible for successful knowledge sharing. These dynamics include: individual trust on fellows, perceptions about the outcomes of knowledge sharing, absorption capacity and learning habits. The other important factors impacting knowledge sharing like; personal experiences, interpersonal relationships, expertise, motivation, and personal and professional backgrounds also cannot be ignored while studying knowledge sharing behavior.

2.3   *LITERATURE FLOW DIAGRAM*

Learning through knowledge sharing

Data

Knowle-dge

Inform-ation

Willingness to share

Absorption capacity

Motivation

Tacit

Wisdom

Trust

Knowledge Management

Explicit

Perception

Technology

2.4   SUMMARY

In the start of literature review knowledge is defined by varied philosophers. Further it is explained with the support of references about the two dimensions of knowledge i.e. tacit and explicit knowledge. Then the advantages of knowledge sharing are discussed with special emphasis on the knowledge management approach which is discussion on transformation process of tacit knowledge into explicit knowledge. Selected predictors and variables are pointed out which the college and university management must understand and manage in respective institutions to manage the knowledge sharing effectively. Also in literature review direct or indirect relationship of various predictors with knowledge sharing behavior in the learning process of the students is to point during their professional development phase while their stay at colleges and universities.

Chapter 3
METHODOLOGY

3.1 INTRODUCTION

Methodology means the selection of correct model out of various choices for planning and implementing for our research. As research had to undergo various activities like preparing appropriate models, case to study, data gathering techniques, format of data analysis selection of correct methodology is most essential step (Silverman, 2006). This chapter explains which research methodology is adopted, the developing research design as well as the methods adopted that are enclosed with the research problem i.e. how varied independent variables sway the learning through knowledge sharing.

The selection had to be made from qualitative and quantitative research in general. The research was conducted on quantitative method with particular discussion on the survey research method. It also explains procedure of data collection and analysis at different phases. Further it delineates the stratagem for ascertaining firmness, trust and fidelity of the research.

Survey research is used: "to answer questions that have been raised, to solve problems that have been posed or observed, to assess needs and set goals, to determine whether or not specific objectives have been met, to establish baselines against which future comparisons can be made, to analyze trends across time, and generally, to describe what exists, in what amount, and in what context." (Isaac & Michael, 1997, p. 136).

We can describe knowledge philosophically into following; in ontology knowledge is what people say about knowledge; in epistemology how people know about knowledge; axiology is what values go into knowledge; rhetoric is how people write about knowledge; and methodology is the procedure to study knowledge (Creswell, 2003: 6).

In literature different terms are used such as, approach, strategy, mode of enquiry, method, technique, and paradigm. In order to establish relationship between these terms philosophers have incorporated research methodologies (qualitative, quantitative), paradigms (positivist, interpretivist,) research methods (survey, case study, experimental research, ethnography, action research, historical research) research techniques (interview, questionnaire, experiment,) with the help of using research instrument (human, pencil and paper etc) (Pickard ,2007), (Walliman,2005). (Kumar, 1999) states that the study can be classified into quantitative, qualitative and mixed approaches. Different theoretical perspectives on this strategy of inquiry e.g. ethnomethodology, ethnography, discourse analysis, grounded theory, narrative analysis, hermeneutics, frame analysis and conversation analysis, phenomenology. The work of (Maione & Chenail, 1999), (Trochim, 2005) and (Denscombe, 2003) avows that qualitative research is a term used for description and interpretation of social phenomenon. They all jointly divide qualitative research approaches into following main approaches phenomenology, ethnography, grounded theory surveys, field research case studies, experiment, internet research, action research.

Quantitative research approach involves deduction i.e. formulation of hypotheses, identification of variables which could measure the objectives and such measurement then used for enquiry. Data collected then used for testing of hypotheses and really describe reality. Finally the results of enquiry are matched with original hypotheses to modify or confirm the theory from which original hypotheses was taken. The main objective of or research conducted through quantitative approach was that our research could be generalized, to be objective and theories could be tested. There are many strategies associated with the quantitative approach. It can be experimental in which researcher act as an active agent involved in manipulation of independent variable and observing effect on dependent variable. In survey strategy cross-sectional and longitudinal studies are conducted by employing questionnaire or structured interviews for data collection from a selected sample of population. This research is carried with the help of survey on cross-sectional and longitudinal method by using questionnaire as data instrument to collect data from students selected as sample population of ten colleges and universities of Lahore, Pakistan.

3.2 PARADIGM

As per the requirements of the research question, Positivism is adopted as research paradigm and philosophical assumption for this study and quantitative approach is implemented as the research philosophical assumption.

In ontology i.e. what is the nature of reality or what knowledge was related to positivism. As research focused on singular reality existing apart from researchers' perception and cultural biases which is objectivism. The research hypothesis that, students learning process sway with the knowledge sharing behavior or not. This study is based on the objective on true reality which exists and governed by unchangeable natural cause effect laws. The research consisted of stable pre-existing patterns or orders that was tried to discover with interaction of participants of the research. The realities of life are not time-nor context bound. The results of the research can be generalized. Further in ontology the human beings behave in a rational way, shaped by external factors which mean that some causes have effects on every one. E.g. motivation, perception, technology have effect on the learning through knowledge sharing. It is also called as mechanical or behaviorist approach. Students which represent people engage in such behavior. Though research findings might be rejected or fail to reject the hypothesis.

In epistemology of positivism the researcher's relationship is defined. In this research distance and impartiality i.e. researcher's objectivity was maintained restricted to data collection through instrument and knowledge was gained through sense and is real.

While analyzing positivism as paradigm, one epistemological question arises about nature of knowledge. In positivism knowledge can be described in a systematic way. It consist the verified hypothesis that can be regarded as factors and laws. If these laws and factors hold true then these laws can implemented on large groups of people in suitable situations. Further Knowledge is accurate and certain.

Regarding the role of theories generated during the research as an epistemological question; theories are normative of nature, present models generate general propositions explaining casual relationships between variables. The theories postulated during the research were tested in order to confirm or reject the theory generated. The theories were also attempted to

be proved from observation and behavior of the respondents. In positivism regarding analyzing theory building, theories were tested in a controlled setting, empirically supporting or falsifying hypotheses through process or experimentation. The role of researcher while conducting research through this paradigm was to uncover reality of natural laws, scientifically explain, describe, predict and to control phenomena. The results of research findings accepted as true if these results can be measured and observed and can be generalized and replicated. Role of common sense is not allowed rather only deductive reasoning is applicable. Deductive thoughts include creation or designing of theory, determining assumptions in relation to that theory and analyzing those assumptions in the face of reality. Deductive approach is the basis of positivist and quantitative research. The assumptions are inferred from a theory and examined in order to prove or disapprove theory.

With regard to philosophical assumption of axiology the researcher focused to eliminate the possibility of bias. In rhetoric philosophical assumption the language of research is data collected through questionnaire and transformed in data analysis through SPSS16. In the methodological philosophical assumption role of researcher is was independent from the subject. During the process of investigation the researcher controlled the investigation. In respect to the role of values in positivism as paradigm, the science is value free, thus values have no place in our research and it remained free from bias. While selecting positivism paradigm, methods must be empirical, observation must be structured and replicable. The variables selected were quantifiable with respect to measurements and experimental measurements directly manipulated variables and observation. The type of studies adopted is survey and field work and collection of data with help of closed ended question for the verification of hypotheses. Data was then passed through statistical analysis using quantitative descriptive studies.

3.3   RESEARCH DESIGN

The research design endows a frame work for the collection and analysis of data. Our research design was based on the following dimensions; that research could express causal connection between variables both between independent variables and dependent variables and also expressed causal connection between independent variables as well.   Research design's other dimension was also kept mind in this research that there must be large number of participants should become the part of investigation. Therefore our research has covered ten major colleges and universities and investigating 1000 participants, so that our research can be generalized. Further it was ensured that the variables selected from the literature to study and understand the behavior of individuals and these individuals understand the problem of learning through knowledge sharing is how important for students during their professional learning process prevailing in the colleges and universities. Yet another dimension was that our research problem accepted and appreciated for its relation with current social phenomena and connected to the lives of participants.

Five different research designs are discussed in literature i.e. quasi-experiments, cross-sectional or social survey design, case study design and comparative design (Creswell, 2003). For our research cross-sectional or social survey design is selected.

Following steps were taken for research design. First of all a sampling plan was developed. In this methodology sample was selected from population. Purpose of sampling plan was to depict procedure by selecting sample, fixing the size of sample and medley of media by which survey will be organized. In our research survey was conducted with the method of distributing questionnaire to the respondents.

Secondly, procedures were adopted for estimation of reliability of population from which the sample data and estimates were obtained. Reliability was a prime issue while conducting qualitative research, as our concern whether a measure is stable or not. During this process response rate and the preferred level of accuracy was identified up to desired requirements for the survey.

Thirdly, inputs acquired from the people and participants through survey by measuring identified variables. Estimates acquired were analyzed with respect to reliability and validity

to ensure the usefulness of the estimates keeping in view resource limitations that might exist during conduct of survey. Validity was concerned with the veracity of conclusions that were produced from research. The major kinds which were ensured during our research were measurement validity, internal validity, external validity, ecological validity. Measurement validity is also known with the name of construct validity. This concept means that the questions asked from the participant are bringing the same concept which is required to ask by the researcher. If measurement validity is not stable then the results become unreliable. The concept of internal validity is also kept in focus in this research. Internal validity relates the issue of casualty i.e. the conclusion derived from the research incorporates causal relationship among the variables is authentic and not formed by anything else.

The issue of external validity is although more important for qualitative research but it is equally significant for quantitative research as well while maximizing opportunity for generating a representative sample. The external validity means that the results can be generalized. It is only possible if careful selection of participants is selected to participate in the research. Regarding ecological validity arises whether or not the findings can be applied to people or not is important for both qualitative and quantitative research.

Further, as mentioned in literature three key elements were kept in mind while developing our research methodology to ensure correctness of our study i.e. sample selection, sample size and survey media. Sample selection was based on population size and similarity index with respect to its characteristic. The participants were selected at random but belong to the required requirements for survey. The population as narrowed down as much as possible to keep the study at level where approximate effect is achieved.

Sample size was carefully selected to acquire degree of precision, suitable size of sample is selected acquire required level of precision to postulate the possibility if Type I error occurs when the null hypothesis is rejected when it is, in fact, true. Secondly to achieve 95% confidence interval sample is carefully selected that the corresponding statistic for the population falls within the specified range of the sample statistic.

Statistical power is researcher's rejection probability of null hypothesis given that the alternate hypothesis is true. If null hypothesis is mistakenly accepted Type II error exists. To

avoid this situation reasonable size of sample is selected. Sample of this research was selected which possessed its mean and variance. Literature states that a good sample must have capability of narrowing the means there by decreasing variance, resultantly reducing the overlap of distributions and providing better statistical results. As far units of analysis were concerned in the research individual students were participants in the survey. The researcher's resources allowed using the choice of questionnaire for survey as it required minimum resources in terms of cost, time and manpower required. Further written survey was adopted to get more pace and prompt response of participants. Other methods like verbal and mixed mode survey methods were not used.

Some disadvantages or problems or errors were seen in the process of written surveys. Written survey was subject to coverage error where population was quite vast and distinctly situated. Written survey also had error of non response. Also it was observed that in written survey the participants referred to others respondents during the filling the questionnaire. Further, item non response error is also observed in the survey method when some or many questions were skipped intentionally of by mistake.

3.4   RESEARCH SITE

The current study was conducted on education sector of Pakistan. Universities are considered as the podium of highest rank where students are admitted to discover the hidden knowledge from the hearts and minds of the most experienced and learned teachers. This exploration of knowledge is only possible when certain fundamental variables are carefully included in the knowledge sharing process which are supported by literature and proved statistically. As per the list of Higher Education Commission (HEC) in Pakistan there are132 institutions recognized of which 73 are public universities and 59 are private universities. The objective of this study was to target prominent educational institutes of Lahore.

In Pakistan's Lahore is famous and known for its educational institutions and is declared as an educational hub. Lahore enjoys privilege of hosting a number of colleges and universities more than any other city in the country. There is a long list of renowned professionals who graduated from educational institutions of Lahore and had served the

nation. Yet many are serving and leading nation currently in fields of engineering, technology, pharmacology, medicine, commerce, languages, literature, IT, biotechnology, nuclear sciences, microelectronics, politics, business, telecommunication and many more. Majority of well reputed universities are in public sector where students prefer to join and start the career. As these public sector institutions have a policy of admission on merit bases therefore a galaxy of brilliant stars of academia is quite visible. In recent years tremendous growth of private universities has also been seen. This new development is hallmarked by scholarly circles as this combination of public private partnership has provided an opportunity for parents to provide their children best education with no excuse. It is imperative to point out that increasing number of students especially in higher education is a healthy sign for society as well. Due to this entire educational environment the literacy rate of Lahore is 74% which is also substantially higher than other cities in higher education. According to Pakistan statistical year book 2003-2004 In Pakistan, the higher education composition of students, is as follows:

Graduations in 2003-2004	
Bachelors	82064
Masters	32892
PhD	294
Total	118056

3.5 POPULATION/SAMPLE

In this study probability sampling specifically Stratified Random Sampling technique was used. Stratification method is used when the population comprises into homogeneous sub-sets. Also when these sub-sets don't overlap each other and called "strata". Generally in strata based sampling subjects can be classified on natural basis with respect to age, education and gender etc. In such setting all groups got equal chance of participation and vigilant selection helps to concluded rationale research findings applicable generally.

Further cautious selection was made for compilation of data from medley of students belonging to varied colleges and universities engaged in different programs. For this purpose students were selected on gender basis with respect to their years of study i.e. below 14 years, above 14 but below 16 years / above 16 years.

Out of many famous institutions the researcher has selected following colleges and universities with a careful selection on the basis of following guide lines.

1. Number of students enrolled in the college and university.

2. Number of course offered in the college and university.

3. Previous academic records and results.

4. Alumni of the college and university.

5. Qualification and experience teaching faculty.

6. Educational infra-structure and facilities provided to the students.

7. Library access with respect to number and availability of books both (text books reference), journals and search engines.

8. Tendency of students using these facilities.

9. Educational environment provided in campus with respect to political, social and extra co-curricular activities.

10. Gender discrimination i.e. male/female class segregation of permission of combine classes.

11. Influence of political parties and pressure groups on the college and university management.

12. Recreational facilities in campus like cafeteria, gymnasium, sports, swimming pool and common room etc.

13. Availability college transport and hostel facilities.

14. Security measures for teachers, students and custodian staff. Display or wearing of college identity cards.

Above mentioned pre-requisites have no direct relation on learning through knowledge sharing but do have a strong indirect relation with our research model. Keeping in view above criteria following blend of public and private colleges and universities of Lahore were selected for our research.

1. University of the Punjab
2. Comsats
3. LUMS
4. National College of Arts
5. Garrison College
6. Skans
7. Fast
8. University of Engineering and Technology
9. Lahore School of Economics
10. University of South Asia

3.6   STRATEGY OF INQUIRY

While developing the instrument for survey, the study focused on clear objectives of translating the variables in to measureable factors. The researcher ensured that at any point the spirit of the topic is not neglected. Consistency in administrating the survey was also focused. The instrument developed has all qualities of a good instrument like, help full in quality data collection, helpful in data processing and afterwards conducive for data analysis.

It was made sure that such questions must be designed that it could produce answers something reliable and valid. The wording used was easily understood by participants according to the educational level. Also the response given by the respondents must be clear. Unclear and ambiguous statements were not included in the instrument which could create any problem of understanding for the participants. The instrument developed fulfilled all civil and ethical requirements and included such questions which the respondents should be willing to answer with no hesitation. Biased wording, acronyms, abbreviations etc were not used. Precaution were taken while drafting the instrument that similar questions were not used in the beginning and same at the end this could lead to difficult situation because respondent might answer differently. No personal, objectionable and difficult analogies were included in the instrument. While drafting the questionnaire length was also considered that it should not look a time consuming activity for the respondents. For data collection a variety of instruments can be employed like questionnaires, interviews and focus groups. For this particular research questionnaire was used to collect data containing questions easily understandable for the participants. Few minutes were required by the respondents and any ambiguity or confusion arisen at the time of filling the questionnaire was discussed and clarified on spot.

Close-ended questions were used so that respondents could answer the questions quickly after examining individual responses with available choices. To facilitate this process Five point Likert scale was used. This process provided respondents an easy way to answer the question which in return helped researcher to analyze the data.

The other kinds of close ended question with unordered choices and partial closed-ended question were not used. In unordered choices respondent had to answer after comparing possible responses and select one so to answer multiple choice questions. This tool is useful when researcher wants rank items in order of preference.

In third type of closed-ended question in which the respondent is asked to compare possible responses and select one, or write in other. It is observed that most respondents choose one of the given responses when this type of question is presented.

Closed-ended questions are divided in further kinds as; questions that describe and evaluate people, places, and events; for measuring responses to ideas, analyses, and proposals; and questions for measuring knowledge.

3.7 MEASUREMENT OF QUESTIONS

Literature suggests Evaluative continua and Agreement continua used in closed ended questions regarding describing and evaluating people, place and events. Evaluative continua are adjectival or numerical scales. Ideally suited multiple choice questions with five to seven response options are offered. The problem might arise if respondent misinterpreted numerical scales. Then the whole research could fail. For this research Agreement continua was used. In this, respondents were simply required to respond to questions with agree or disagree to given statements. These scales were easy for respondents to understand and answer.

To measure knowledge, question is often used to evaluate respondents' acquaintance with a topic, to measure respondents' capability to provide informed responses about a said knowledge already available with the respondent. This method is to identify these responses with the help of "true" and "false" or "yes" and "no" format. Some times researcher mix or intentionally add some possible or incorrect answers to check the correct knowledge with responses.

The research is to measure responses to Ideas, analyses or proposals, therefore, **such** type of question asked by respondents to compare their own views with the views of the researcher in the questionnaire in shape question statement. Therefore clear and unambiguous questions are developed by carefully presenting one idea at a time by using contents like "strongly agree", "agree", "neutral", "disagree" and "strongly disagree". However work of (Flower, 1995) suggests that emotional contents like "strongly" should be replaced by "completely", "generally", or "mostly" instead. In this research five point Likert scale is used to collect the responses.

3.8   IMPORTANT TASKS BY RESPONDENTS

There were some important tasks required to be performed by respondents during survey while answering a survey question. The first question understands that the respondent must comprehend what the researcher is inquiring and what information will be best to meet the survey.

The second is response formulation that respondents have a propensity to make new verdict as that is previous judgments need some adjustment while answering the question.

The third task of the respondent was corresponding ability to the researcher. As it was observed that respondent only make a response that fits the given options directly or sometimes intentionally or unintentionally change the answer keeping in view the political or social norms.

3.9   PROBLEMS AND ERROR IN SURVEY

The literature as well as our research identified some problems of biases related with the respondent. First, as a survey was generally conducted outside the daily schedule many participants felt themselves important and behaved differently as observed in study of Hawthorne Works of the Western Electric Company 1927. Respondents, simply being aware of importance of study, answer differently as per normal routine. Secondly, sometimes respondents eagerly approved and go with positively-worded questions. Further it was observed that respondents' answer high or low rating this disturbs validity of the results.

In our research, execution was the third phase of survey process. In this phase individual responses and reporting survey results were kept confidential. Further voluntary participation of respondents was ensured as an ethical consideration without undue pressure. A pilot study was also conducted in University of the Punjab to ensure validity before actual survey was conducted. The study was published with the title of "**Causative Factors and Predispositions Sway Learning Process Through Knowledge Sharing Behavior Among Students: A pragmatic study of Punjab University**" in the *Interdisciplinary Journal of Contemporary Research in Business, UK. Vol.2 (8) December 2010*. In this research paper

independent variables of absorption capacity, perception, willingness to share and trust were discussed their relationship with dependent variable learning through knowledge sharing. Further the concept was researched and published with title "**Knowledge sharing behavior of the students: comparative study of LUMS and COMSATS"Arabian** *Journal of Business and Management Review (Oman chapter)* **September issue** *Vol 1 (2)***.** The topic of research was also been accepted for presentation **in** *4th World Conference on Educational Sciences University of Barcelona, Barcelona - Spain 02-05 February, 2012***.** To conduct Then surveys results were analyzed to divulge probable relationships among the responses to make sure reliability of respondent characteristics across questions with the help of SPSS 16 quantitative techniques and analysis.

3.10 METHOD

The data was collected with lot of effort and hard work. The researcher had to visit ten different universities and colleges, further approaching students studying in different departments. It took almost two and half months to collect data. 1000 questionnaires were distributed among 1000 students. In many cases, questionnaires were delivered to the participants in first meeting and collected in next meeting. Sometimes researcher had to visit twice. Another difficulty faced in data collection process, many students did not show any interest in research. Some students were observed filling without paying proper attention or returning questionnaire incomplete. The researcher had wait for many hours to receive completed instruments. To get valid and reliable results this effort was mandatory. Two out of ten students accepted to participate in the research process.

On contrary many interested participants showed keen interest and asked for brief introduction about the aims and objectives of study. For many students learning through knowledge sharing was a new concept. As students had only interaction with teachers and information is passed on with the help of books. Due to awareness about importance of research these students became a good source of data collection. With little instructions researcher managed to obtain data. The research was completed by using both primary and

secondary resources to conduct research. Primary data means data which is gathered by approaching the students visiting their respective colleges and universities for filling of questionnaire.

For examination of the data collected SPSS 16 soft ware as used by running the findings of questionnaires through Descriptive Statistics, Histogram, Scatter plots, Pearson Correlation, Regression with regression equations and One Sample Test. This helped researcher to scrutinize the impact of independent variables like trust, perception, and willingness to share, absorption capacity, motivation and technology on learning through knowledge sharing behavior as dependent variable. Pearson Correlation is used on the research data to see that variables are related in a linear straight line, to find out and indicate the associations among all the pairs of three or more variables. Pearson Correlation and Spearman rho were two options. We selected Pearson Correlation as our variables are scale, where as Spearman is used when variables are ordinal Further Bivariate regression is used to predict scores on dependent variable from other independent/predictor variables. To measure complex associational statistic, multiple regression is run to predict a scale/dependent variable from two or more independent variables.

3.11   VALIDITY AND RELIABILITY

For the rationale of data collection, a questionnaire was so premeditated by the researcher in which close-ended questions were prepared. Five-point Likert Scale was employed in questionnaire. The questionnaire consisted of 27 items representing with the following detail. Learning through knowledge sharing as dependent variable (17, 19, 20, 21, 22)

(17)   Sharing knowledge is interesting for me.

(19)   I learn new things with an intention to share with others.

(20)   I share my knowledge with people so that I also may learn something new.

(21)   I often share my knowledge with an intention of increasing the others' knowledge.

(22)   I believe that sharing knowledge also increases the wisdom.

Trust (1, 2, 3, 4)

(1)   I share my knowledge with the only fellows I trust.

(2)   I just share ordinary things with common students.

(3)   I can share important information with the students I don't know before.

(4)   I also share my personal experiences with my trustworthy colleagues. (Fellow)

Perception (12, 13,14,16,18)

(12)   I share with others only the information that is less important.

(13)   I can help my fellows with my knowledge even in the period of exams.

(14)   I never share my knowledge with my competitors.

(16)   I share the things that I consider important.

(18)   I think, there should be something new to share.

Willingness to share (5,6,11,15)

(5)   I share my knowledge even with the fellows I don't like.

(6)   I only share when I am asked to.

(11)   I am always ready to share what I know.

(15)   I want to be approached rather than I voluntarily share my knowledge with other   fellows.

Absorption capacity (7,8,9,10)

(7)   I often share whether others require it or not.

(8)   I share with one who can understand me quickly.

(9)   I don't care whether others want to learn or not.

(10)   I even share knowledge with my colleagues who have less information about the topic.

Technology (23, 24,25)

(23)   Use of modern technology can help me to share my knowledge with others.

(24)   Ease to access to technology can be helpful for knowledge sharing.

(25)   There must be proper concealing for the use of modern technology.

Motivation (26, 27)

(26)   Motivational behavior of teachers can also motivate me to share my knowledge with others.

(27)   My inner drive and feeling helps me to share my knowledge with others.

Table.1

Reliability Statistics

Cronbach's Alpha	N of Items
.778	7

The Reliability Statistics table provides the Cronbach's Alpha (.78) which is positive and alpha based on standardizing the items (.70). The results of this data are acceptable because it is more than (.70). Therefore we can say that internal consistency reliability of the items provides good support for research literature.

3.12   ANALYSIS PROCEDURE

1000 questionnaires were distributed to the target participants of ten selected colleges and universities. Mixed response was observed from the student's many enthusiastically participated in the research process and answered the questionnaire with keen interest and diligence and a few showed little interest in the research. Out of 1000 questionnaires 753 were received complete in all respect and were used for the research. It can be observed from the

table below that, 491 male students' 65.1 % and 262 female students which constitute 34. 7% participated in the study which returned questionnaire completely. Interestingly female students seem to be shy or reluctant in responding the research.

3.13 MEASUREMENT

TABLE.2

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	491	65.1	65.2	65.2
	Female	262	34.7	34.8	100.0
	Total	753	99.9	100.0	
Missing	System	1	.1		
Total		754	100.0		

Table.3

Qualification of the students

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less 14 year	106	14.1	14.1	14.1
	14-16	348	46.2	46.2	60.3
	more than 16	298	39.5	39.6	99.9
	4	1	.1	.1	100.0
	Total	753	99.9	100.0	
Missing	System	1	.1		
Total		754	100.0		

It is interesting to note from the table that 298 students belonged to the group of students having education more than 16 years. Further the combined response of students in more than 16 years which is 75.7%. This interesting fact strengthens the importance that students realize the significance of research problem.

3.14 SUMMARY

In this chapter methodology was discussed at length selected for planning and implementing for the research. Various activities imperative for research like preparing appropriate models, case to study, data gathering techniques, format of data analysis, selection of correct research methodology, the developing research design, methods adopted that are enclosed with the research problem i.e. how varied independent variables influence the learning through knowledge sharing. Selection made from qualitative and quantitative research in general as the research was conducted on quantitative method with particular discussion on the survey research method. It also explains procedure of data collection and analysis at different phases. Further it delineates the stratagem for ascertaining firmness, trust and fidelity of the research.

In this chapter Positivism is discussed as it is adopted as research paradigm and philosophical assumption for this study. The quantitative approach is implemented as the research philosophical assumption with respect to ontology, epistemology, axiology, rhetoric, methodological philosophical assumption as values in positivism paradigm. While discussing our research design following dimensions; that research could express causal connection between variables both between independent variables and dependent variables. Therefore our research has covered ten major colleges and universities and investigating 1000 participants, so that our research can be generalized. For our research cross-sectional or social survey design is selected. Following steps were taken for research design. First of all a sampling plan was developed. Secondly, procedures are adopted for estimation of reliability of population from which the sample data and estimates are obtained. Thirdly, inputs acquired from the people and participants through survey by measuring identified variables. Estimates acquired were analyzed with respect to reliability and validity. The major kinds of validity are conferred i.e. measurement validity, internal validity, external validity, ecological validity. As per selecting sample for research Stratified Random Sampling technique was used. For this purpose students of colleges and universities were selected on gender basis with respect to their years of study i.e. below 14 years, above 14 but below 16 years / above 16 years. Five

point Lickert scale questionnaire with Agreement continua for this research was used. In this, respondents were simply required to respond to questions with agree or disagree to given statements. These scales were easy for respondents to understand and answer. For examination of the data collected SPSS 16 soft ware as used by running the findings of questionnaires through Descriptive Statistics, Histogram, Scatter plots, Pearson Correlation, Regression with regression equations and One Sample Test.

Chapter 4

ANALYSIS AND RESULTS

4.1   INTRODUCTION

In the preceding chapter of research methodology, the research procedure, instrument for the data collection and its analysis was thrashed out for the rationale to discern the consequence on the dependent variable learning through knowledge sharing in various universities of Lahore Pakistan.

The analysis and interpretation of the data is pedestal on these variables, independent variable i.e. : Knowledge Management, absorption capacity, trust, willingness to share, perceptions about knowledge sharing, motivation and technology and dependent variable is learning through knowledge sharing behavior. The data was collected through personally administered questionnaire of 27 statements and distributed and collected from 1000 students of eight public and private universities by the researcher. Out of which 753 questionnaires were found complete in all respect and used for data analysis. The statements of questionnaire were transformed into five-point Likert Scale. Afterwards data so collected was entered into the statistical software of SPSS to be analyzed for further study and recommendations. The analysis of data so obtained was presented in the form of tables and diagrams. Pearson Correlation and Regression analysis was performed to discover the relationship of dependent variables with identified independent variables. One Sample Test was also use applied to witness as to what degree the target population has responded to our questions.

4.2   ANALYSIS AND RESULTS

TABLE.4

Descriptive Statistics

	Mean	Std. Deviation	N
learning through knowledge sharing	3.6884	.70920	753
Trust b/w teacher student	2.9702	.69097	753
willingness to share	3.1875	.60070	753
absorption capacity	3.1421	.64210	753
Motivation	3.8134	.87749	753

Table.4 provides descriptive statistics for the variables learning through knowledge sharing behavior, trust, willingness to share, absorption capacity and motivation.

4.2.1 PEARSON CORRELATION

TABLE.5

Correlations[a]

		learning through knowledge sharing	Trust b/w teacher student	Willingness to share	Absorption capacity	motivation
learning through knowledge sharing	Pearson Correlation	1	.076[*]	.283[**]	.144[**]	.526[**]
	Sig. (2-tailed)		.037	.000	.000	.000
Trust b/w teacher student	Pearson Correlation	.076[*]	1	.226[**]	.199[**]	.079[*]
	Sig. (2-tailed)	.037		.000	.000	.030
willingness to share	Pearson Correlation	.283[**]	.226[**]	1	.209[**]	.204[**]
	Sig. (2-tailed)	.000	.000		.000	.000
absorption capacity	Pearson Correlation	.144[**]	.199[**]	.209[**]	1	.137[**]
	Sig. (2-tailed)	.000	.000	.000		.000
Motivation	Pearson Correlation	.526[**]	.079[*]	.204[**]	.137[**]	1
	Sig. (2-tailed)	.000	.030	.000	.000	

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations[a]

		learning through knowledge sharing	Trust b/w teacher student	Willingness to share	Absorption capacity	motivation
learning through knowledge sharing	Pearson Correlation	1	.076[*]	.283[**]	.144[**]	.526[**]
	Sig. (2-tailed)		.037	.000	.000	.000
Trust b/w teacher student	Pearson Correlation	.076[*]	1	.226[**]	.199[**]	.079[*]
	Sig. (2-tailed)	.037		.000	.000	.030
willingness to share	Pearson Correlation	.283[**]	.226[**]	1	.209[**]	.204[**]
	Sig. (2-tailed)	.000	.000		.000	.000
absorption capacity	Pearson Correlation	.144[**]	.199[**]	.209[**]	1	.137[**]
	Sig. (2-tailed)	.000	.000	.000		.000
Motivation	Pearson Correlation	.526[**]	.079[*]	.204[**]	.137[**]	1
	Sig. (2-tailed)	.000	.030	.000	.000	

*. Correlation is significant at the 0.05 level (2-tailed).

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

a. Listwise
N=753

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In Table 5 the Pearson Correlation coefficient is .77; the significance level (sig) or p is .037 and the number of participants of both variables (learning through knowledge sharing behavior and trust) is 753. The correlation between (learning through knowledge sharing behavior and trust)is not statistically significant because the "sig" is more than .05. Thus, we can accept the null hypothesis of no relationship and state that there is no systematic association between (learning through knowledge sharing behavior and trust). Therefore we could not predict anything about (learning through knowledge sharing behavior and trust).

The Pearson Correlation coefficient is .283; the significance level (sig) or p is .000 and the number of participants of both variables (learning through knowledge sharing behavior and willingness to share) is 753. The correlation between (learning through knowledge sharing behavior and willingness to share) is statistically significant because the "sig" is less than .05. Thus, we can reject the null hypothesis of no association and state that there is an association between (learning through knowledge sharing behavior and willingness to share). In non technical language students who show more willingness to share knowledge, they learn more through knowledge sharing process. As the correlation is positive this means that higher the willingness to share knowledge higher will be the learning through knowledge sharing and vice versa. In this case the correlation is .28, so, using Cohen,s (1988) guidelines the effect size is medium for studies in this area.

The Pearson Correlation coefficient is .144; the significance level (sig) or p is .000 and the number of participants of both variables (learning through knowledge sharing behavior and absorption capacity) is 753. The correlation between (learning through knowledge sharing behavior and absorption capacity) is statistically significant because the "sig" is less than .05. Thus, we can reject the null hypothesis of no association and state that there is an association between (learning through knowledge sharing behavior and absorption capacity). In non technical language students who possess more absorption capacity, they learn more through knowledge sharing process. As the correlation is positive this means that higher the absorption capacity higher will be the learning through knowledge sharing and vice versa. In this case the correlation is .14.

The Pearson Correlation coefficient is .526; the significance level (sig) or p is .000 and the number of participants of both variables (learning through knowledge sharing behavior

and motivation) is 753. The correlation between (learning through knowledge sharing behavior and motivation) is statistically significant because the "sig" is less than .05. Thus, we can reject the null hypothesis of no association and state that there is an association between (learning through knowledge sharing behavior and motivation). In non technical language students who are more motivated to acquire knowledge, they learn more through knowledge sharing process. As the correlation is positive this means that more the students are motivated higher will be the learning through knowledge sharing and vice versa. In this case the correlation is .52.

Table.6

Descriptive Statistics

	Mean	Std. Deviation	N
learning through knowledge sharing	3.6884	.70920	753
Technology	3.8588	.79168	753
Perception	3.2271	.54666	753

Table.6 provides descriptive statistics for the variables learning through knowledge sharing behavior, technology and perception.

Table.7

Correlations^a

		learning through knowledge sharing	Technology	Perception
learning through knowledge sharing	Pearson Correlation	1	.549**	.265**
	Sig. (2-tailed)		.000	.000
Technology	Pearson Correlation	.549**	1	.221**
	Sig. (2-tailed)	.000		.000
Perception	Pearson Correlation	.265**	.221**	1
	Sig. (2-tailed)	.000	.000	

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

a.
Listwise
N=753

In Table 7 The Pearson Correlation coefficient is .549; the significance level (sig) or p is .000 and the number of participants of both variables (learning through knowledge sharing behavior and technology) is 753. The correlation between (learning through knowledge sharing behavior and technology) is statistically significant because the "sig" is less than .05.

Thus, we can reject the null hypothesis of no association and state that there is an association between (learning through knowledge sharing behavior and motivation). In non technical language students believe that technology and availability of new dimensions and facilities used process of learning through knowledge sharing. The more the use of modern technology is used the more there will be increase in the learning through knowledge sharing and vice versa. In this case the correlation is .53, so, using Cohen,s (1988) guidelines the effect size is medium for studies in this area. The Pearson Correlation coefficient is .265; the significance level (sig) or p is .000 and the number of participants of both variables (learning through knowledge sharing behavior and perception) is 753. The correlation between (learning through knowledge sharing behavior and perception) is statistically significant because the "sig" is less than .05. Thus, we can reject the null hypothesis of no association and state that there is an association between (learning through knowledge sharing behavior and perception). In non technical language students believe that perception and awareness about the subject leads to better learning through knowledge sharing. The more the students get aware of knowledge the more learning through knowledge sharing and vice versa. In this case the correlation is .27.

4.2.2 MULTIPLE REGRESSIONS

We have used multiple linear regressions which is a generalization of simple linear regression where several predictor variables are allowed on a right hand side. Learning through knowledge sharing is taken as response, outcome or dependent variable, whereas willingness to share, perception, technology, motivation, trust and absorption capacity are used as explanatory, predictor or independent variables. The systematic part of our model consists of (Learning through knowledge sharing) as constant term and rest are other predictor variables mentioned above are regarded as fixed (non-random or exogenous).

Table.8

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.648[a]	.420	.416	.54177

a. Predictors: (Constant), motivation, perception, willingness to share, technology

In Table 8 The Model Summary table shows that the multiple correlation coefficient (R), using motivation, perception, willingness to share, technology as predictors simultaneously, is .65 and Adjusted R^2 is .416, meaning that 41% of the variance in learning through knowledge sharing can be predicted from the combination of motivation, perception, willingness to share, technology. Note that adjusted R^2 is lower than unadjusted R^2 (.42). This is in part related to the number of variables in the equation. Further Table 8 shows the dependence of Learning through knowledge sharing (dependent variable) on willingness to share, perception, technology, motivation (independent variable). R value of .64 shows the goodness of the model. Regression analysis shows that 42% change in dependent variable is due to the independent variable, while remaining 36% is the unexplained variability.

Table.9

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	*Regression*	*158.678*	*4*	*39.670*	*135.152*	*.000ᵃ*
	Residual	219.551	748	.294		
	Total	378.229	752			

a. Predictors: (Constant), motivation, perception, willingness to share, technology

b. Dependent Variable: learning through knowledge sharing

In Table 9 of ANOVA table shows that F = 135.152 and is statistically significant. This indicates that the predictors   combine together to predict learning through knowledge sharing. Also model is considered to be good fit if significance value falls between0% to 5%. In Table 9 shows the sig value of .000 which means that relationship between Independent and dependent variable is highly significant hence the model is good fit.

Table.10

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	.562	.160		3.5 26	.00 0
willingness to share	.127	.035	.107	3.6 67	.00 0
perception	.179	.038	.138	4.7 56	.00 0
technology	.296	.030	.330	9.9 91	.00 0
motivation	.263	.026	.326	10. 095	.00 0

Table 10 signifies Regression coefficients i.e. Beta (β) of willingness to share with Learning through knowledge sharing is .127 with significant value .000 which shows positive and significant relationship between Learning through knowledge sharing and willingness to share. Regression coefficients i.e. Beta (β) of perception with Learning through knowledge sharing is .179 with significant value .000 which shows a positive and significant relationship

between perception and Learning through knowledge sharing. Regression coefficients i.e. Beta (β) of technology with Learning through knowledge sharing is .296 with significant value .000 which shows a positive and significant relationship between technology and Learning through knowledge sharing. Regression coefficients i.e. Beta (β) of motivation with Learning through knowledge sharing is .263 with significant value .000 which shows a positive and significant relationship between motivation and Learning through knowledge sharing.

So:

$$X = \alpha + \beta_1 Y_1 + \beta_2 Y_{2+} \beta_3 Y_3 + \beta_4 Y_4$$

Where

X= Learning through knowledge sharing

Y_1=willingness to share

Y2= perception

Y3=technology

Y4= motivation

$$X \quad = \quad .562 + .127\,Y_1 + .179 y_2 + .269 y_3 + .263\,Y_4$$

We see that learning through knowledge sharing is expected to increase by .127 if willingness to share increases by 1. Learning through knowledge sharing is expected to increase by .179 if perception increases by 1. Learning through knowledge sharing is expected to increase by .269 if technology increases by 1. Learning through knowledge sharing is expected to increase by .263 if motivation increases by 1. The standard errors of the regression coefficients are fairly small, indicating that coefficients are have been estimated fairly precisely.

Table.11

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.144[a]	.021	.020	.70224

a. Predictors: (Constant), absorption capacity

The Model Summary table 11 shows that the multiple correlation coefficient (R), using absorption capacity .14 and Adjusted R^2 is .020, meaning that 14% of the variance in learning through knowledge sharing can be predicted from the absorption capacity. Note that adjusted R^2 is lower than unadjusted R^2 (.21). This is in part related to the number of variables in the equation. Further Table 11 shows the goodness of model fit with R square value of .020 that is less than 0.005. Regression analysis shows that 14% change in dependent variable is due to the independent variable.

Table 12

ANOVA^b

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	7.883	1	7.883	15.984	.000ᵃ
Residual	370.347	751	.493		
Total	378.229	752			

a. Predictors: (Constant), absorption capacity

b. Dependent Variable: learning through knowledge sharing

The ANOVA in table 12 shows that F = 15.984 and is statistically significant. This indicates that the predictors   of absorption capacity to predict learning through knowledge sharing. Also model is considered to be good fit if significance value falls between0% to 5%. The above table reflects the significance of independent variable, Absorption Capacity on the overall model, as the value of significance is .000 it can be concluded that this variable has a strapping impact on learning through knowledge sharing which means that relationship between Independent and dependent variable is highly significant hence the model is good fit.

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Table.13

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	3.187	.128		24.922	.000
absorption capacity	.159	.040	.144	3.998	.000

a. Dependent Variable: learning through knowledge sharing

Table 13 signifies Regression coefficients i.e. Beta (β) of absorption capacity with Learning through knowledge sharing is .159 with significant value .000 which shows positive and significant relationship between Learning through knowledge sharing and absorption capacity. So:

$$X = \alpha + \beta_1 Y_1$$

Where

X= Learning through knowledge sharing

Y_1=Absorption capacity

$$X \quad = \quad .562 + .159 \, Y_1$$

We see that learning through knowledge sharing is expected to increase by .159 if Absorption capacity increases by 1. The standard errors of the regression coefficients are fairly small, indicating that coefficients are have been estimated fairly precisely.

Table.14

Model Summary

Model R	R Square	Adjusted R Square	Std. Error of the Estimate
1 .076ª	.006	.004	.70762

a. Predictors: (Constant), Trust b/w teacher student

The Model Summary in table 14 shows that the multiple correlation coefficient (R), using trust is .076 and Adjusted R^2 is .004, meaning that 1% of the variance in learning through knowledge sharing can be predicted from the trust. Note that adjusted R^2 is lower than unadjusted R^2 (.006). This is in part related to the number of variables in the equation. Further the table shows the goodness of model fit with R square value of .006 that is less than 0.005. Regression analysis shows that 1% change in dependent variable is due to the independent variable.

Table.15

ANOVA[b]

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	2.189	1	2.189	4.371	.037[a]
Residual	376.041	751	.501		
Total	378.229	752			

a. Predictors: (Constant), Trust b/w teacher student

b. Dependent Variable: learning through knowledge sharing

The ANOVA in table 15 shows that F = 4.371 and is statistically significant. This indicates that the predictors   of trust to predict learning through knowledge sharing. Also model is not considered to be good fit as significance value does not falls between0% to 5%.

Table.16

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	3.457	.114		30.352	.000
Trust b/w teacher student	.078	.037	.076	2.091	.037

a. Dependent Variable: learning through knowledge
sharing

      Table 16 signifies Regression coefficients i.e. Beta (β) of trust with Learning through knowledge sharing is .078 with significant value .037 which does not shows significant relationship between Learning through knowledge sharing and trust.

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4.2.3 ONE SAMPLE TEST

TABLE.17

One-Sample Test

	Test Value = 3				95% Confidence Interval of the Difference	
	T	Df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Trust b/w teacher student	-1.182	752	.237	-.02977	-.0792	.0197
willingness to share	8.564	752	.000	.18747	.1445	.2304
absorption capacity	6.073	752	.000	.14210	.0962	.1880
learning through knowledge sharing	26.638	752	.000	.68845	.6377	.7392
Perception	11.399	752	.000	.22709	.1880	.2662
Technology	29.767	752	.000	.85879	.8022	.9154
Motivation	25.437	752	.000	.81341	.7506	.8762

Table 17 show the level at which different independent factors affect the process of learning through knowledge sharing of students studying various the private and public universities of Lahore. All of these independent variables of the current study were tested at test value of 3 in One-Sample Test.

The results showed that

4.8.1   T- Value of trust is -1.182 which is negatively related to learning process with insignificant value of .237 which shows that students did not considered trust as an imperative and significant independent variable important for the process of learning.

4.8.2   T- Value of willingness to share is 8.564 with significant value of .000 which shows that students have declared that willingness to share is an essential ingredient necessary for knowledge sharing. The students have clear perspective that learning process could not be completed without the willingness of sharing from both sides i.e. teachers and students. The efficiency of students fairly improves when they attentively and willingly listen lectures and attain knowledge.

4.8.3   T- Value of absorption capacity internal audit is 6.073 with significant value of .000 which shows that students s strongly believe that absorption capacity is one of key elements in due course of knowledge. Without such an attribute there is rare possibility of positive and strong knowledge sharing activity. Therefore absorption capacity becomes an essential factor responsible for learning through knowledge sharing and is reviewed students.

4.8.4   T- Value of learning through knowledge is 26.63 with P value of .000 which shows that the respondents have agreed with the literature that learning through knowledge sharing is one of the most successful processes in due course teaching. The students' when ever carefully attend lecture the learning is achieved more than the reading of books or written material. A relationship between teacher and student is important so that knowledge can pave its way to the minds and soul of the students there by increase the cerebral and intellectual capital of the youth.

4.8.5   T- Value of perception is 11.39 with P value of .000 which also shows that students support perception as one of major independent variable without which learning through knowledge sharing could not be possible. Awareness about the subject and knowledge increase the interest of teacher to teach and for students to get knowledge. For consistent and sustainable achievement of the results perception is needed to be increased so that students could develop a competitive edge over other students.

4.8.6   Value of technology is 29.76 with P value of .000 which shows that there is clearly defined role of technology is present in the minds of students. Knowledge sharing in

current milieu not possible without the use of state of the art teaching aids e.g. use of multimedia, sound systems, video conferencing, expert databases, email, chat room, bulletin boards and discussion group to communicate information, networking, individual facility of computer terminals, internet browsing and much more to share explicit and tacit knowledge. The process of learning through knowledge sharing also speeds up when knowledge available in shape of soft form can be directed towards the students easily and swiftly with the help of technology. Policy makers and think tanks need to adapt technology in universities and colleges to augment the learning through knowledge sharing.

4.8.7 T- Value of motivation 25.437 with P value of .000 which shows that students have also favored the independent variable of motivation as factor which complements the process of learning through knowledge sharing. Teacher's role mentor and coach have been seen in the research. Students believed that it is the teacher who guides and opens the door of knowledge which leads to success. Although teacher could only open a door of information, acquaintance and awareness and rest effort has to be taken by the student. The research depicts that motivation is a catalyst to be added by teacher during the learning through knowledge sharing process.   Proper training programs, workshops, seminars, debates, interaction of students with successful businessmen and people with dignified career surely help the students to be motivated and learn through knowledge of such individuals.

Chapter 5
CONCLUSION & RECOMMENDATIONS

5.1   CONCLUSION

This Endeavour is conducted to implore that what predispositions and factors have capacity to sway the learning through knowledge sharing process in the students studying at college and university level. Being a qualitative research it was difficult to transform the variables of trust, willingness to share, absorption capacity, learning through knowledge sharing, perception, technology and motivation. With the help of carefully designed self-administrated questionnaire the researcher could acquire the required information and extract the results with the help of latest statistical tools and techniques.

There results of research unfolded new realities before the researchers that variable like trust did not turned to be an imperative ingredient in learning process. This needs attention of the concerned authorities that measures are needed to taken for the development and initiation among the students such that trust also can be reflected as an essential factor in the learning through knowledge sharing model.

5.2   SUGGESTIONS AND RECOMMENDATIONS

1. The research specifies that knowledge about a particular subject makes a teacher an ideal teacher for the students. The more the capability and potential of teacher to know subject the better command will a teacher get to communicate his knowledge and experience clearly.

2. The university authorities must ensure that the teaching faculty in order to develop trust and motivation among students must reply and give proper explanations to

questions asked by students. This feature augments the interest of students and helps increase learning process. A teacher having qualities of being friendly, patient with good sense of humor are seen more successful among the knowledge sharing process. Fair grades is another factor that the university authorities must think because according to our findings if students are not fairly marked they get de-motivated and learning process through knowledge sharing somehow seems to be stand still.

3. Learning through knowledge sharing is also decisively linked with performance and knowledge of the faculty. In the research it is observed that students actually consider university teaching very seriously and they believe that this learning process more or less surly going to impact their professional life. They also consider their experience in university helps to strengthen their skills to be used in future during their practical life. As our title suggests the professional learning of students through knowledge sharing. So it is recommended that university management must not over look this requirement of students and all facilities such as workshops addressed by professional, study tours to various organizations and seminars must be arranged to motivate students.

4. It is recommended after outcomes of our research that student in their initial years seek knowledge by lecturers. If these lectures are unable to provide knowledgeable content through highly experienced faculty then the enthusiasm an trust is seem to be dwindled. Students trust and willingness to acquire knowledge can only be achieved amicably by excellent organized teaching full of knowledge skills.

5. It is recommended on the basis of finding of study that motivation in students helps to get good marks and grades in their assessments, tests and exams. The university management must ensure to their teaching faculty that lecturers experience, enthusiasm and positive behavior helps motivate students. Further these expertises are imperative for learning process. Also students believe that university education is a door step for higher studies and development of career.

6. The use of technology is strongly recommended in the process of knowledge sharing. Teachers using variety of teaching instruments, tools, facilities and teaching methods add willingness to share knowledge and boosts trust of students. Student's observation

and attention is prime requirement in class by any teacher. It can easily be achieved by adopting careful use of technology. Many students are not found attentive because of poor visibility of White/black boards, poor or improper voice quality, improper heating or cooling facilities. It is observed that institutions are paying attention on these basic facilities but use of latest technology is still not used because of financial constraints. If latest techniques are employed students will surely get involved on the learning process through knowledge sharing.

7. It is suggested that quick learning process is also associated with time management. Students are observed that if they feel that their time is wasted or their time is not appropriately utilized. They lose trust and attention in the lecture. A pre calculated and well prepared lecture equipped with right direction speeds up the learning process. So it is recommended that lecture plans can be implemented in advance by teaching faculty so as to know what is to be delivered on a particular day, week and month or during the semester or annual term. Some home work and preparation is observed by teaching faculty but it is not that significant which could robust an impressive effect on students to motivate or build trust to enhance learning process.

8. The research also recommends that students trust can be attained by inculcating the feeling of achievement, a sense of security, satisfaction, a conducive atmosphere for learning and free and impartial environment to share their knowledge. A pleasure-seeking learning milieu of learning can relax students and teaching faculty to feel safe in learning process. Such a facility relies on the shoulders of universities higher management by providing an atmosphere free from political and social interferences.

9. It is further recommended from results of research that if learning process through knowledge sharing is improved students feel satisfied and they enjoy their life in university as well as when they are away from campus. Quick learning process provides an opportunity for students to spend their time with their families and loved ones. Therefore, more and more study tours are highly recommended for students during their stay in universities and colleges. This healthy activity plays as a role of catalyst in learning process, helps to strengthen trust between teaching faculty and students and motivates to acquire knowledge in duration of studies.

10.   Since students are sentient that after completion of their studies they have to serve society and they are going to influence or become part of decision making process of organizations, therefore it is also recommended that professional qualification, values and must be included in the learning process through knowledge sharing. This can be achieved by strict observance of timetable, conducting tests, exams, assignment submission dates on time etc. Teaching members with the support of management impose penalties, fines and detentions, punishments for any misconduct or failure. This policy must be ensured and applied with no exception because it is observed that if such policies are not applied uniformly, students and teaching faculty get de-motivated and lose confidence on the system and prime objective of learning through knowledge sharing during studies is not achieved.

5.3   *LIMITATIONS AND DIRECTIONS FOR FURTHER RESEARCH*

1.   This research is an explorative research conducted with the view to study in depth the important constructs of learning through knowledge sharing behavior. The independent variables of perception, willingness to share, trust, absorption capacity, motivation and technology are studied to find any relationship and significance. Trust has been found showing negative relationship with dependent variable. Further research studies can include more detailed dimensions of trust by exploring ability to trust, benevolence, integrity and trustors propensity. These proposed dimensions of trust can help to study learning through knowledge sharing with a different perspective.

2.   The research is only conducted on student's point of view. The questionnaire can be developed for teaching faculty and university higher management as well as to explore how learning through knowledge sharing can be improved with the contribution of these factors.

3.   Further studies can also include the variables of "homophily" i.e. endorsed characters and acquired characters. Endorsed characters of students and teachers may include variables of age, gender, race, customs, citizens and immigration. Whereas acquired

characteristics may include the constructs of educational history, skills and marital status. These dimensions can be studied to implore the learning through knowledge sharing.

4. The study has only focused on one dimension of knowledge sharing. Yet there are many more constructs i.e. sharing open knowledge, sharing indirect knowledge, using open knowledge, and using indirect knowledge (Holste, 2003) can be used.

5. Keeping in view the size of the population the sample size can be a question for any researches. The study is conducted in the hub of educational activities i.e. Lahore. While other cities especially remote areas are not included in the research. Further researchers can include the participants of varied cities to reach more accurate findings and recommendations.

6. The study is conducted in a contrived set up with no interference with the respondent with close ended questionnaire. Interview methods can also used to further enhance the validity and reliability of the research. As many hidden sentiments and comments can only possibly be extracted by probing into the problem through direct and indirect questions of interviews.

7. Future researchers in order to increase the more generalized results can collect data from more universities and colleges situated in different cities and villages across the country and compare the results to get more valuable recommendations. The results so achieved will have more valid findings.

8. Another limitation of our research is the questionnaire technique i.e. filling of the questionnaire. This method sometimes unable to provide the true response as many respondents only fill up the questionnaire without knowing the importance of the research and understanding the importance of the question asked. Therefore interview technique has capacity to solve this problem if not completely may be to some extent.

9. The research has pointed out that parents are also an important factor playing a major role in the learning process of students through knowledge sharing. The researcher feels the future researcher must take into consideration the role of society, government, parents and organizations as well.

10.   Class room environment is also found a significant variable having massive impact on the learning process through knowledge sharing. Future studies can also consider this variable as well which can directly and indirectly effect results.

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FIG .1 BAR CHART LEARNING THROUGH KNOWLEDGE SHARING

learning through knowledge shsring
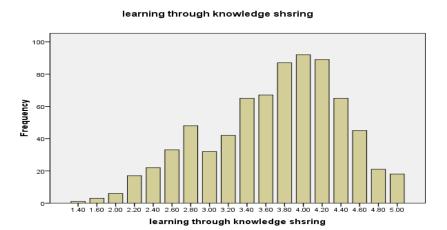
FIG .2 FREQUENCY POLYGON LEARNING THROUGH KNOWLEDGE SHARING
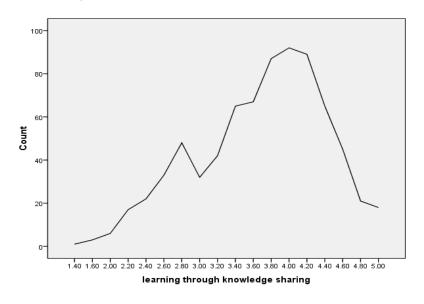
FIG .3   BAR CHART TRUST

Trust b/w teacher student
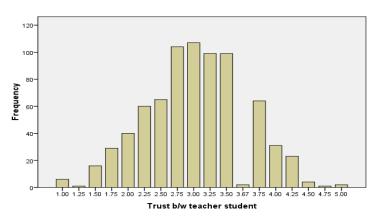
FIG .4   FREQUENCY POLYGON TRUST
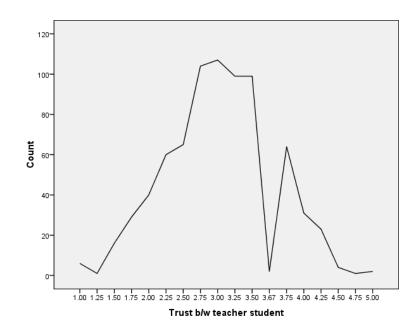
FIG .5 *BAR CHART WILLINGNESS TO SHARE*

willingness to share
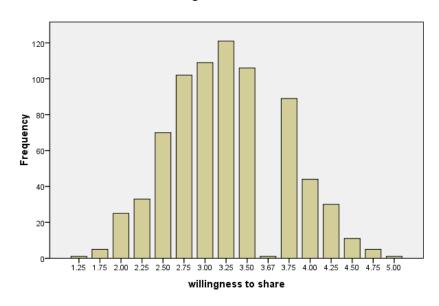
FIG .6 *FREQUENCY POLYGON WILLINGNESS TO SHARE*
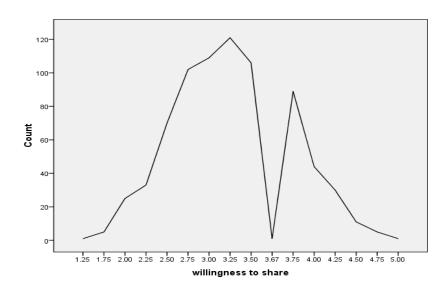
FIG .7   BAR CHART PERCEPTION

perception
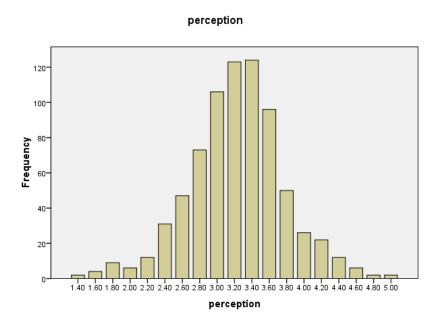
FIG .8   FREQUENCY POLYGON PERCEPTION
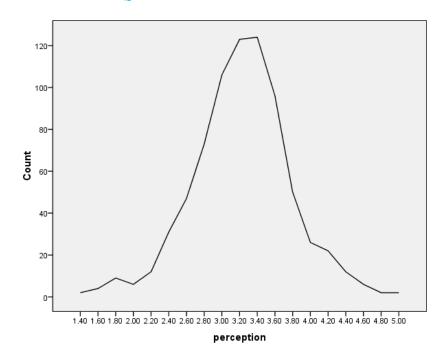
FIG.9   *BAR CHART TECHNOLOGY*

technology
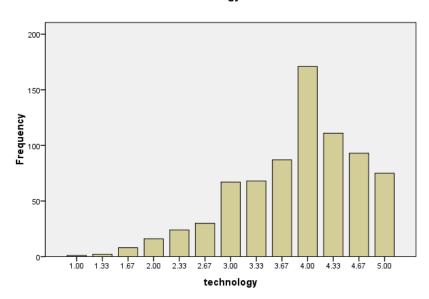
FIG .10   *FREQUENCY POLYGON TECHNOLOGY*
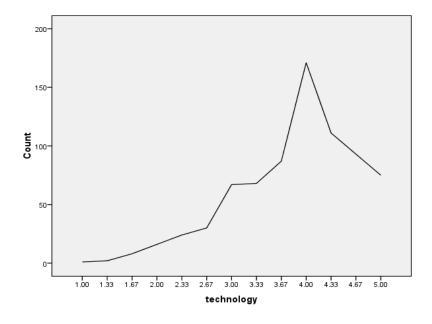
FIG .11   BAR CHART MOTIVATION

motivation

motivation
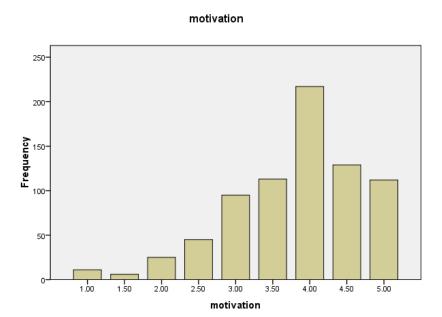
FIG .12   FREQUENCY POLYGON MOTIVATION

motivation
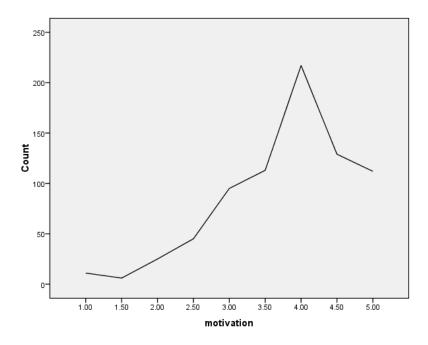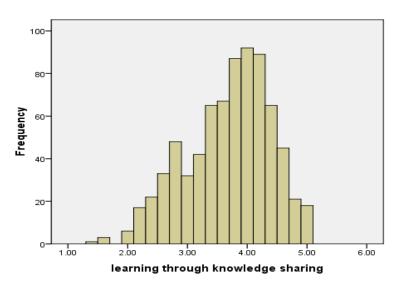
FIG .13   *HISTOGRAM LEARNING THROUGH KNOWLEDGE SHARING*
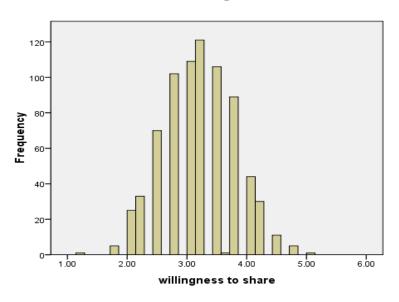
FIG .14   *HISTOGRAM WILLINGNESS TO SHARE*
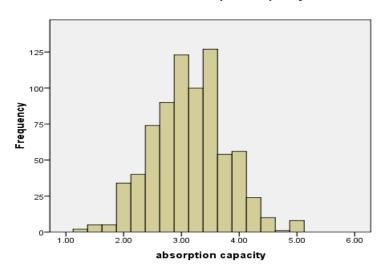
FIG .15 HISTOGRAM ABSORPTION CAPACITY

absorption capacity
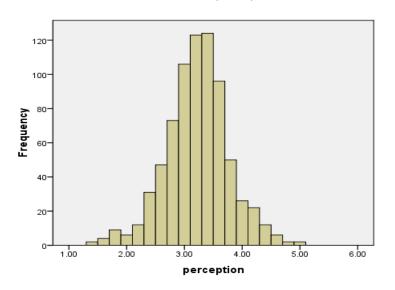
Mean =3.14
Std. Dev. =0.642
N =753

FIG .16 HISTOGRAM PERCEPTION

perception

Mean =3.23
Std. Dev. =0.547
N =753

FIG .17   HISTOGRAM TECHNOLOGY

technology

Mean =3.86
Std. Dev. =0.792
N =753
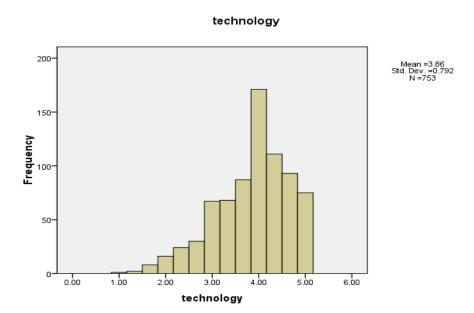
FIG .18   HISTOGRAM MOTIVATION

motivation

Mean =3.81
Std. Dev. =0.877
N =753

*FIG. 19   SCATTER PLOT LEARNING THROUGH KNOWLEDGE
         SHARING/TRUST*

learining through knowledge sharing
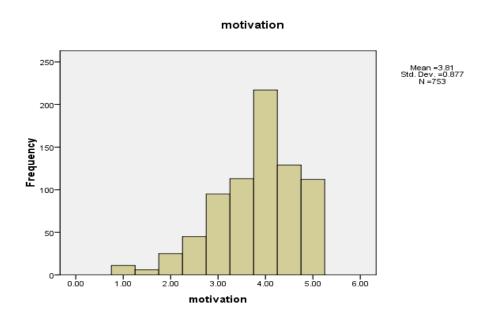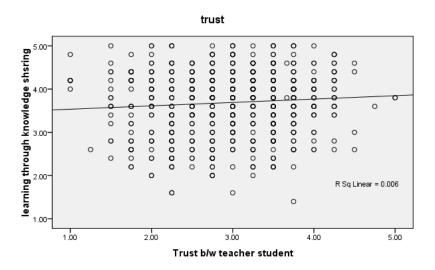
FIG. 20   SCATTER PLOT LEARNING THROUGH KNOWLEDGE SHARING/WILLINGNESS TO SHARE

learining through knowledge sharing

FIG. 21   SCATTER PLOT LEARNING THROUGH KNOWLEDGE SHARING/ABSORPTION CAPACITY
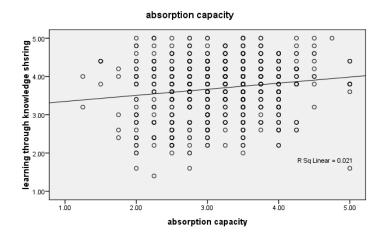
learining through knowledge sharing

FIG. 22   *SCATTER PLOT LEARNING THROUGH KNOWLEDGE SHARING/PERCEPTION*

learining through knowledge sharing

FIG. 23   *SCATTER PLOT LEARNING THROUGH KNOWLEDGE*
        SHARING/TECHNOLOGY

learining through knowledge sharing

technology

R Sq Linear = 0.301

FIG. 24   *SCATTER PLOT LEARNING THROUGH KNOWLEDGE*
        SHARING/MOTIVATION

learining through knowledge sharing

motivation

R Sq Linear = 0.276
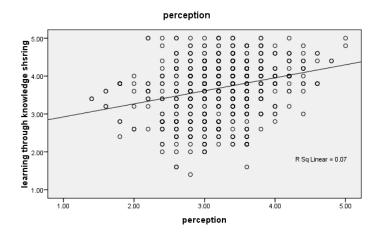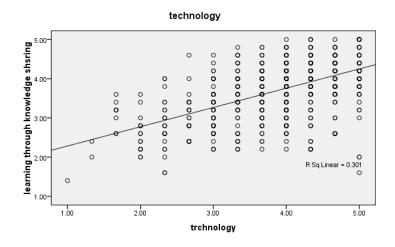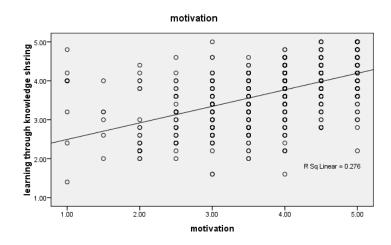
FIG. 25   LINEAR REGRESSION LINE/QUADRATIC REGRESSION LINE
MOTIVATION

learining through knowledge sharing
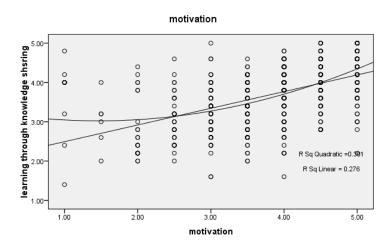
FIG. 26   LINEAR REGRESSION LINE/QUADRATIC REGRESSION LINE
TECHNOLOGY

learining through knowledge sharing

108
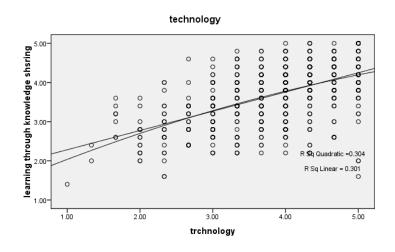
FIG. 27   *LINEAR REGRESSION LINE/QUADRATIC REGRESSION LINE*
        PERCEPTION

learining through knowledge sharing
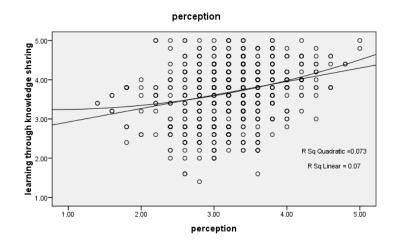
FIG. 28   *LINEAR REGRESSION LINE/QUADRATIC REGRESSION LINE*
        ABSORPTION CAPACITY

learining through knowledge sharing
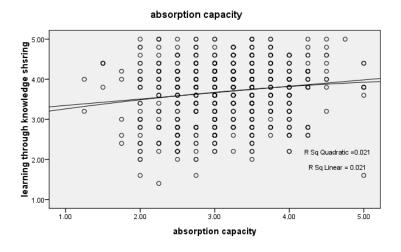
FIG. 29 *LINEAR REGRESSION LINE/QUADRATIC REGRESSION LINE*
TRUST

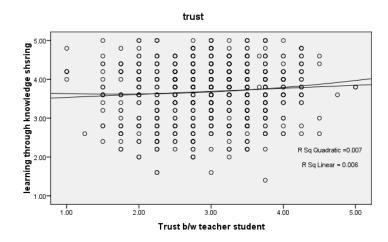learining through knowledge sharing

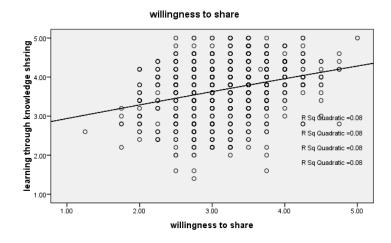*FIG. 30* *LINEAR REGRESSION LINE/QUADRATIC REGRESSION LINE*
WILLINGNESS TO SHARE

learining through knowledge sharing

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Thanks