

**T.C.
ISTANBUL AYDIN UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES**



**BARRIERS AND FACILITATORS AND THE ROLE OF KNOWLEDGE
BROKERS AT KNOWLEDGE SHARING AMONG STUDENT
“A CASE STUDY IN THE UNIVERSITY”**

**MASTER THESIS
Taghi SHAKOURI YOUVALARI**

**Department of Business Administration
Business Management Program**

Thesis Advisor: Asist. Prof. Dr. Nima MIRZAEI

JULY 2018



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T.C.
İSTANBUL AYDIN ÜNİVERSİTESİ
SOSYAL BİLİMLER ENSTİTÜSÜ MÜDÜRLÜĞÜ

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DECLARATION

I hereby declare that this master's thesis titled as "Barriers and Facilitators and The Role of Knowledge Brokers at Knowledge Sharing among Student "A CASE STUDY IN THE UNIVERSITY" has been written by me in accordance with the academic rules and ethical conduct. I also declare that all materials benefited in this thesis consist of the mentioned resources in the reference list. I verify all these with my honor.
(09.07.2018)

Taghi SHAKOURI YOUVALARI



FOREWORD

I would like to thank my dear advisors Asist. Prof. Dr. Nima MIRZAEI for its uncomplaining support. I am grateful to my lovely and kind wife for standing by me through all the issues

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July 2018

Taghi SHAKOURI YOUVALARI





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ABBREVIATIONS

KM:	Knowledge Management
KS:	Knowledge Sharing
IT:	Information Technology
IB:	Intellectual Business
CRM:	Customer Relation Management
K. BROKE:	Knowledge Broker
CHSRF:	Canadian Health Services Research Foundation
KT:	Knowledge Transfer
KB:	Knowledge Broker
DIKW:	Data Information Knowledge Wisdom
HTMT:	Heterotrait -Monotrait Ratio
PLS:	Partial least squares



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**BARİYERLER VE TATİLATÖRLER VE BİLGİ BROKERLERİNİN
ÖĞRENCİ İÇİNDE BİLGİ PAYLAŞIMINA YÖNELİK ROLÜ
“ÜNİVERSİTEDE ÖRNEK BİR ARAÇ”**

ÖZET

Bilgi paylaşımı, yeni organizasyonun, rekabetçi pazar yerinde organizasyonel performansı yenilemek ve geliştirmek için planladığı önemli bir parçasıdır. Bilgi paylaşımı, çeşitli bilim adamları tarafından çözüm sunma ya da işlev ve önemi hakkında yeni fikirler açılması için açıklanmıştır. Bu çalışma, bilgi paylaşımını ve bileşeni perspektiften anlatmayı ve bilgi temelli örgüt grupları içindeki paylaşım sistemlerine odaklanmayı deniyor. Bilgi yaratma ana üyesi olarak Enstitüler Organizasyon, bilgi paylaşım gruplarının performansına oldukça bağımlıdır. Bu çalışmada ,bir araştırma yaklaşımı kullanılır ve bir anket yapılarak birincil veriler toplanır. Toplanan veriler, SPSS ve Smart-PLS de korelasyon ve regresyon modeli gibi farklı istatistiksel testler uygulanarak analiz edilmiştir. Raporun araştırma bulguları, bilgi brokerinin engellerin rolünü azaltmaya ve kolaylaştırıcı rolünü geliştirmeye yönelik güçlü olumlu etkileri olduğuna işaret ediyor.

Anahtar Kelimeler: *Bilgi paylaşımı, Bilgi yönetimi, Bilgi paylaşım kolaylaştırıcıları, Bilgi Paylaşım Engelleri, Bilgi Aracıları.*



**BARRIERS AND FACILITATORS AND THE ROLE OF KNOWLEDGE
BROKERS AT KNOWLEDGE SHARING AMONG STUDENT “A CASE
STUDY IN THE UNIVERSITY”**

ABSTRACT

Knowledge sharing is an essential part of new organization that plans to innovate and improve organizational performance in the competitive market place. Sharing of information has been described by various scholars to present solution or opening new ideas about its function and importance. This work attempts to describe knowledge sharing and its component from perspective and focuses on the sharing systems within the knowledge based organizational groups. Institutes as the main member of knowledge creation organization is highly dependent on the performance of information sharing groups.

In this study, a quantitative research approach is used, and primary data is collected by conducting a survey. The collected data is analyzed in SPSS and Smart-PLS by applying different statistical tests such as correlation, regression model and path coefficient. Research findings of the report indicate that there is strong and positive effects of knowledge broker on reducing the role of barriers and improve the facilitator's role.

Keywords: *Knowledge Sharing, Knowledge management, Knowledge sharing facilitators, Knowledge sharing Barriers, Knowledge Brokers*

1. INTRODUCTION

The globalized and knowledge-based economy is increasingly depended on application of knowledge and innovation among organizations. Most organizations have complete understanding of the importance of value creation by applying knowledge and innovation into their products and services. The concept of knowledge management has been developed recent years due to highly and intensive competitive conditions that organizations must deal with it at marketplace. In any theory and strategy of KM, Knowledge and intellectual capital are key organizational assets. Knowledge sharing is therefore the most important aspect in this process since the vast majority of KM initiatives depend on it.

Knowledge sharing depends on the habit and willingness of the knowledge worker to seek out and/or be receptive to these knowledge sources. The right culture, incentives, must be present. According to the past literatures, the most important goal of KM is capturing, converting and reusing of knowledge and turning it to profitable asset in the competition filed, but the procedures and tools commonly are not easy to application because of the barriers among organizations, these barriers are categorized in the main parts that effected form people ,systems and technological infrastructures ,so organizations try to overcome barriers by using KM application and also using facilitators to reduce obstacles effects in different level of process. This fight has been started from the begging of KM application and varies from one system to another but always remains between these two major parts. Nowadays, to assist facilitators or somehow controlling or reducing the effect of barriers, one new idea is defined at KM systems to complete the circle of knowledge sharing as a catalyst, which is called knowledge broker, the main role of new part is monitoring the fluency of knowledge transferring among the engaged part of KM systems.

Second chapter starts with definition of knowledge at different filed, especially management and organizations culture, the subordinates of it according to the Knowledge Hierarchy (DIKW Pyramid) such as data, information, knowledge and wisdom, after it the most two categorize that mostly are used in management strategies

and practices. Knowledge, in practice, classified as tacit knowledge – mostly undocumented and holding by people- and explicit knowledge –mostly classified and documented.

The second and third parts are about intellectual capital and knowledge economy, what are the intellectual capital and its classifications, management methods and how it is related to the organization knowledge. Finally, knowledge-based economy will discuss with details, importance and why the organization's most priority and investigation is about finding solution for facing it.

Knowledge management describes at next part, what are the strategies at application and practice, how many models there are or accepted and then the most famous models will discuss such as business intelligence model, The Johari Window Model, Bridging Epistemologies and so on. After describing models, elements of knowledge management and KM assessment will explore, as an accepted by the former researches, there are three main elements people, process and technology at KM.

The last three parts includes facilitators at knowledge sharing, barriers and knowledge broker. The relationship among them during knowledge sharing, effects at performance and fluent knowledge transferring .Facilitators and barriers are discussed at their effects at Inter-project level , personal knowledge sharing, organizational knowledge sharing and Technological knowledge sharing levels.

Knowledge broker section includes, knowledge broker Functions and its conditions at knowledge acquisition and integration and finally its issues at playing role among main parts of KM elements, how it can perform and establish suitable condition for having acceptable connection among players of knowledge transferring for making knowledge as profitable asset for organization. After reviewing and assessment the past literatures about components of study, conceptual framework is created. Facilitators, barriers and knowledge broker are defined as three major variables as discussed. The research expands the idea and hypotheses based on the past literature about knowledge sharing process, strategy and tools that focused on motivators, obstacles and new concept of knowledge broker role at balancing sharing procedures. Therefore, it has been assumed that there is a strong connection among components of defined variables, including knowledge broker effect on facilitators and knowledge broker impact on barriers during the sharing process. The main objective of the study

is to develop different hypothesis based on that assumed relationship and test of the effect of knowledge broker impact on facilitators and barriers.

Systematic approach is applied for data collection to test the hypothesis which involves primary data by conducting a survey from 120 people. A structured questionnaire is used as a survey tool to collect data from students. Questionnaire is divided into three parts, first part includes question relevant to facilitators, and second section is related to barriers and third part point the awareness of knowledge broker concept and issues. Likert scale is used for development of questionnaire which involves five steps strongly agree to strongly disagree. Chapter four discusses the outcomes and findings of the case study in detail. Smart-PLS and SPSS are used to analyze the collected data by using different statistical tests such as correlation and regression. Chapter five of report concludes the overall findings of data which includes both theoretical finding and statistical findings.



2. LITERATURE REVIEW

The capacity of organizations and people inside them directly impact on participating at knowledge transaction, especially organizational knowledge, is distinguished as one of the contributing components to organizational power. Sharing of knowledge helps people and organizations develop new kind of knowledge. This enables them to talk about it and understand specific subjects which can empower the age of new knowledge (Ferine, 2003). Despite the significance of knowledge in organizational knowledge, there are motivations to trust that workers are not willing to share their knowledge willfully.

2.1 Knowledge

The oxford dictionary defines meaning of knowledge as follow: reality, information, and abilities obtained through involvement and training; the hypothetical or practical comprehension of issue. The word knowledge is one of the most subsidiary words in so many areas such as individual knowledge, religious knowledge, political, communicating, situated knowledge, organizational knowledge. There are so many diverse definitions are available for the knowledge which has prevalent aspects plus designation. One of the prevalent definitions of knowledge in Oxford dictionary, knowledge can descry as an academic or applied comprehension from a concept, issue. It has two antithesis categories are called tacit knowledge that has theoretical origin of how someone understands a subject, the other is implicit knowledge with inception belongs to practical experiences or skills (oxforddictionaries.com/definition/knowledge).

Armstrong (2009) demonstrated a valuable and complete definition for knowledge that related to individuals understanding about items, thoughts, ideas, strategies, practices and the way works are finished. Regardless of different meanings of knowledge, there is common part that related to the quality of awareness and comprehension about somebody or something, for instance realities, information, clarifications, data or

talents and capacities which is collected among trainings, catching, comprehension, finding or learning results (Armstrong, 2009).

By the way the essential piece of knowledge is knowledge obtaining for useful utilization at both individual level and social level. In another procedure knowledge includes complex intellectual capacity to process, assessment, correspondence and derivation capacity (Stanley, 2002).

Knowledge has more significant and key part at association levels as a basic response resource. Associations in this deeply increased competition need to utilize all their ability, assets, adaptability and administration to remain at a safe area and benefit. To accomplish this preferred standpoint, they need to find finding staffs with articular information, aptitudes, or capacities, in addition on sharing Knowledge (Wang and Noe, 2010).

2.1.1 The knowledge hierarchy (DIKW Pyramid)

In 2007 research distributed by Danny. P (2007), which clarified the cause of DIKW, pyramid. For better understanding the parts of information and profiting it, there is a division and separation system that called DIKW pyramid. It is otherwise called the DIKW chain of importance, it is also known as the DIKW hierarchy, wisdom hierarchy, knowledge hierarchy, information hierarchy, and the data pyramid. Generally, data is characterized by respect to information, knowledge from data, and wisdom from knowledge. Even though references to the DIKW progressive system were made by both Zeleny (1987) and Ackoff (1989) in the Knowledge Management domain.

It is comprehensively utilized by theoreticians, in Software engineering, Administration Data Frameworks and in the authority, as they talked about, the data chain of command, and the "Knowledge Pyramid" is one of the fundamental, conceded and broadly utilized as a part of the data and information written works. In meaning of information, usage of learning administration frameworks and the meaning of information and data at IT, the DIKW pyramid has utilized for planning systems (Rowley, 2007).

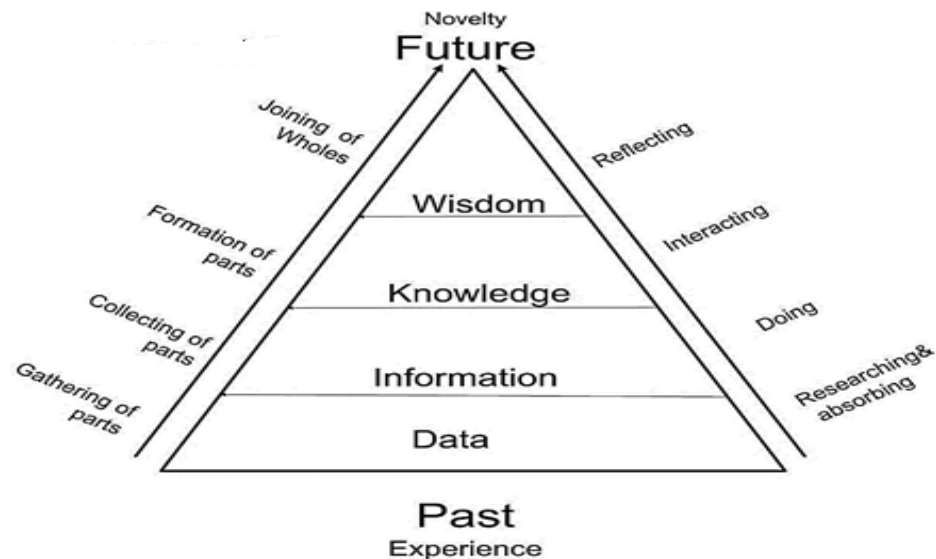


Figure 2.1: The knowledge pyramid (J. Rowley 2007)

2.1.2 Data

According to the meaning of DIKW, first part, data is images or marker, which defines jolts or flags. There are a few qualifications and considerations that discussed data as image or data as a flag, for each situation it relies upon the circumstance or place of utilization that it required, it appears the imperative part is the acknowledgment of data as the initial segment of knowledge it is possible that it is image or flag (Zins and Chaim 2007).

Data is understood to understand images, and additionally to signs or boosts implied by Zins terms nominative data. Zins (2007) defines it as "the result of perception" nominative data are the perceptions. That refinement is casually possible gloomy in implications of information to the extent "facts".

2.1.3 Information

The second layer at DIKW hierarchy is information, regularly information is characterized as sort of data that can be helpful subject. Additionally, in substance of DIKW, information is specified as descriptive knowledge or basically description, and is isolated from data by being valuable.

Information is gotten from data in the techniques of noting, answering and interrogative questions ("where", "quality", "time"), in this manner data is changing to information by procedures of joining, recreation, tuning and connection with different sources that settle on it valuable for basic leadership .According to Rowley

,information is "framed of organized information, that has been handled by using various tools for the information that has relationship with solid reason and content, so it has meaning, worth, helpful and associated (Rowley and Jennifer and Richard Hartley, 2006).

2.1.4 Knowledge

The DIKW is characterized knowledge with respect to the information. Following of perceiving data and converting it into information, the following stage in the handling makes it as knowledge. The meaning of knowledge at pyramid is not quite the same as alternate definitions in different branches of sciences. Zins has offered that knowledge, is something scholarly than functional or worldwide and it is characterized in propositional terms (Zins and Chaim 2007).

Danny (1995) has authenticated knowledge is a mix of detailed involvement, values, filed of information that prepares a circumstance and structure for estimating and joining new experiences and information.

2.1.5 Wisdom

The knowledge that is picked up in the past level goes up the top level is called wisdom. The procedure from data to wisdom is about journey from past to present, wisdom is about acting and anticipating future. Wisdom serves to new information will be accessible in the procedures and activities (Wallace and Danny P. 2007).

2.1.6 Tacit knowledge

First time Polanyi (1966) characterized this kind of knowledge. Tacit knowledge is a sort of scholarly, implicit, undocumented and secured of knowledge held by typical individual, due to the feelings and emotions, individual encounters, explore, singular recognition, knowledge, dreams, contemplation's and customized data .it is gained generally through investment with other individuals among various normal activities. (Polanyi, 1966).

Borgatti and Cross (2003) described that different qualifications can be made among "know how", knowledge about substance, " know what ", knowledge about procedures and "know who". Different refinements can be made among "comprehend what", knowledge about substance.

Some case of ordinary execution and tacit knowledge are: playing the guitar, driving an auto, swimming at pool, and assembling parts of a mind-boggling puzzle, decoding a complex scientific issues and conditions (Chugh, 2015).

In the knowledge management filed, the tacit knowledge is a knowledge which can't be completely systematized. For this situation, a man can collect tacit knowledge with no conversations. For example, working with their supervisor and understand hand to hand fighting not through dialogue but also by cognition, personalizing, and experience. Experience is a method to collecting deductive learning. Without a few models of common tests, it will be painfully and difficult for individuals to contribute the way of thinking and procedures and algorithms of problem solving with each other's (Lam, A. 2000).

2.1.7 Explicit knowledge

The second type of knowledge as indicated by the experts is explicit knowledge. It is knowledge that can be recorded, arranged, acquires, analyzes, recovers and verbalized. Moreover, it can be discussed and registered as literacy, digits, mathematical and consistent rules. Explicit knowledge is anything but difficult to flow and circulate. It can be founded in documents, in the internet, and other seeable and unwritten sources. As indicated by Nonaka (1994) explicit knowledge is about that sort of knowledge that can be transferable and translatabe in formal terms, for example, archives, orderly and principled language. It is just a sort of whole learning domain (Nonaka, 1994).

2.1.8 Differences with explicit knowledge

According to Plony (1958), tacit knowledge can be distinctive from explicit knowledge in three major areas:

- Modifiability and instrument of transmitting knowledge: As explicit knowledge can be arranged, and effectively exchanged without the knowing the root, tacit knowledge be natural or entirely knowledge that communicated and couldn't be conveyed, comprehended or utilized without the 'knowing subject'. Disregarding the explicit knowledge, the exchange of tacit knowledge requires close activity and response and the required of regular comprehension and trust among the general population

- Principle strategies for the securing and collection: Explicit knowledge can acquire through legitimate inference and increased through functional involvement in the important setting. Conversely, tacit knowledge must be procured through commonsense involvement in the significant setting.
- Capability of accumulation and methods of assignment: Explicit knowledge can be gathered at a solitary area, indistinguishable structures and distributed without the investment of the knowing subject. Tacit knowledge conversely, is individual logical. It is learned and can't be accumulated. The acknowledgment of its maximum capacity needs the coordinated effort of the knowing subject (Bell Chip R, 1997).

Table 2.1 shows differences and similarity for explicit (effectively classified) and tacit (embedded in the mind).

Table 2.1: The characteristics of tacit and explicit knowledge (Nonaka, 1994)

Explicit knowledge	Tacit knowledge
intentional normal, specialized	intellectual, empirical learning
Well-organized	Individual
Constant extent	Setting delicate/particular
contents self-determining	Powerfully made
Give external existence or form to	unconscious assimilation
Smoothly qualified	hard to collect or modify
Simple to codification	hard to divide up

2.1.9 Knowledge creation cycle

There are relations between tacit knowledge and explicit, how they can identify with each other and how they can change over particularly from tacit form to the explicit form or can be archived, refined and reused. A very useful and significant instruction was recommended by Nonaka (1994) that recognized four distinct methods of how current knowledge can be exchange into new knowledge through the cooperation between the tacit and explicit knowledge.

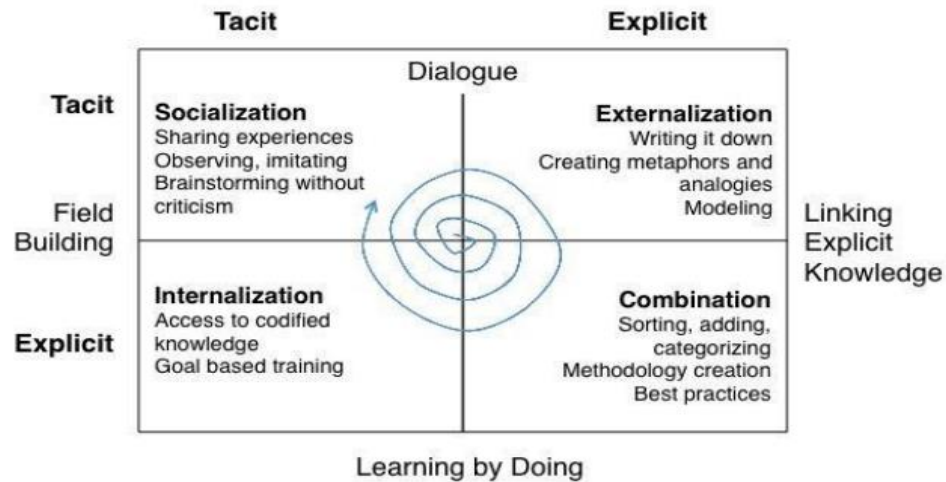


Figure 2.2: organizational knowledge constitution model (Nonaka, 1994)

The knowledge converting over technique from Nanoka (1995), knowledge transmitting is a spiral procedure. It is 2by2 framework that shows how the changing over of knowledge will make the new knowledge in either shape – tacit or explicit or the objective knowledge can be exchanged to supply both sort of knowledge. Every method of each sort of knowledge can be changed over. At the point when considered as a continuous knowledge process, the model is a clockwise winding; hierarchical learning relies upon bringing in and seizing the learning spiral. (The model is a spiral, not a cycle).

- **Socialization:** transferring tacit information in one individual to another person is called socialization. It is experimental and dynamic, including knowledge capturing by the methods for coordinate association and correspondence among clients and providers outside the association and individuals inside it. The outcomes rely upon talents, willing and regular mental models.
- **Externalization:** the means that makes knowledge as explicit knowledge is externalization. One of the valuable ways that a man can use to explain his own tacit knowledge, practically speaking, externalization is reinforced by two key variables.

In the first place, the emphasizing of implicit knowledge, the change of tacit into explicit knowledge – incorporates methodology helps to express one's considerations' or pictures as words, thoughts, (for instance, intentional narrative, records) and pictures. Talked, "tuning in adding to the benefit of all individuals," support externalization.

The other factor incorporates decoding the implicit learning of people into instantly sensible structures. The needed tools will be derivable/ conditional reasoning or imaginative deriving (grabbing). In the middle of such correspondence, people share feelings and make sense of being good expressive their cogitative, however quick info and the contemporary interchange of considerations. Externalization is a technique related to people inside a social event.

When knowledge appears as categorical, the possibility of interchange as explicit knowledge by using a procedure is called mix (Nonaka 1995). In this state in which innovation has highest value, the explicit knowledge can be captured in files, electronic message, intelligence, finally by collecting and summarizing. The basic key for collecting important internal and external knowledge and modifying/getting is being ready to make it more suitable.

- Combination allows exchange of knowledge inside clusters by help of associations. Internalization is a route toward comprehension and holding explicit information in to implicit learning that kept by the personals. Tacit form of Knowledge is significant by the possessor. Knowledge is, all things considered, experiential; acknowledge thoughts and methodologies. The knowledge procedure exchanges community and gathering explicit knowledge to the person.

Deshpande (2014), designed a new model that makes to better understanding of knowledge creation as Figure 2.3:

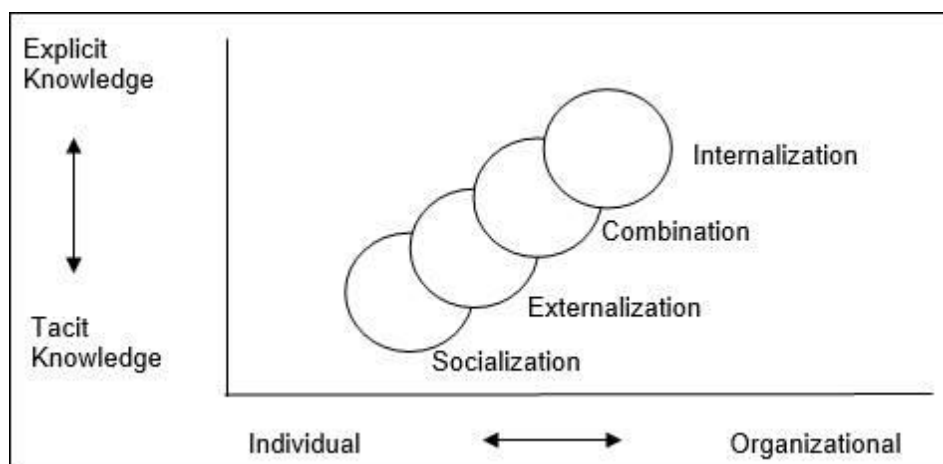


Figure 2.3: The four processes of knowledge creation (Deshpande a, 2014)

2.2 Intellectual Capital

Traditional economies relied on using of land, assets, instruments and capital for the generation of worth, the new period of knowledge economy will rely upon using of knowledge. Knowledge is extremely significant hotspot for individuals, organizations and nations. Strategies and organization are designed to convert knowledge and intellectual capital to beneficial tools and gain advantages. The wealth and assessment of associations can grow or decline related to how the people make, collect, and utilize their intelligence. Intellectual capital includes various types, procedures, a kind methodology and mental, strategies associations use to make, comprehend, issue realizing and recreation. (Doubleday, 1997).

There are such huge numbers of various meanings of Intellectual capital: Intellectual capital has been characterized of the intangible worth of a business, including people as human capital, the reliability characteristic in its connections as Relational capital, and whole of remained at the times staffs go outside, it is about every knowledge smaller or bigger in a company that everybody knows that has ability to competitive future .The meaning is utilized as a part of the scholarly world to represent the estimation of intangible resources not recorded obviously on organization's monetary records. Also characterizes as the contrast between a companies equitably estimated worth and the cost of replacement its advantages. The things organization can't decide sticker price on, for example, proficiency, information and a company's hierarchical learning ability (Edvinsson and Malone, 1997)

Organizations define the intellectual capital as reusing of knowledge through Knowledge management and Intellectual Capital Management (ICM). Making, forming and refreshing the load of intellectual capital can be occur by how an association is able to formulate from strategic viewpoint, which combined each of the three parts of intellectual capital among the hierarchical foundation through communicating and misuse, estimation and disclosure (Stewart and Thomas, 1997).

Running a company and Standing in the good position at knowledge-based economy and Information era needs measurements of the exact value and the total efficiency of intellectual capital's components. Recognizing the intellectual capital in organizations allows leveraging of its intellectual assets. In recent years the definition of intellectual capital was expanded, because of rapid economic changes and evolution. According

to Roos, Pike and Fernstorm (2005) intellectual capital is all non-monetary and nonphysical resources, that are partly or fully controlled by organization and contribute to its value creation.

2.2.1 Classification

Intellectual capital is a wide idea which is frequently divides into various classifications most generally human capital, social and basic capital.

Human capital is described as knowledge, talents and experiments that hold by individuals. Additionally, also it is kind of credibility that workers of a business make it through the utilization of abilities, know-how and talent, it may be specific characteristics, or it can be ordinary for people. It will be important when we face organizations that have limitation of enhancement, inventiveness ability at conflicts, worker engagement adaptability, inspiration, and fulfillment, learning limit, reliability, formal preparing and instruction. Individual's qualification and competency is fundamental for organizations. This is individuals' ability to take care of issues and act in various conceivable outcomes. It combines talents, training, knowledge, qualities and social abilities. Individuals are the main objective elements of job; establishment and property, regardless of doubtless items or complicated (Bontis and Nick ,1996).

Relational capital (RC) point out to the creation of the connection between the firm and its condition (Cic, 2003). It can be business capital, the esteem and relationship that association keeps up with the fundamental specialists associated with its business procedures, and social capital which the association keeps up with other social operators and its encompassing (Euroforum, 1998).

Relational capital is determined a kind of assets related outside sources of the organization customer, suppliers or partners in advanced and original work (Bontis and Nick ,1996). There are some examples and categories that explain importance of relational capital and its role. These aspects include: Brands, stakeholders, customer relationship, partners and contacts.

The Structural Capital has the protective role for not tangible or concrete foundation; the organization activities and information provide human capital to operate. According to the Kanter (1997), individuals are the most important property of organizations, the basic role of them is being most effective nations. They cannot turn into assets till they hide spreading knowledge connected to clients.

Organizational capital (structural capital) is a piece of the intellectual capital of the organization. Organizational capital includes the accumulated capitals of the organization that is protected and utilized for typical operation and advancement of the organization (Khavand Kar, Jalil, 2013). Also, it includes information and formalized knowledge stored in PC databases (explicit knowledge), and additionally existing ability caught as organizational and procedural courses of action, critical thinking talents, and so on. (Khavandkar, Ehsan, 2009).



Figure 2.4: The intangible asset of modern organization (Thomas Steward)

2.2.2 Management

The abstract characteristic of knowledge nature and methods, and the raising demand for value creation and motivation in organization asset, make them to develop and establish management strategies to use of their intellectual capital. The management of intellectual capital is conceptualized through a various stage method, controlled by a derivative rationalization. The intellectual capital management is depicted as a cycle between related courses of action or practices: Key Arrangement, Investigation and Misuse, Estimation and uncovering of intellectual capitals finally, the connections between three segments of intellectual capitals are demonstrate by figure below. (Fernstorm, L, 2005).

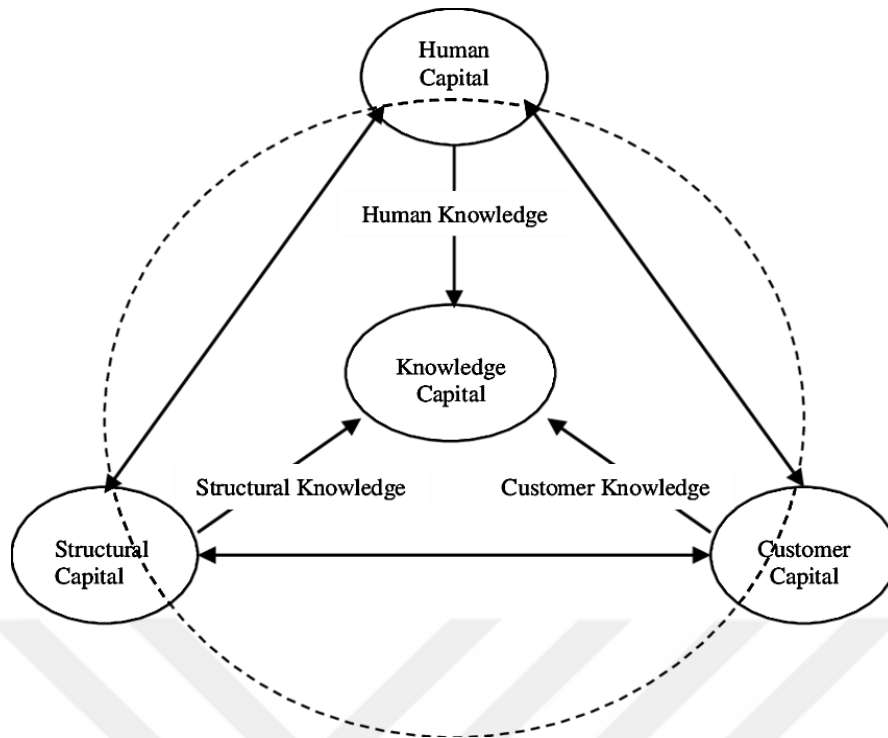


Figure 2.5: intellectual capital elements (Fernstorm, L. 2005)

2.2.3 Organizational knowledge

Organizational knowledge is the kind of knowledge and capacity that hold by staffs of organization or organization itself, in fact it can be utilized and shared to make the organization more credible. For a beneficial start to KM, an organization should reach in a doubtless point of view in case of how knowledge inhabited and where is created inside the organization various level. An organization must decide to put knowledge assets as a first stage to extend plans for obtaining, looking after, organizing, and utilizing those capitals on a permanent procedure. By the examination of Bontis (1996), All organizations that acknowledged knowledge saw it official to know how and where to get to it, and fruitful endeavors so far have begun by defending, characterizing intellectual portfolio by delivering an organizational 'knowledge delineate'.

2.3 Knowledge Economy

Traditional aspects of science and innovation are changed because of extremely competitive and financial conditions. The lack of assets and exceedingly request to inventive advantages, among organizations made them to apply better approaches to their objective and competitive ideas in the market. The most pioneer firms also have

begun to reuse their crucial assets for picking up their objectives, for example, capitals, lands, and fundamentally knowledge. They have changed their need to research at knowledge management methodologies to give creative ways, items and administrations. Organizations can gain a competitive advantage by having and overseeing remarkable, hard to- imitated, and substitute assets (Wernerfelt, 1984; Barney, 1991).

These assets accessible in the organizations recorded store or held by staff of it as ability, skills or individual alignment. High-roller and Concede (1996) led those knowledge-based asset key drivers of competitive advantage.

2.4 Knowledge Management

Knowledge Management is an idea and a term that characterized two decades prior, generally in 1990. Simply one may state that it implies arranging an organization's information and knowledge comprehensively, however that sounds somewhat vague, and shockingly enough, it isn't the entire picture. Early in the KM development, Davenport (1994) offered the still broadly cited definition:

"Knowledge management is the way toward catching, disseminating, and adequately utilizing knowledge."

When people are talking about knowledge management, perhaps the words confuse us. However people tend to consistently change our circumstances and conditions, utilizing rare piece of information to deal with our everyday employments or arranging the future business, for example, time and money management by utilizing the information accumulated from their costs, utilizing information that are accessible from associations with others or individual, go to the abnormal state of life and employment, yet a large portion of us don't focus on the procedure that we utilize it day by day life. Knowledge management, as a field of study, has existed for over 3 decades, in the organization level the meanings of knowledge management refined by specialist's late years because of the vitally important of it during new difficulties in economy. (Sveiby, K.E. 1997).

As indicated by Girard, John P.; Girard, JoAnn L. (2015), Knowledge management (KM) is the path to creating, contributing, operating and managing the information and data of an association. Likewise, Knowledge management is a procedure that must

record for the mechanism and structures that is needful to deal with knowledge, at the same time, focusing on the procedures and executants of the knowledge that is trying to supervise.

Such huge numbers of different definitions are accessible for KM which relies upon the field that it is expected to utilize, for example, Accounting, Artificial Intelligence, Annalists, and Substance Management, and Military. Despite the normal and valuable terms of every definition that can be connected to the others, organizations and establishments are interested the idea and use of KM at improvement and training process, human assets, information management and the others that are comparative capacity and identified with the knowledge sharing, making, catching and reusing the knowledge (Christensen, 2003).

One of the advance definition has been distributed by Serrat, (2009) that stresses and characterizes, knowledge management is straight and regularly management of procedures, validate significant personal and accumulate knowledge property to be recognized, create, check out, contributed, and used for privilege.

Generally, the dominant part of various definitions is there –, for instance, Knowledge Management in ADB," (2004-p130), D. Ruler, (2005) and Glossary: Knowledge Management and Sharing (2012) have the terms in like way and related viewpoints like making, dealing with, sharing, and using data and experiences, catch, update, and reuse information to achieve hierarchical targets, exact administration of strategies, composed approach to manage the creation. The educational part furthermore uses the ordinary focus and thought of knowledge management. However, it is determined as a course of action or practices that improves, change and adjust the use and sharing of data and information in essential improvisation. (Petrides and Nodine, 2003).

2.4.1 Strategies

There are techniques and strategies to utilize Knowledge management at organizations or knowledge-based foundations. The main sections of KM suggest that sharing processes of a learning system are made especially depending on the degree that people notice to fundamental matters. Leibowitz, Jay (1999) introduced special Knowledge management model that includes four steps including:

- Knowledge Attic: it is about construction of foundation in the beginning of the process.

- Knowledge sponge: empowers accumulation of knowledge but has no effect on the usage.
- Knowledge Publisher: has no effect on accumulation but acts as facilitators the using of knowledge.
- Knowledge Pump: enhance both, the accumulation and usage of knowledge.

There are numerous procedures and instruments for knowledge management at the organization level that a portion of the are: information sharing, Cross-venture learning, After-activity surveys, Knowledge mapping, Communities of training, Best practice exchange, Competence administration, Knowledge archives, Measuring and detailing scholarly capital, Knowledge intermediaries, Inter-venture learning exchange (Leibowitz Jay, 1999).

2.4.2 Knowledge management models

There have been several attempts at developing structures and models to reflect a complete perception and understanding of what knowledge management is and how it works. These can be classified into two Categories: descriptive and prescriptive. Holsapple and Joshi (1999) defined that the descriptive models try to explain and explore the nature of KM subjects, whereas prescriptive ones distinguish methodologies to figure out administration aspect of knowledge management.

These attempts and researches try to find a suitable practice and perfect solution and became aware of in which condition and process organizational knowledge is created transmitted and reconfigured to use for competitive advantages in the market place. A study by Heisig (2009) at 160 frameworks showed, the KM activities can be defining with the five central activities of sharing, creating, using, storing and identifying. There are different practical and theoretical models for Knowledge management application inside the any organizations, that some of the import ants are described below:

2.4.3 The capability maturity model

For creating a theatrical model, to use a complete measurement of software customers and to establish software for project the model was instructed by military. point of the model was produced for the capacity of making legitimate software infrastructure, software implementation, processing and the distinguishing subscriber efforts,

collecting the needed data, analyzing, categorizing, refining, and reusing it to reach the organization goal and plans. therefore all the purpose of the model focused on an organization ability to assimilate, adapt and drive its programming applications the strategy and exercises for an association to advance starting with one level then onto the next. CMM (Capability Maturity Model) was categorized in 5 levels, due to this classification, it includes: capacity to anticipate, efficiency, and helps an organization's programming operations that are designed to guarantee the organization process at constructing these five levels. (Hollsoption and Joshi, 1999).

- Initial (individual heroics): this stage mostly is about tacit knowledge. Processes at this level are typically not recorded or demonstrated by reports collected from records and running at progress. The level could relate with tacit knowledge information level. The information is uncontrolled and depends upon the state of customers or condition and situation. This gives an anarchic or brief condition for the procedures.
- Quotable: The qualities of level 2 are associated with those processes that can be repeatable, most likely with concrete outcomes. Process course of action is probably not going to be strict, however in which it happens might provide the guarantee that current ongoing are preserved timing of actions.
- Defined: there are some descriptive methods and procedure for grouped and all reported, standardized, and association with each other. It is conceivable to measure the improvement and capability due to timing in the organizations adventure.
- Managed: it characterizes some metric, instruments and management operation for gathering the information of processes. In a few organizations can perceive and discover approaches to change and subdivide the process to specific respondent without adversities or deviation from subtle elements. At this level Procedure weakness and sufficiency is appointed.
- Optimizing: this is about determination of methods on continuously and for all time, enhancing process execution through both dynamic and innovative technological change and changes.

Capability Maturity Model Integration (CMMI) is a capacity development model created by Product Building Foundation, some portion of Carnegie Mellon College in

Pittsburgh, USA. The CMMI principal is that "the quality of a framework or item is exceptionally impacted by the process used to create and look after it". CMMI can be utilized to control process change over a venture, a division, or a whole organization. (Knowledge Management in ADB, 2004)

CMMI gives:

- Rules for processes change.
- An incorporated way to deal with process change.
- Implanting process changes into a condition of new forms.
- A staged way to deal with ongoing changes.

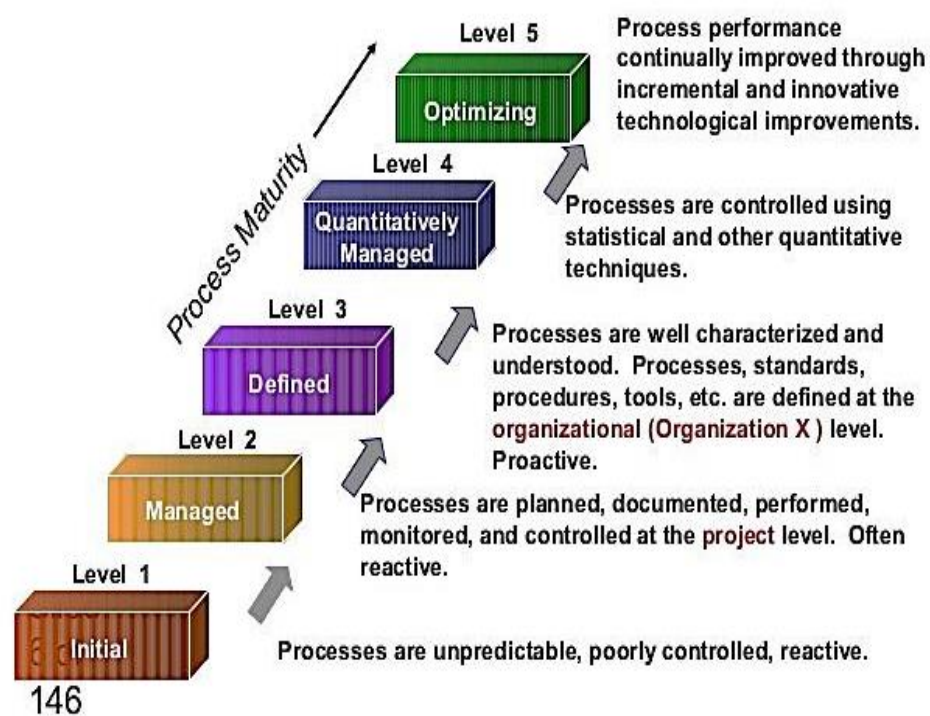


Figure 2.6: CMMI staged representation (Knowledge Management in ADB, 2004)

2.4.4 Business intelligence model

Business Intelligence (BI) shows processes and procedures that help organizations to obtain information, utilize advances, related specific devices and structures. which are helpful to collecting, information analysis, formation and scattering of information. BI supply the past, present and future perspectives of business operations.

There are several parts for BI works in the knowledge managements, for example, online analytical processing, Reporting, investigation, data mining, process mining,

complicated event preparing, business execution administration, bench marking, content mining, insightful examination and prescriptive investigation. Recognizing new methods and completing a feasible strategy with respect to elements of knowledge can furnish businesses with a highly risk market privilege and superlative security (WHO knowledge management glossary. 2006).

Business intelligence can be used by organizations to give a tremendous domain for business decisions making from operational. Basic working decisions include arranging or assessing course of action. Key business decisions combine necessities, objectives and broadest level. Generally, the best tools are BI, when it unites data got from the market in which an association works as external data and data from association sources inside of the business, for instance, monetary and operations data as inner data. Information can provide a complete vision in external and internal form, as a result, makes a "knowledge" that can't be derived by a specific arrangement of data. Within using business intelligence instruments empower or to organization to get learning from new markets, to assess request and sensibility of things and organizations for different market partitions and to gage the impact of promoting tries (Petrides and L, 2005).

Business intelligence is made of such a substantial number of different parts including:

- Several dimensions or aspects, naming and standardization.
- On-time detailing with analytical alert.
- A strategy of cooperation with uncompleted information sources.
- Cooperation adjustment, budgeting and moving expectations.
- Statistical conclusions and eventual recreation.

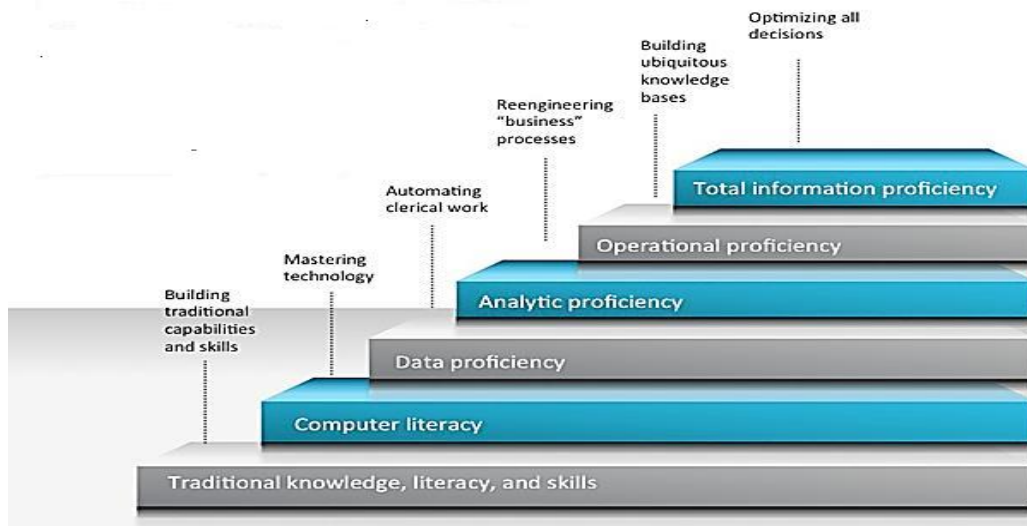


Figure 2.7: BI implementation steps (Rud and Olivia, 2009)

2.4.5 Key performance index enhancement.

Business intelligence can be associated with the future business purposes, with an ultimate objective to influence business from market. Evaluation – using Metrics Reference Model program is conceivable to make a chain of importance for execution. Metrics and examination allows business pioneers to advance towards business goals, also it is called business process management. Analytics – plans and projects that build quantitative processes for a business to achieve at ideal choices and to fulfill business knowledge revelation. Also includes: information mining, process mining, statistical analysis, mental analytics, mental modeling, business process modeling, and complex occasion processing and prescriptive analytics. Knowledge management prompts learning management and administrative consistence (Ruud and Olivia, 2009).

2.4.6 The Johari window model

The technique developed by Joseph Luft (1916–2014) and Harrington Ingham (1916–1995) in 1955, includes procedures assist people to recognize their connection and relation with other people and with themselves, which were created by psychologists. A very outlined and helpful system for comprehension and preparing mindfulness,

singular improvement, better correspondences, Interpersonal connections, collaboration adaptability, group advancement and inter collector connections. It is additionally called 'locales' or 'regions' or 'quadrants'. Each incorporates and demonstrates the Information-emotions, inspiration, zones, quadrants, or points of view are as per the following, demonstrating the quadrant numbers and usually utilized name.

- **Arena:** The first part, Arena quadrant coordinates is designated to mutual comprehension or shared data. This is known as the self-known by others and relationship is influenced to control relational effectiveness. In this way, when the data transfer is greater, it makes more satisfying, reasonable, and profitable the relationship.
- **Blind spot:** This step indicates data is unclear about person self-interest but obvious in accordance with others. We may recommend this statistic so kind of evident skills about the SECI Model. Another technique because of inserting such would remain external facts so much is internally unknown.
- **Facade:** The facade step points to statistics that are recognized in imitation of the self-interest externally unknown. This is equal with an organization's personal statistics; and is a kind of prized formulas. Expectations are unfamiliar according to the external. In knowledge management, we are able also consult records within the "facade" step in accordance with information recognized along improvement, then revelation within the organization.
- **Unknown:** The unknown step related with unexpressed information. These records perhaps have an impact on the greater of the data among the Johari Window. Information beyond the unknown step is able circulation in conformity with façade. Client-company clarifications over the Johari Window execute and summed on as:
 - A public fact is accessible and generally understood through each party.
 - Private statistics is acknowledged via the consumer however no longer communicated according to the layout team (Taken from businessballs.com)



Figure 2.8: The Johari window model (businessballs.com)

2.4.7 Bridging epistemologies

S.D.N. Cook and J.S. Brown (2005) introduced the model first time. Bridging epistemology in addition to knowledge possession focuses on the ability to use knowledge as a tool (knowing as action). The idea is basically follows some hypothesis and accepted facts. The first is about nature of knowledge, it noticed those divisions: tacit or explicit and individual or group. Also, there are two epistemologies:

- Epistemology of possession leads to preference of explicit before tacit and individual before group knowledge.
- Epistemology of practice (bridging epistemology) in addition to knowledge.

According the concept of bridging epistemologies, the associations need to create balance point of knowledge in all four quadrants, evenly use all four knowledge quadrants, and ensure two-way exchange of knowledge between tacit and explicit, and between individual and group knowledge.

- Expertise to create and execute
- Knowledge of construction things and previous registration of execution.
- the knowledge about diversity and accuracy of techniques

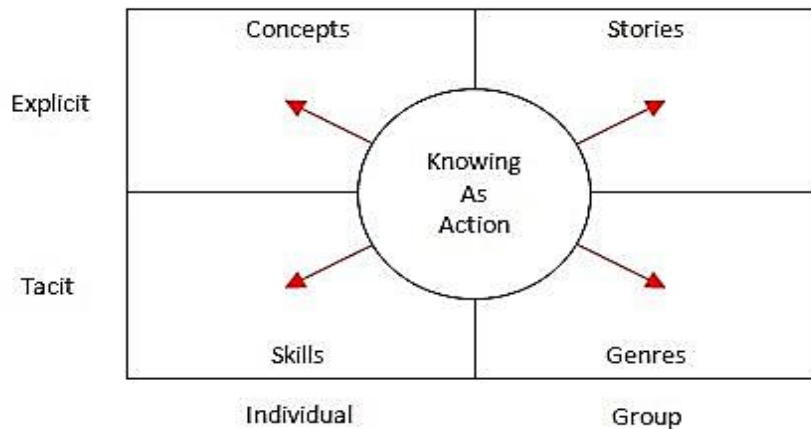


Figure 2.9: Bridging epistemologies model (12manage.com)

2.4.8 The three worlds of knowledge

Karl Popper (1987) added a concept called Objective Knowledge and among it he described the thoughts of 3 ontological worlds or domains.

- Material objects, strategies or activities consisting of physical and organic entities (W1)
- Concerning intellectual objects, activities and techniques or a psychological world concerning beliefs (W2)
- Products dealing with intellectual issues (W3)

The pattern was constructed with the aid of Popper in conformity to allow him for addressing the mind-body problem and additionally recognize the connections among the physical, the intellectual and the symptoms about the ethnical personality. For this, he evidently assesses subjective (tacit) and objective (explicit) knowledge. Stamp Elroy and Joe Firestone hold interpreted Karl Popper's assignment into the world about Knowledge Management. Their action makes manifest that: Knowledge is examining, evaluated and surviving shape of information permanency. When it is blinded with proper tools and related to strong case, it may help to handle troubles and additionally assist it to adjust.

The three-world's explanation:

- W1: Surviving, structure over information among physical systems. That can also enable organizations in adaptation with accommodation to their surroundings.
- W2: Surviving, beliefs and conviction tendency in minds about the world.
- W3: Surviving, sharable (objective), etymological definitions about the world.

2.4.9 Pyramid to wisdom and the DIKW model

Modern classification of information hierarchy includes four primary parts that are: data, information, knowledge, and wisdom and these ideas are directly related with each other and some way or another derivate from each other. There was a need to characterize and structure a model or some guide to discover the connection between the associated idea. A one of the best amongst the most celebrated models that have supported is called DIKW.

The DIKW pyramid, additionally observed around the world as the DIKW band of importance, intellect progression, knowledge order, information pecking order, then the data pyramid, indicates a category regarding models because of outlining secure structural and deliberate relationships in data, information, knowledge, and then wisdom. Information is described as like a way from data, knowledge related to information and intelligence as like far as like knowledge".

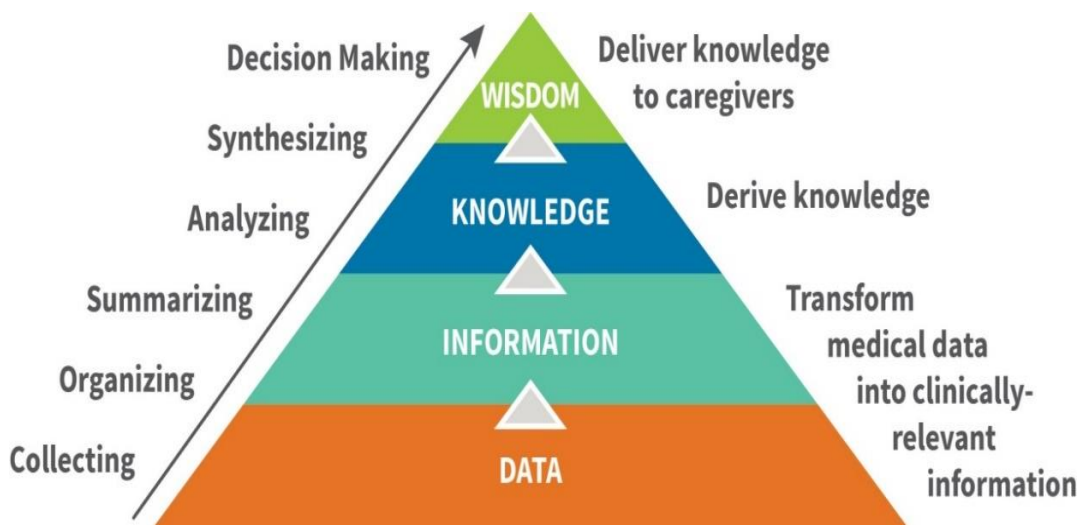


Figure 2.10: Pyramid till wisdom and the DIKW model

2.4.9.1 Data

According to the model the initial segment is called Data. Data is defined as images or token, showing signal or boosts. That cannot remain utilized at the beginning till combine with the other types by using and utilizing technique after it's soften and source. Zeleny (2005) portrays that class and its trademark namely "know-nothing". Also, like are partial progressive contentions among scholastics in relation to statistics ideas, incomplete on them timekeeper records so a sign and partial others apply it as like images, then partial share reflect inconsideration on records to lie a reality, every structure and standpoint has everyday components and additionally interesting.

2.4.9.2 Information

In the DIKW model second section is described as Information level, according to Rowley (2006) that is a sort of original knowledge, and individual obtain it from data by making it useful, information is derivative out of facts with the aid of doing specific process, or after processing it has meaning.

2.4.9.3 Knowledge

Knowledge is the appropriate collection of information, such that its intent is to be useful. Knowledge is a deterministic process. When someone "memorizes" information then they have accumulated knowledge. This knowledge has useful meaning to them, but it does not provide for, in and of itself, integration such as would infer further knowledge. Zins (2007) has viewed abilities as much intellectual issue rather than sensible and universal, whilst Zeleny (2005) has assured to that amount to seize advantage among representative form is in imitation of perform it of data then "All knowledge is tacit.

2.4.9.4 Wisdom

The fourth and the last level in the DIKW hierarchy is Wisdom. At this stage, when the knowledge from the before step is connected and actualized it gives wisdom. Wisdom is the top level came to in DIKW hierarchy and answers the Why question. Rowley (2007) properties the accompanying meaning of wisdom to Ackoff (1989): Wisdom is the ability to construct viability. Wisdom consists of value, as requires the intellectual potential so much we name judgment. The moral and esthetic values infer

are native in imitation of the player and are one over a unique and private. Finally, after the all definition that understands how data as a straight piece of DIKW hierarchy began to travel from the main level previously and turn into a wisdom that makes and causes organizations to upgrade the market value, anticipate the future advances, and plan the competitive advantages is delineate by the figure beneath which outlines inside and core ideas of each progression:

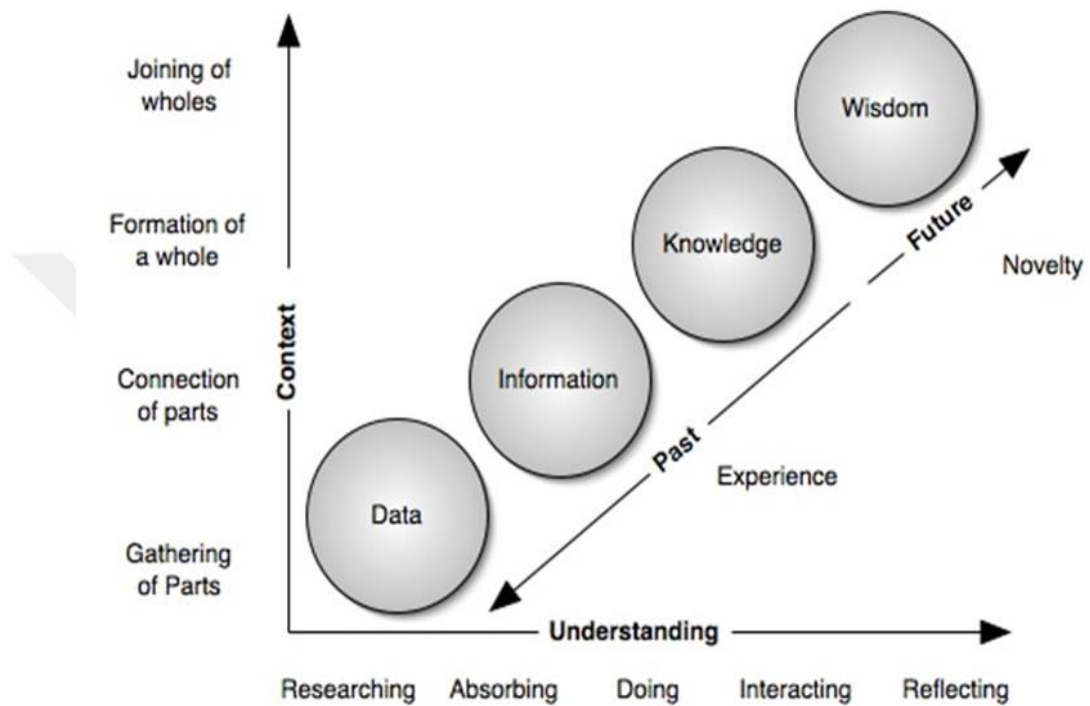


Figure 2.11: Core concepts of DIKW (Hey J. 2004)

2.4.10 The life cycle model of knowledge

The Knowledge Life Cycle Model is a quite modern for the Nineties which talks in relation to any other awareness of Knowledge Management Development. It is a completed knowledge technique lifestyles association opportunity, beginning along talents technology and collapse within marketplace. It is also concerning knowledge constructions inside commercial enterprise structures. Development consists of persistent decrease among circle period of the knowledge procedure cycle. (Divya Dinakar, 2009).

2.4.11 The knowledge management method

This model offers a significant structure according to catching, dividing and misusing knowledge and experience. Divya Dinakar (2009) verified that knowledge

management is an oxymoron. He defined that knowledge is something as related possesses to spirit of people and is not something that be able remain controlled and managed. Utilization about a little equipment and administration systems allow them to perform and stay ordinary as an institution and empowers the knowledge according to making, exploring, securing, sharing, refined, validated, exchanged, embraced, adjusted or connected. The accomplishment necessities according to a figured boundary for knowledge creation need to have:

- A reliable foundation and an entrepreneurial business enterprise (the correct Conditions).
- League model then high-quality equipment according to procedure of knowledge (the appropriate Means).

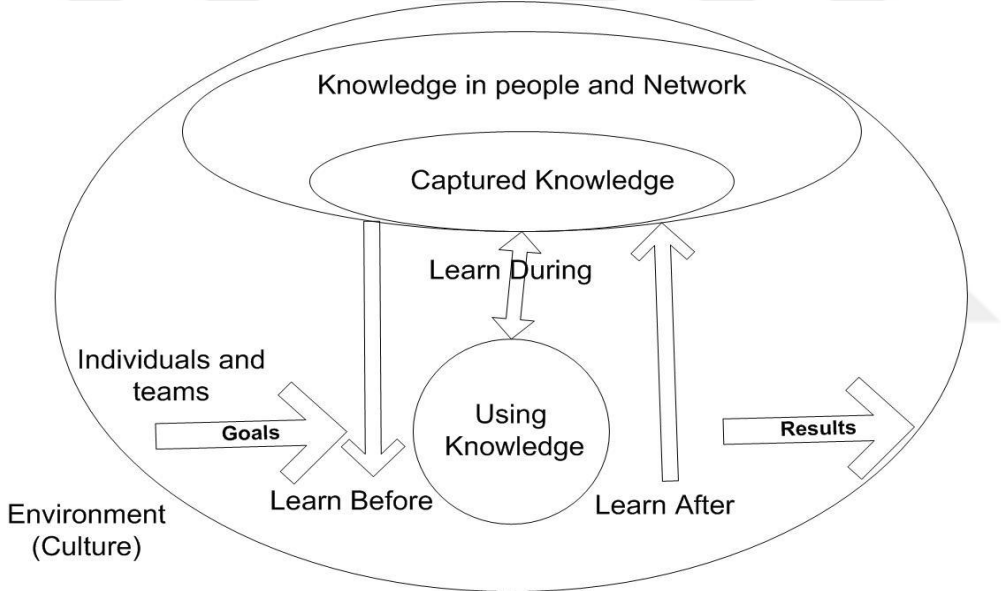


Figure 2.12: Role models to inspire learning and sharing (Divya Dinakar, 2009)

2.4.12 The model of six knows knowledge

The model is certainly one of the easiest knowledge management models. This pattern finds similarities among the DIKW model and the questions and it helps conformity with answer. The self -descriptive aspects of model shown under.

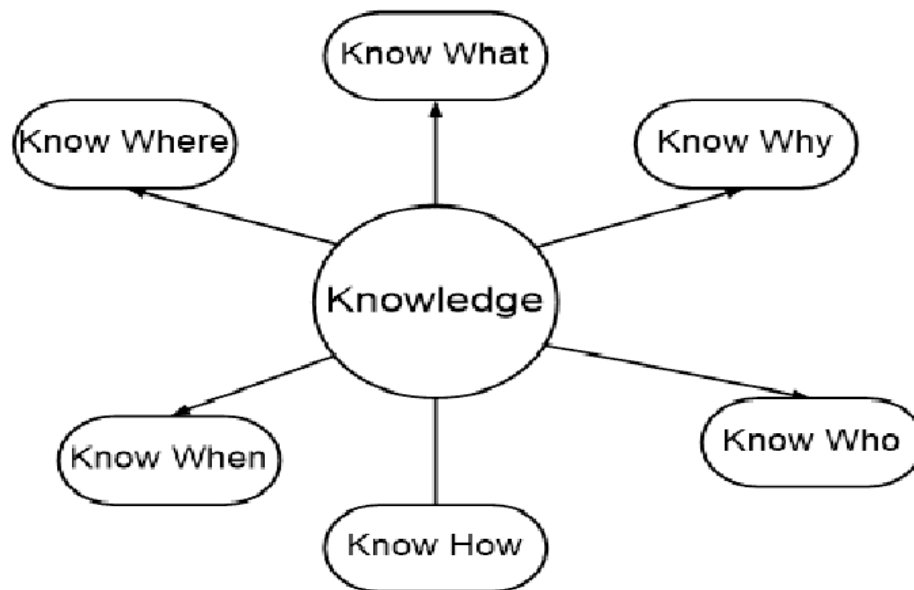


Figure 2.13: Six knows knowledge model (Levitt, B, 1998)

Know what, is the knowledge about how to find information that is adequately associated with external data. According to the definition, it creates the sense, so it can be connected to a valuable test for organization to find the important and right data, then use the collected data in the association's future make profit. It also depends on how administration faces the obstacles in this case to create balance point between internal source and external sources.

The "know how" is essentially implicit. It proposes that know how altogether related to the dominance of a persona and is more personal to people. Know how strategy is about visions and lets a person to offer suitable procedure expect certain results. Know how learning is existed in the social participation of people at communications and without it team can't work satisfactorily.

It characterizes knowledge as a system that can ready to express common and social viewpoints. It is possible that it is tacit or explicit. This frame is more engaging and relies upon the origin and philosophy of information.

It is mostly about tacit knowledge of individuals or society. Know who' knowledge also relies on capacity of successful participation among various kinds of individuals and specialists and is a fundamental for the organization knowledge. It is an everyday learning process among who are engaged with it.

2.4.13 Elements of knowledge management and KM assessment

Bhatt (2000) proposed details the components and its sub-components of knowledge management. Individuals, Process and technological issues that are isolated to the many parts help to give better technique. All the models are attempting to accomplish and actualize a capacity which disagree and bear on the competitive condition. Based on actual practices and encounters of the major worldwide KM contextual investigations, the component for KM can be generally and directly categorized into three classes-Individuals, Processes, and technology.

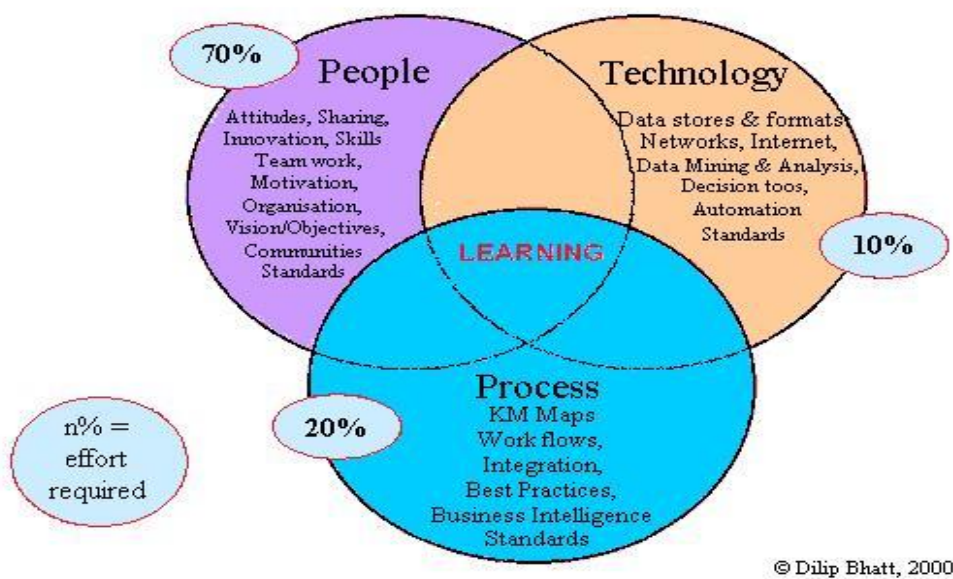


Figure 2.14: Knowledge component (Dilip Bhatt, 2000)

For setting up a learning and competitive organization and get great business outcomes there is needed for KM, these are the fundamental factor for the greater part of organizations around the world. Organization has to execute KM to set up Innovation and processes, while the "general population" factor has established the greatest challenges. The process factor is referred to the business processes of the organization.

These three components interface together, each of them having a bilateral association with each of the other two. For example, Individuals are engaged with planning and then working at Processes, while Processes determines the parts of, the knowledge required by Individuals (Armstrong M 2006).

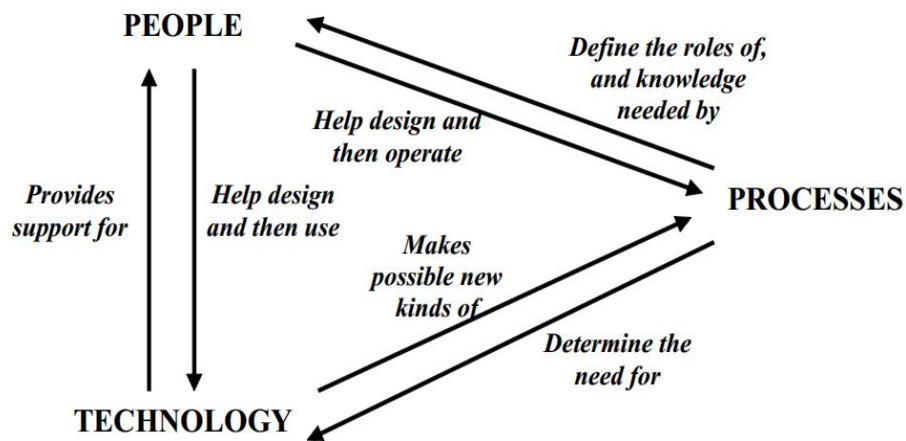


Figure 2.15: People, processes and technology (Edwards, 2009)

Due to the figure 2.15, it is possible to discover and conceptualize the inventiveness of knowledge management; the arrows are the pointed to position and the elements on the vertices. Cases of knowledge management activities close to the People would be related to dependence exercise and practice. For technology vertex would actualize supplies or learning based frameworks. The Process vertex would discover better approaches to work or to build up what association needs to accomplish. Associations can utilize this design to deliberately coordinate their management assurance, upgrading the learning benefits, and diminishing their deficiency. Knowledge procedure can be weighted as knowledge-based state where the assets and abilities match to the knowledge needful to help cases or administrations in cases. (Zack, 1999).

2.4.13.1 People

As indicated by the past investigates from the three segment of knowledge management – individuals, procedures and technology, individuals is the most essential one. The most important piece of knowledge management is knowledge sharing procedure needs hard and extra activities, for instance, making, sharing and using knowledge that are directly related and done by the general population. The two others, procedures and technology, can be learn in a proper way, so the important part to complete these is capital at long term and customers of these will be general population who works clearly with them or don't.

commonly, the working conditions and the society's way of life about working, and advance was formed base on competitions and endeavoring to be better than others,

this culture causes another issue and along these lines of vision people don't have energy to share their knowledge and enter valuable discussions. (Pilbeam and Corbridge, 2006).

As indicated by National Library for wellbeing, (2005) there are two key factors that make it hard. Some methods help individuals to participate at knowledge sharing, which are culture – associations or society – and personal practices. Sadly, these two factors incredibly connected with each other. Starting late, the examination on the general population segment and its part at knowledge management and organization knowledge is extended, considering the new finding in the management zone and the significance of scholarly capitals that is needed for the most part which related to the population. Likewise, some article considers it a branch of human resource administration. Several courses for human resource management impact on knowledge management are typically said (Armstrong, 2006):

- Create a new trustful culture in which the principles emphasize the importance of participating at knowledge sharing.
- Support a space of liability, accountability and reliance.
- Create procedures of authoritative and individual realizing which will deliver and help with dissipating knowledge.
- Educate on techniques with respect to awakening individuals to share knowledge and repaying the people who do in that capacity.
- About individual's administration and desire those to take an temptation at knowledge sharing in associations there are a few procedures and issues to help, for example,
- Culture – working by respect to it till, the work make possibility of changing.

For example, if the general population in organization has a fundamental conviction that searching for help means deficiency.

- Lead by example:

For a few people in an association, the line chairman or boss has most impacts their regular work, for this circumstance it is better that boss exhibit their activities and

inspiring powers, during the action and show how they will act and offer information with others as a superior way to deal with change and satisfaction.

- Arrange rewards and assessment:

In most case if individuals acknowledge that they will benefit by sharing knowledge, directly or indirect, they are more obligated to share. Kieslerand (1994) demonstrated that individuals will simply grant their knowledge to others if they see a prompt profit for what they do; it will be happen when those knowledge-sharing prizes exploit the costs when some person has as a fundamental need, for instance, time, danger for the action or respect. The arrangement and giving a not too bad authoritative reward structure may aliment the general population to share their knowledge. As per the IBM (2008) the most vital difficulties happen while executing change facing individual's positions.

Every Organization has a structure and forms, so these work levels with each other, as indicated by the definition a great part of the time has used to acknowledge of Regular procedures. Procedures and connected sub spaces required for association should recognized, made and maintenance at hierarchical level. It must be accessible to the procedure executors for ensuring that it meets the material measures, methodologies and models. This procedure contains specific that figures out what work is vital to play out the objective, by distributing those endeavors to individuals, and sorting out those people groups in the required parts, for instance, fundamental authority systems.

The fundamental goal of usage regulated, adaptable and predominant organizational process is to achieve competitive advantages at market successfully and effectively. When the organizing process isn't worked well, the yield result might be faced multilateral quality, dissatisfaction, loss of proficiency, and restricted sufficiency.

For studying the impact of process and utilization on organization, a couple of cases must be see continually and sought to know whether it isn't extraordinary, find the game plans, for example, association must careful the probability of access to information at each level of it, the authoritative chain of importance is totally characterized smooth to ensure the flood of knowledge or the obstacles neutralize it. Most perfect way to deal with comprehends whether and how an association's foundation and procedures are aiding or blocking individuals is to ask them. (IBM, 2008).

2.4.13.2 Organizational culture

Organizational culture includes an organization's expectations, experiences, philosophy, and values that hold it together, and is expressed in its self-image, inner workings, interactions with the outside world, and future expectations. It is based on shared attitudes, beliefs, customs, and written and unwritten rules that have been developed over time and are considered valid. Also called corporate culture. The values and behaviors that contribute to the unique social and psychological environment of an organization. (businessdictionary.com)

Each Organization includes four main section: at the first look the physical aspects of any organization are clear, the second and intangible part are discipline and activities for managing and establishing work at the infrastructure aspect, the behavioral part is about common activities and reflexes of staffs, at long last the essential suppositions, qualities, convictions and standards that shape day by day conduct is and social. While executing change at the "higher" levels is conceivable, as the accompanying realistic recommends, the toughness of the change is brief without change at the basic social level (Russell, 1989).

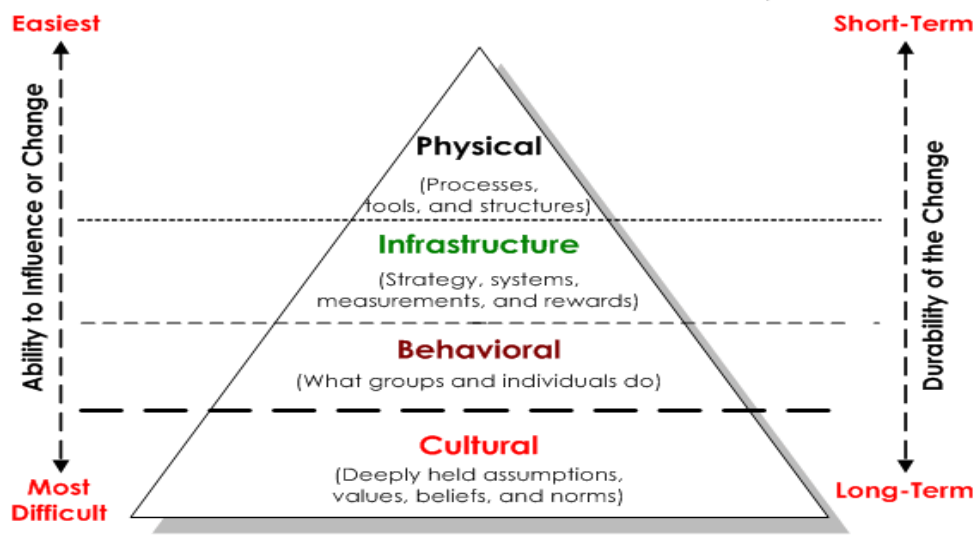


Figure 2.16: The four level of organization (RussellConsultinginc.com)

2.4.13.3 KM technology

The third part of KM is technology and its application. Rodriguez and Edwards (2009) stated that third part of the knowledge management is KM technology; in recent years due to rapid progress at computer science that provides powerful tools to gathering, storing and analyzing data there is a strong focus on information technology (IT). IT helps and provides many applications which enable knowledge management implementations easily.

Nonaka and Takeuchi (1995) stated that IT has a critical part in bearing of knowledge generation systems. Considerations about socialization part shows that, procedures must be defined according to the relationship and correlation among persons as a peer-to-peer or within team member, in this case IT is very important, because it enables having structures that individuals can able to interact, communicate by the IT tools. The tools facilitate the socialization processes. For example, numerous associations make business catalog that incorporate the information about specialists and their field of mastery. Such business directories encourage socialization by indicating the wellspring of implicit knowledge (Zack. M,1999).

- Externalization: This level is about changing of implicit knowledge to the explicit knowledge, by help of procuring knowledge methods, apparatuses and frameworks can encourage the way toward changing over in various form. The mixture of change, examination and social occasion gave unequivocal knowledge accessibility. The KM procedure tolls have critical part at this blend, by supporting correspondence and encouraging it.
- Internalization: changes explicit knowledge into implicit knowledge. In which the Knowledge can be founded and sifted and distinguished all should be possible by utilizing fitting It apparatuses, while investigation and introduction capacities are helpful in acclimatizing knowledge from its explicit frame into implicit shape.

According to the Business Dictionary, Organizational culture (2015), technology is important facilitators and initiatives of knowledge management. Technology may affect and push knowledge management systems in two main ways:

- By providing tools and instruments for staffs to observation, spread and access explicit knowledge, information and other related aspects, for instance, in stored electronic records or big data.

- By creating special infrastructures to person with person so they can communicate and contribute tacit knowledge, for example, through forums, video or audio chatting tools.

One of the critical considerations that must be seen about development is that Innovation incorporates validity when it diminishes the cost, time and exertion required for individuals to participate at knowledge sharing. Any business capacity that is in type of reports or databases as explicit knowledge or staying in individuals' brain as implicit knowledge can be gotten by KM process. 95% of information is put away as implied knowledge which helps business in winning flighty and focused conditions. In a perfect knowledge association, individuals exchange knowledge across completed functional territories of business by using enhancement and developed Process.

2.5 Barriers and Facilitators to Knowledge Sharing

Needle, David (2004) indicated the practical sharing of knowledge among organizations parts is getting to be noticeably huge and vitally important for accomplishment of it. Perceiving the complexities and challenges of activity and polices of any technique or usage of knowledge management is fundamental and supportive for organization directors. There are such a significant number of knowledge about the ideas of knowledge management, KM techniques, best practices and how the organizations can ready to build up knowledge – based framework to utilize their beneficial advantages, what are the key required instruments and finally the systems and procedures for accomplishing the organizations goal at competitive market, the basic core of the most examinations have been locked in at two level of issues ,ones are the barriers ,which infers what makes it difficult to achieve the desire point ,what sort of issues go about as the barriers ,the others are called facilitators which help to move effortlessly ,continually among the KM process and achieve the goals with bring down cost.

2.5.1 Knowledge-Sharing barriers

knowledge management rehearses show that numerous organizations neglect the quality of experience that aggregated in their past projects when they choose to apply and utilize it in new projects, the primary driver of this sort of disappointments are specifically identified with the thinking little or misunderstanding of the barriers at organizations level. Understanding the obstacles that make the sharing and exchange of knowledge hard is the initial phase in distinguishing potential arrangements.

Barriers may show themselves in various kind and diversity, they can be characterized in many classes according to the circumstance that organizations look with the projects or issues amid the activity mode. The two-major categorizing method have examined among analysts, one has the global perspective about prohibition and group them as internal and external barriers, and the other goes further at the knowledge management model's component as personal, organizational and technological barriers. The two orders are helpful to building up the knowledge management frameworks (Martínez Sanz, M. 2016).

Martinez (2016) recommended two of them as external to the project (however internal to the organization) and internal to the project, although, they are firmly related. The external barriers would incorporate all those obstacles that keep the exchange of knowledge over the organization (the between project level). The internal barriers would concentrate on the deterrents that make knowledge sharing between individuals from the group troublesome (intra-project level).

2.5.1.1 Inter-project level barriers

In functional organization staff and individuals are connected by regulations. Typically, their knowledge is in every division. Project groups can get to the knowledge and involvement in a specific branch of knowledge just from the records of a division, or by reaching the people working in that office.

The utilization of learned lessons is an endeavor to limit this issue, although there is restricted confirmation of the usage of the collected lessons from one project into another one. Practice demonstrates that colleagues are frequently enrolled for another project even before their present project has completed and there is almost no opportunity to catch their accepted procedures and learned lessons. Contrary to when this information is gathered and reported, it is normally not listed or organized in a

way that other groups could utilize it. As a result, numerous organizations can't gain from their past encounters and known slip-ups are probably going to be rehashed (Andreas Riege, 2005).

Organization's culture is created by the normal encounters and practices of its individuals after some time. As expressed in A Manual for the Project Management Assortment of Knowledge, basic encounters include: shared values and convictions; controls, methods and strategies; inspiration and reward frameworks; chance tolerance; administration, hierarchy and authority relationships; set of accepted rules; and work ethic, and so forth.

The culture and style of an organization impact its knowledge-sharing behaviors at the inter-project level. There are two measurements of the organizational culture: the level of internal against external concentration, and the relative solidness or adaptability of the organizational structure. These two measurements make four quadrants that speak to four culture sorts:

- Family and corporate manifestations.
- A flexible, adaptable, and informal organizational structure.
- Culture of ordering and hierarchy.
- Culture of marketplace.

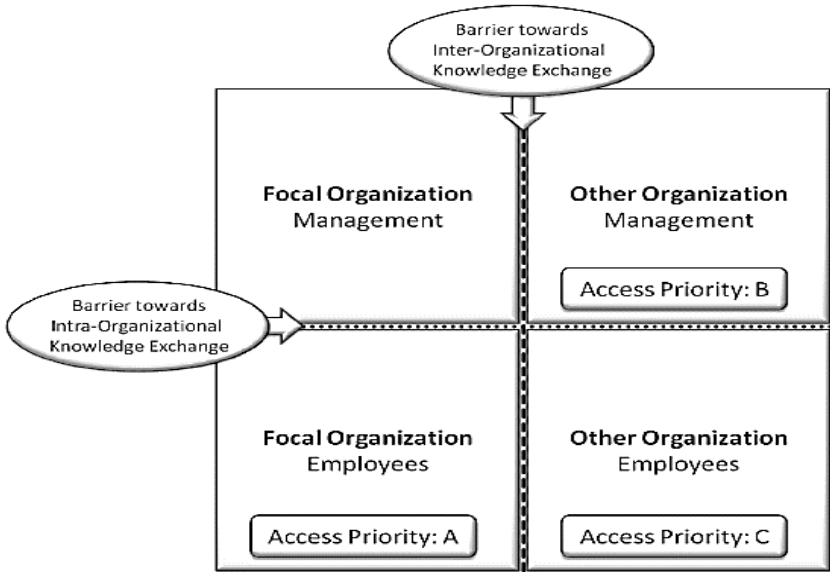


Figure 2.17: Barriers for intra-and inter-organizational knowledge exchange (PMI® Global Congress, 2016).

2.5.1.2 Knowledge sharing barriers for personal

Andreas Riege, (2005) categorized the major barriers at personal and organizational level as follow:

- Timing issues and problems to knowledge sharing, and correct sense of need that makes them to participate in learning special knowledge.
- Danger of sharing may create bad condition or endanger job consistency.
- The lack of acknowledgment and awareness of the benefit and privilege of knowledge sharing among others.
- Dominance due to sharing between explicit or tacit knowledge, for example, experiment that needed in attainment, understanding, argument and interactive critical thinking.
- Application of strong sequences and situation-based status or formal power
- Contradiction in experience Stages.
- Timing conflicts and connection between learning sources and recipients.
- Weak communication between team.
- Age differences.
- Gender differences and contrasts.
- Absence of public media and network.
- Differences in management levels.
- The ownership and license property make the people not to participate.
- Shortage of trust climate among individual when they sense abasement knowledge or not satisfy with rewards for it.
- The differences and multi-cultural issues and structures.

2.5.1.3 Sharing barriers for organizational knowledge

At KM methodology and sharing facilitators in organization's sharing issues include:

- Low quality and complex expertise or administrative issues.
- Inappropriate official and unofficial atmosphere to participate in sharing, mirroring and creating (new) knowledge.
- Clear and strong condition of rewarding system at organization may encourage staffs to share more of what they exactly know.
- Solid organization culture does not have sufficient assistance to sharing workout.
- Organization wealth deficiency that would jeopardize satisfaction of sharing opportunities.
- Connections and information streams are restricted into management.
- Difficulties at labor physical condition and nature of jobs restricted knowledge sharing.
- Conflicts and harmful competition between business section, and supporters may affect in opposite way.
- Large scale of structure and possibility of unmanageable. (Andreas Riege, 2005).

2.5.1.4 Technological barriers of knowledge sharing

- Lack of knowledge about IT technology and applications, restricts people from sharing knowledge.
- Lack of proper internal and external supports related to IT systems prevents doing sharing done.
- Imaginary expectation of IT framework's ability at doing tasks from staffs.
- Construction of IT systems without recognition the correct need and expectation.
- Lack of sufficient awareness of new and updated IT frameworks and systems.
- Lack of correlation and misunderstanding the advantages of any new chassis and old ones (Andreas Riege, 2005).

2. 6 Knowledge Broker

According to the accepted definitions, knowledge broker is a mediator that can be in the form of an association, or group of people or man, that expects to create connections and systems between makers and clients of knowledge by giving connection route to the source of knowledge. There are such enormous quantities of different definitions for term of knowledge broker due to the field that it used, each of them has the consistent center of vision, part and limits. Knowledge handling is a developing field where the focus is the creation, exchange and use of information between individuals (Holgate, 2012).

Migle and Caroline (2001), defined at published paper that entitled 'The Theory and Routine with respect to Knowledge Brokering in Canada's Health Framework' dispersed by Canadian Health Administrations Exploration Establishment (CHSRF) in 2003 evidently analyze the information dealer's ability to support association, find, process and modify learning in different settings.

The idea of knowledge brokering is additionally proposed by Pawlowski and Robey's (2004) where the knowledge broker is a knowledge exchange facilitator. Knowledge agents act as facilitators and help systems to exchange knowledge, in some case their action is the art of connecting and establishing relationship between collectors of information, providing exchange stream between engaged people, creating and consulting about new method of exchange among the process. (Wenger, 1998).

Knowledge broker could have important role based on the working section, for example, wellbeing and social care settings, including for example between boss, personality co-facilitators, chiefs, experts, advantage customers and investigators. As a middle person, knowledge broker will at a breaking point condition in which needs to stay and connect two different side of exchange together and role will be defined due to commitment and depends upon who are the two sides that need to connect with each other. In some cases, movement at two sides may causes unexpected events and results. As indicated a knowledge broker acts as a man who fills in gaps between at least two sides, creators and users of association, so they are called 'limit spanners' (CHSRF, 1999).

A most dominant place that knowledge broker may act are different marketplaces and innovation fields. Knowledge broker's idea is mostly related to the nature of

knowledge excess or surplus. At academic level which is called academic knowledge broker, they are portrayed as workforce renders benefit as medium between researchers and organizations. They help the framework by building up solid relationships with directors, strategy producers and specialists as a trusted gathering by the two sides, the part is to give better understanding, inventive arrangement, find and fill the holes among the different piece of any required processes. In the most profound form of definition, the academic knowledge brokers have a sort of dual part as knowledge generator and knowledge broker (MacDiarmid C, 2009).

The primary goal of a knowledge broker is to transmit and consider discoveries from the academic exercises in which knowledge is required, for example, organizations, industry, health administrations and open by associating the knowledge generators to the individuals who required it (Canadian Health Administrations Exploration Establishment, 2003; Holgate, 2012).

Knowledge brokers participate at the knowledge management frameworks for the most part have equaled as a facilitator, that demonstrations to exchange the knowledge and accept dreams of technique among individuals and organizations to achieve the competitive advantages.

There is one general hypothesis that a knowledge broker does not act as manager among the recorded in whom they act, also they have close or direct relationship with pioneers. The knowledge broker may be arranged outside of the customary authoritative chain of command, (for instance, regarding assigning the financial plan or execution managing the outcomes). They will move between validate headway and practice change; they may try to be reasonable in picking data and chances to affect the people who are organized in either side of the evidence practice limit (Lomas J, 2007).

2.6.1 Knowledge broker functions

Because of the idea of Knowledge, it is not a concrete subject and depends on a broad classification of components, for instance, condition, time, administration, people or the development of new knowledge. It is also affected by the dedication, theories and experiences that people or collectors get or hold. Knowledge can be an insecure and muddled thing. Vicky Ward (2012) portrayed this well in her paper on knowledge exchange, which is appeared by her 'one-celled critter' demonstrate (underneath).

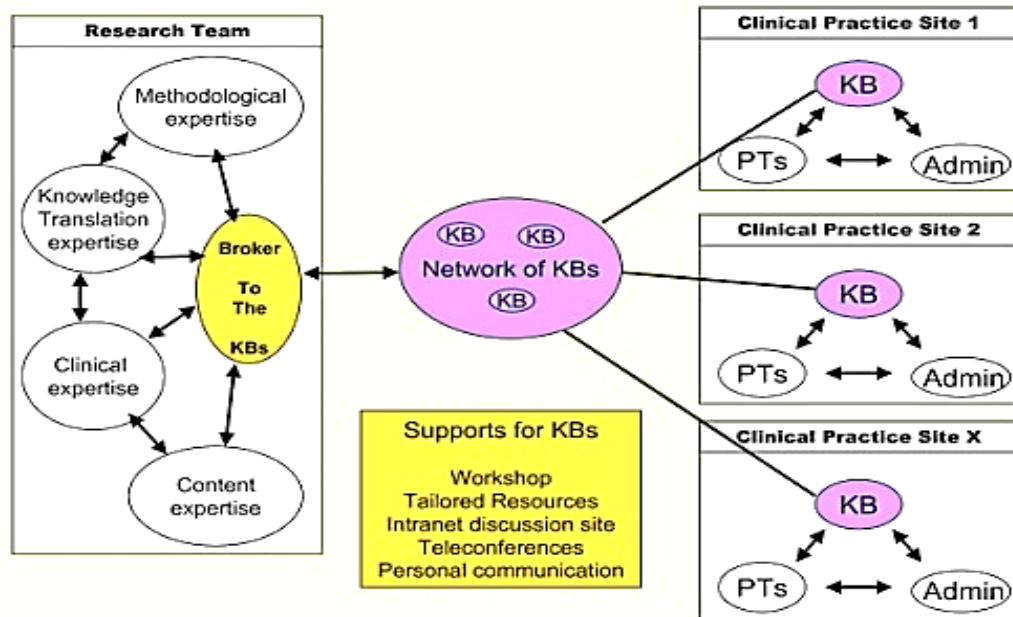


Figure 2.18: A broker to the knowledge brokers (KB) mode (Vicky Ward 2012)

The most generally known knowledge brokerage idea was depicted by Hargadon and Sutton in 1997. Innovation brokering that changed to the knowledge broker is depicted as an organization's capability to enact its network structure to achieve different knowledge, recombine it and exchange it to other fields.

Hargadon (2002) indicated that the dominant part of a knowledge brokers are recombination of expansion of resources when people inside the knowledge organizations connect and participate in sharing and exchanging of knowledge at the case of authoritative culture.

Knowledge brokers act as middle person to empower the stream and exchange of knowledge from where it is made or goes to where it is required, so it brings the supporting co-change and improving the creative remote reaches of organization in their system. Ordinarily the knowledge brokers energize the right utilization of the best open research affirm in fundamental authority forms, upgrading individual and authoritative capacity to organize suitably in demonstrate educated essential administration. In this setting, knowledge brokers lead into uses (Goering, 2003).

These knowledge brokers' action model outlines basic qualities: knowledge brokers need to move between numerous limits for access to knowledge. At the point when knowledge is obtained, it is accumulated and recovered for the knowledge brokers' needs; finally, it is extended. The authors recommend the new model that completely

incorporates the process steps. The proposed model comprises of three associated part, the initial segment is states of knowledge brokerage, and the center is knowledge brokerage process and finally the results of knowledge brokerage. All parts are associated and have criticism to each other because of the level of process and steps (Migle and Caroline, 2014).

2.6.2 Conditions of knowledge brokerage

Hargadon (2002) grouped that process of knowledge broker into three sections: individuals, organizations, and networks. Environmental fractures or just isolated parts of organization, geographically or managerially have coordinate effect on the knowledge broker exercises. the level of moving state, basic leadership, access to information finally the position among many staffs or groups with the defined authority are determine the exceptional of knowledge brokers affect amid the projects and process.

Theoretically several frameworks, including structural gaps and groups of training have been utilized to conceptualize fracture. For the structural openings' theory (Burt, 1992), knowledge brokerage oversees the incomplete pieces, and to the subsequent structure of competitive arenas. Organizations just have a set number of alternative accomplices, and accomplices seek, withdrawal is related with taken a toll. In this unique circumstance, structural gaps insinuate the nonappearance of an association between two contacts that are both associated with a third performing artist. The most vital resources for firms that act as knowledge broker are its staff's. The act of Knowledge broking requires that association has ability to process a critical measure of Knowledge. Organization atmosphere also has deeply impact on knowledge brokerage activities (Hammami, 2013). When an organization's tendency and entire attentions dictated by very restricted and solid authority, it will undoubtedly affect the role of brokers. For those organization that improving of knowledge brokerage is vital, they should conduct their improvement in that direction, for instance by improving a new ideas and period of reflection in sharing of normal assignment(Worren, Moore and Cardona, 2002), so it gives insurance that knowledge brokers be able to manage themselves by their knowledge and their correspondence organize.

2.6.3 Knowledge attainment

The process of extricating, knowledge source organizing, in most cases, human specialists is called Knowledge acquisition. In this circumstance, knowledge may be held by various parts and knowledge brokers must navigate various breaking points on their assignments. It needs to clear comprehend about the affiliation and outskirts of related parts that have related and isolated knowledge; the knowledge agent is the responsible for interfacing distinctive parts to better trade of knowledge. Moreover, enhancing knowledge brokers get a significant measure of specialized knowledge to totally comprehend the activities of players in each field they interface with (Jacobson, 2006).

The limit broadcast over reliably isn't a direct procedure, as a rule it is hard and complex. Levina and Vaast's (2005) had examination about information systems execution in two associations underlined the piece of authenticity and realness in limit crossing 'Credibility is a turned and complex case including both the unsettling influences of vitality relationship and the exchanging of capital. Brokers require both working up their credibility and to set up and control expel with a specific end goal to acquire and to pass on new knowledge. Because of the significance of the knowledge securing and the way that knowledge essentially contains unmodified and unstructured shape, knowledge brokers need constant learning venture to see new strategies to deal with the moving toward issues. Knowledge, are harder to get the chance to, gain, orchestrate and use than others. The published research by Polanyi (1958) is one of the basic cases in tacit knowledge nature and suggested that implied knowledge is mostly in individual's mind, very difficult to capture.

2.6.4 Knowledge integration

Knowledge translation (KT) is a mind reflection and multidimensional idea that needs a broad understanding of its systems, methods, and estimations, main element of it, and the functions, how it can make connection between personal level and contextual levels.

Traditionally Knowledge Translation (KT) has been depicted as a dynamic and continuous procedure that incorporates the blend, spread, exchange, and morally stable utilization of knowledge to set down well-being, give more capable well-being organizations and things. (Canadian Organizations of Health Exploration, 2009).

A critical for KT, as showed by Cihr (2004), is that it circles all means between the age of new knowledge and its application to achieve beneficial outcomes for society. Essentially, KT is an interactive process supported by successful exchanges between analysts who create new knowledge and the individuals who utilize it. According to the definition by Cihr, bringing clients and creators of knowledge together amid all phases of the examination cycle is fundamental to effective KT. The qualities of KT can be compacted as takes after:

- KT incorporates all means between the formation of new knowledge and its application.
- KT requirements multi directional correspondences.
- KT is an interactive process.
- KT requires progressing collaborations among important gatherings.
- KT incorporates different exercises.
- KT is a nonlinear process.
- KT underscores the utilization of research-created knowledge (that might be utilized as a part of conjunction with other sorts of knowledge).
- KT includes various knowledge-client gatherings.
- KT is client-and setting.
- KT is affect oriented.
- KT is an interdisciplinary process.

Also, there are KT frameworks that depict the steps of the KT process that generally called Knowledge to action process:

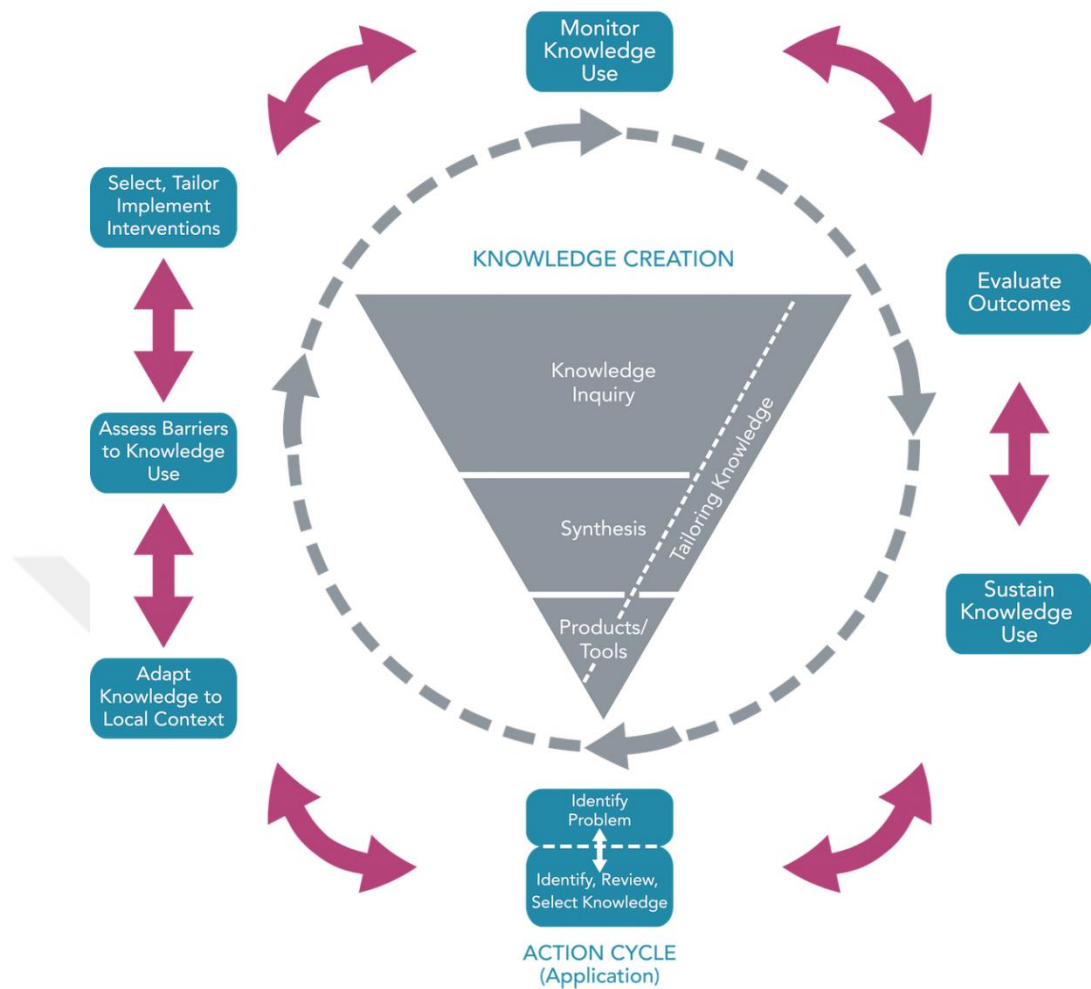


Figure 2.19: Knowledge to action process model (Cihir, 2004)

The KB part is also defined as progressing two-part understanding and provide connection among experts, pioneers, and creates dominant comprehension of environment and societies for who engaged at process, also helps to establish comment joint venture at improvement strategy.

Knowledge brokers associate the basic leadership parts of organization to the specialists for better understanding each other's motivation, exercises cultures, and limitations, and can make basic space to utilize confirm in basic leadership.

According to the distributed article by Conklin, J., Elizabeth Lusk, E., Harris, M. and Stolee, P (2013), the KB exercises include:

- Establish relationships among various gatherings of people with basic significance and goals.

- Upgrade and propel corresponding comprehension among these social events.
- Simplify and overcome to interchange issues of knowledge above social restrict that make the collection difficult.
- Simplify operations and exercises of social interaction as a component for achieving knowledge trade.
- Establish boundaries and limits inside these gatherings to go about as a group to discover, make, offer, and utilize knowledge activities.
- Trace the organizational obstacles and improve that regularly to direct knowledge exchange.
- Engage in analytical errands that are related with the above exercises.

2.6.5 Issues in knowledge brokering

The Canadian Health Administrations Exploration Establishment held a workshop in 1999 to discover the issues expanding in association and trade models. There were several fundamental structural hindrances inside government, examine financing organizations and colleges which keep linkage and trade from occurring. Subsequently, the workshop distinguished an unmistakable accord about the requirement for knowledge brokers it was less certain where the duty regarding such a part lies and where the assets and structures required supporting such a part would originate from. Obstructions recognized included:

- Absence of familiarity with brokering and associated exercises about venture arrangement and absence of acknowledgment of the costs engaged with keeping up joins before and after financed projects.
- Disincentive to linkage and trade gave to the reward frameworks to scholastic.
- Headway and chairmanship which perceives professional's brilliance and productions however not usage of research in strategy.
- Absence of establishment to fabricate association and interchange infrastructure, work force, and foundations.

- Reforms and asset restrictions which diminish the capability of health benefit.
- Organizations to incorporate proof based basic leadership.

After that workshop, they gathered arrangements and suggestions for these issues that include:

- A survey of college inspiration structures.
- Long-term programs adjustments which consolidate linkage and trade exercises.
- Investment projects which advance the improvement of abilities and infrastructures in research, association and knowledge transmission.
- For strategy making structures, a recipient capacity ought to be built up to perceive and arrange the necessities, get examine and oversee relationships with partners, for example, analysts.
- Funding structures should support correspondence in their processes, desires and rewards (Cihir, 2004).

2.6.6 Support structures

Nuyens and Lansang (2006) made an exploration for World Health Organization that demonstrated much helpful information about knowledge brokering from WHO knowledge translation activities. They mentioned that frameworks for connecting examination to activity are a fundamental component. Knowledge brokering is an approach to overwhelming the major obstacles intrinsic in association. Among large organizations with complex and unbendable structures and customs, and staying away from these dysfunctional structures by utilizing interpersonal association through captivating, knowledgeable and exceptionally confided in individuals.

These days the models of knowledge processes and frameworks are toward the start of an extended, difficult experience way, and exchange is still in their beginning times, clearly knowledge brokers can't act without support structures.

According to the definitions specifications of a knowledge broker are their capability to help association between two cultures of strategy making and research by understanding where they are found and to who their essential loyalties are.

Knowledge broker is an individual from an examination unit to related issues that need to expand.

Specialists need secure separation from strategy producers to prevent from seen by their organization as an operator, so it expands trust among teamwork. By picking legitimate management tools and defends, it is conceivable to keep away from clashes between scientists and strategy creators and give secure honesty to have advance.

Goering (2003) led various measures the investigators must take amid a project to determine clashes and secure the trust of all collecting.

These include:

- Frequent meetings between companions to discover assessment and build up a mutual work design.
- Conversations about cultural decent varieties, contrasts, meaning of obligations and procedural inclusion in order to understand each other and construct trust.
- Establishment of regular relationship to ensure the objectivity of the exploration. Managerial staff participates in the consultative board as individuals, not speaking to the official perspectives of strategy producers.
- Having clear definitions and hotspots for the consultative council to clarify meaning of parts, obligations and accountabilities. The specialists oversaw the final item.

2.7 Knowledge Sharing Facilitators

The most challenges for any organization are about using knowledge (Gupta and Govindarajan, 2000). if knowledge sharing can be applied it may prompt expanded creative execution, and decrease the capital and assets wasting (Bohn, 2000). However, knowledge sharing does not easy and simple task. Individuals ability at preparation and participate in knowledge sharing is a main obstacle for economical knowledge sharing exercises, Therefore the quantity of articles, books and courses

breaking down how to conquer these boundaries have happened, and how to defeat them.

Knowledge sharing is encouraged by the working of motivators, implying that additional motivators increase additional expenses and diminish-a specific kind of knowledge sharing conduct (Cabrera and Cabrera, 2002). An essential part of sharing is the tools and procedures that provide motivations and connections to expand person's ability in sharing of knowledge. Motivators for encouraging sharing could be tangible and intangible prizes, and an expanding measure of research focuses on that non-monetary prizes are much more critical than monetary prizes (Osterloh and Frey, 2000).

A few analysts show that emphasizing monetary depended rewards can create better facilitating tools for knowledge sharing (Foss, 2003), however the directing method of wining at examination among knowledge sharing systems depicts the fact that knowledge may be considered as yielding force, and despite the fact that people appear to act naturally enthusiasm chasing, knowledge sharing can be facilitated by non-financial related prizes.

2.7.1 Knowledge sharing field

Knowledge sharing idea has been used all around for many decades. Logically, this idea was picked up an enormous temptation, and professionals recognize understanding and verifying the fact that facilitating methods for knowledge sharing have intense difficulties. As Torsilieri (2001), was underscored, there is very difficulties in reporting any positive consequences of using knowledge sharing tools, strategies and theories. The assignment and investigating issues that knowledge load sharing involves, and why those issues come out and in what way or manner to force them proceed, even though people inappropriate to understand optimistic side and authoritative execution to sharing activities, there is no choice but trust that sharing of knowledge can emphatically impact credible execution. (Hansen, 2002).

The target of information sharing can be conceptualized in the form of continuous sequence and reaching from examination of new knowledge through restored and blend of current information to mismanage of existing information (Grant, 1996; Szulanski, 1996). In other words, the sharing purpose of knowledge can study new knowledge or misuse current knowledge, which is a fairly systematic refinement as a

result of which repetition may frequently involve some portion of the two procedures (March, 1991).

Most published-on misusing of knowledge is generally worried about in which way prepare hierarchical accepted procedures empowering a more productive use two sides as personals and managers knowledge. Sharing of knowledge expand in two sides and crosswise over hierarchical limits, and includes diverse authoritative settings, for example, provider relations (Takeishi,2002), client bolster, casual between firm relations collecting of exercising (Brown and Duguid, 2001).

2.7.2 Knowledge sharing exchanging role

Considerable measures of current pieces on information sharing have incorrectly anticipated that knowledge sharing would be an immediate system where information streams from a sender to a beneficiary. Knowledge hypothesis model, in which determination is generally measured by the quantity and all particularly identified with recognizing "the measure of information related with, or produced by, the event of an occasion with the lessening in vulnerability, the end of potential outcomes, spoke to by that occasion or situation" (Dretske, 1981).

Following the contentions of humanist Georg Simmel each collaboration between people can be viewed as exchange. A test in survey human communication as circumstances of exchange is to distinguish what is being exchanged, and how the exchanges are made, advanced and supported. In other words, there are a few measurements of a exchange prompting different at kind models of exchange.

The communication of individuals is based on delivering and restoring the indistinguishability. Identicalness from numerous blessings or exhibitions is able to implement. Every monetary exchange at the form of reliable document, for every settled assertion concerning about administration, at all commitments with official permission, a legal formation implements to make guarantee for correspondence of administration and return benefit social balance and union don't exist without it. Be that as it may, there are likewise countless different relations to which the authoritative document does not matter, and in which the authorization of the proportionality is not feasible. Here appreciation shows up as a supplement. It sets up the obligation of cooperation, of the correspondence of administration and return benefit,

notwithstanding when they are most certainly not ensured by outside intimidation (Simmel cited in Blau, 1964).

Since people identify with each other in various ways, diverse standards of correspondence will be in question in various sorts of trade (Fiske, 1991). The inspiration for moving knowledge is as such the desire to get something consequently, and what is being gotten in kind – what's more, when and how it will start regress and relies upon the exchange model. Sharing of Knowledge is, consequently, considered as a way toward knowledge exchanging a pledge to respond to various cases, for example, financial knowledge, related prizes or appreciation.

Organizational exchanges occur inside organizational limits, and senders of owl edge are repaid either formally or casually. Formal pay is very like financial exchanges – aside from that they are installed inside associations. Formal pay regularly appears as advancements or rewards (Foss and Mahnke, 2003), so people asses activities and the compensation for the tasks that they done. As such, formal pay depends on formal prerequisites to person's organizational conduct, and if people don't agree to these prerequisites they will – in the end – be barred from the association. Organizational exchanges do additionally concentrate on more casual remunerations, for example, being selected as "representative of the month" or generally wind up noticeably known as a remarkable contributor to organizational performance. Authoritative exchanges are organization method for controlling, in which essential mediator of principles among the knowledge creator and user.

2.7.3 Knowledge Sharing Facilitating

Organizations have structures such as social kind, including various financial approaches that help them to supervise exchanges among individuals, difficulties that caused by leading behavior and development plans. To persuade individuals directly participate at sharing process and be active at knowledge creation, facilitators are needed. (Jones, 1983).

Motivations are beneficial because make individuals to participate in various leveled work that theses job are possible to take and done. In different words, individuals will

be led to participate in knowledge sharing when they get something as a byproduct of the knowledge they share. What they share depends on which model is used and accepted by organization reward system. (Cabrera and Cabrera, 2002).

Sharing of knowledge that related to rewards will makes less knowledge evading and more knowledge sharing. Facilitating knowledge sharing does not make noticeably simplicity, but it facilitates the procedure of exchange and according to this fact that the motivations at work are diverse due to the circumstances and have different impact on sharing at different person. (Podsakoff, 2000).

Associated process including an exchange in which the people try to transmit knowledge with significant worth or achieve of significant worth. The things that people donate or collect is some aspects of motivating forces, Fiske (1991) has cleared diverse kinds of swapping include distinctive sorts of counteract.

2.7.4 Knowledge sharing facilitating by using organizational structures

Management consist of numerous varieties regarding structures, for example, configuration offices, Organizations consist of diverse kinds of structures, for example, formal offices, calamity groups, organizations concerning practices and informal systems. Each structure has its own specific qualities relating to what is the inspiration driving the structure, that consist of aspects that keep both structured foundations and which are connected the structure together. (Wenger, McDermott and Snyder, 2002).

Essentially, knowledge sharing is possible to formed as different conditions of interchange smoothed through different sorts of definitive structures. (Katz, 1964).

Any rewards and prizes form framework are motivators conceivably accessible for the authoritative part so staffs have been proposed in keeping up an adequate stage of knowledge sharing exercises (Katz, 1964). Structure prizes might be outward, for instance, pay, progression or reward portion, or natural, for instance, extended reliability or testing and contrasted work. System prizes can in like manner be depicted as nonspecific compensates as in they are conceivably open for every single definitive individual contributing earnestly to knowledge sharing.

Those rewards that related to Individual `were restricted about individuals from official or accidental authoritative component, for example, groups of practices, useful

groups or formal offices. Singular prizes can be extraneous, for example, financial prizes, and inborn, for example, confiding in social relations to partners. Person prizes can likewise be designated as confined prizes, since they not just rely upon how well representatives add to knowledge sharing, yet in addition on participation of specific hierarchical sub-units.

However, the sorts of hierarchical structure facilitating knowledge sharing must not exclusively speak to mixes of outward and characteristic prizes, and non-specific what's more, limited prizes. They should likewise envelop the three distinct circumstances of exchange talked about before. Authoritative enrollment yielding either outward or natural prizes, it is conceivable that take prizes as a stage by stage interchange in which contributing by sharing of knowledge is illustrated with other expert components, for example, rules and compensation, or more characteristic rewards, for example, formal affirmation and expanded adequacy.

Knowledge sharing in view of confined extraneous prizes acclimatizes monetary exchanges while circumstances represented by limited inherent prizes are more like social substitutes. There are 4 structures for the procedures of sharing are demonstrated; each stage is described with detail.

- The efficiency of organizational exchanges due to external factors

The proficiency of authoritative interchanges identified with the outside compensation, public cases dependably incorporate hazard, though masters inside motivation searching for lead or favorable position endeavor to open their aftereffect of – or confine their effort put in substitution (Nickerson and Zenger, 2004).

Central and solid type of hierarchical interchanges with strong supervision is always a certain method to engaging staffs in the process of sharing behavior. The essential target of information partaking in institutional exchanges is associating in hierarchical between conditions and balanced segments, for instance, standards, organizing and sets of obligations are in these way central segments of learning sharing (Thompson, 1967). Ouchi (1980) has an explanation that group of connectors between staffs and organizations are disciplines which created by professionals. Work condition and atmosphere that encourages sharing of knowledge are related to the anatomy of organizations, in which the balance among expenditure of agreement and supervisions could be affected by positive results due to the sharing of knowledge.

Organizational exchanges role in sharing of knowledge are about the information or knowledge that been reject or unsigned at recording process. Sharing process can focus on creating modern and new public network and connection to provide better and more sharing issues before it. sharing of knowledge is likewise about crossing over organizational inter dependencies accordingly winding up even more proficient at planning and abusing what is regularly accepted to be authority's common obliviousness (Postrel, 2002).

- Sharing of knowledge with respect to organizational intrinsic rewards

Intrinsic motivators assets role at institutional interchanges are not used for what was being exchanged. Appeared differently in relation to exchange efficiency outward compensation, hierarchical exchange efficiency characteristic inspirations include unspecified duties (Blau, 1964). This truly frees an extensive measure of advantages – resources that ought to for the most part be spent on agreements. Of course, unspecified duties must be encouraged by trust between the pros related with the interactions. Trust, thus, replacement the watching and organization display in the authoritative interaction efficiency incidental prizes and in the budgetary interaction. (Adler, 2001).

Contrasted with unadulterated specialist and value, trust makes conceivable an expanded extent of knowledge age and sharing. Trust can significantly decrease exchange expenses and organization dangers – supplanting the dread of evading and distortion with common certainty. Evidently at that point, the concentration for works on protecting sharing of knowledge must in this way be re-coordinated from simple to-screen ways to deal with put stock in building activities (Abrams, 2003). Be that as it may, creating confidence is very hard, and whether confidence -developers in the end prevail with regards to cultivating and enhancing knowledge sharing is fundamentally difficult to gauge or generally guarantee. In this manner, concentrating on confidence -working as an upgrading gadget for sharing of knowledge needs reliance relations among the ones actualizing exercise, and who are liable to the exercise.

- Sharing of Knowledge role at economic exchange

The convergence of enthusiasm for organizational structures is the way simple – or troublesome – it is to attach singular execution to organizational execution (Katz, 1964; Foss, 2003). On the off chance that the straightforwardness between singular

exertion and framework execution is less, staffs would consider the inspiration for participating in particular exercises to diminish, while expanded straightforwardness then again will increment inspiration. This thinking does, in any case, just identify with what Katz (1964) alludes to as operational prizes expecting divergent execution. In the event that it isn't conceivable to recognize person's differential execution also, remunerate them appropriately, at that point person's commitment to knowledge sharing will in the long run stop. Then again, on the off chance that it is conceivable to tie person execution to framework execution, at that point knowledge sharing is possible to empower with presenting an institutional composition that acclimatizes a money related interchange.

People contend that organizations are ruled by Low-controlled motivators since situation will be hard to straightforwardly watch and experience a tie weave among endeavors furthermore, prizes. Association financial experts have in this manner proposed the interior half breed as a method for acquainting market like impetuses with the order. The inside cross breed offers a more straightforward connection among exertion and remunerate and is in this way accepted to be better than chains of command in presentation gratuity. The inner mixture acquaints a marketplace with the official association, in which knowledge sharing happens with methods for estimating. Organizational components also workers be able to exceed the cost of sharing what is needed to share and for whom that anticipate more in sharing or the vital kind of knowledge – is the person who get the most elevated extraneous prizes. Acquainting market like motivating forces with the association takes into consideration expanded straightforwardness between singular product of knowledge, and organizational interest for knowledge represented by the valuing of knowledge. Association financial analyst have additionally named that sort of foundation a 20high-fueled institutional foundation by underlining sender of knowledge could share the knowledge at the most elevated accessible cost (Alvesson, 2004).

- Knowledge sharing as s social exchange

A comparable rationale for the straightforwardness among people and institutional execution can be traced in most casual frameworks, for example, groups of training. The administering component is, notwithstanding, not only cost of knowledge, but rather the casual affirmation for sharing of knowledge. Customarily, knowledge distribution has been cleared as procedure continuing between progressive systems.

However, as Miller (1992) has underlined, progressive systems can no dependably own a constructive outcome with singular self-sufficiency and freedom, and along these lines one may anticipate that in progressive systems one risks swarming out characteristic inspiration. As of late, the discourse of knowledge sharing has along these lines begun to concentrate on what Miles (1997) designate better cell organizational structures. These institutional structures have better trust well-found than specialist well-found, also have accepted to all the productively bolster knowledge work (Adler, 2001).

While focusing on the social trade model of learning sharing, the cross of information sharing is reduced to a gathering – or ideally a unit more diminutive than the affiliation which considers an extended straightforwardness as to whom merits trusting. A distinct component forms into a collective coordinated substance, which from one viewpoint benefits the trust in building process. On the other hand, regardless, a distinct component can experience issues in relating to various a distinct component, and one could fight that what happens in the collective interchange pattern of information sharing is, in the stage of in which the issues belongs or in which lack of preparation is about sharing of knowledge – switches due to the individual to the social event based level. (Takeishi, 2002).

Next chapter is about research methodology and discusses about case study issues. What kind of research method and how structural approach was designed?. It will talk about variables, questionnaire choosing method and references, used software such as and specially Smart-PLS ,hypothesis and Sub-hypothesis and finally designed conceptual model for this study.

3. RESEARCH METHODOLOGY

Research methods have different strategy and methodology, plans and calculations that utilized as a part of research. Each of the methods that utilized by a researcher amid a research opinion and named as research methods. They are basically arranged, logical and acclaim objective. They combined hypothetical strategies; examination inspections, numerical plans, factual methodologies, and so on. Research methods enable us to gather tests, information and discover answers for an issue. Especially, logical research methods call for clarifications due to collected certainties, estimations and perceptions. They acknowledge just those clarifications which can be checked by tests. Research methodology is a scientific method to implements issues. It is a study of contemplating how research can be able to complete. Basically, the way that researchers approximate the tasks in an organization, clearing up or anticipating strange thing are defined as investigation technique or research methodology, furthermore, expressed with examination and techniques that provide collected data. The duty of it is to give clearance to the project. (Rajaseka, 2006).

3.1 Data Collection Methods

Data collection is a procedure of collecting information from all the related origins to reach proper response and answers in the research issues and problems, examination the hypothesis and measure the results. Data collection methods can be divided into two categories: secondary methods of data collection and primary methods of data collection.

3.1.1 Primary data collection methods

Primary data collection methods can be divided into two groups: quantitative and qualitative. Quantitative data collection methods are based in mathematical calculations in various formats. Methods of quantitative data collection and analysis include questionnaires with closed-ended questions, methods of correlation and regression, mean, mode and median and others.

Quantitative methods are cheaper to apply, and they can be applied within shorter duration of time compared to qualitative methods. Moreover, due to a high level of standardization of quantitative methods, it is easy to make comparisons of findings.

Qualitative research methods, on the contrary, do not involve numbers or mathematical calculations. Qualitative research is closely associated with words, sounds, feeling, emotions, colors and other elements that are non-quantifiable.

Qualitative studies aim to ensure greater level of depth of understanding and qualitative data collection methods include interviews, questionnaires with open-ended questions, focus groups, observation, game or role-playing, case studies etc.

3.1.2 Secondary data collection methods

Secondary data is a type of data that has already been published in books, newspapers, magazines, journals, online portals etc. There is an abundance of data available in these sources about your research area in business studies, almost regardless of the nature of the research area. Therefore, application of appropriate set of criteria to select secondary data to be used in the study plays an important role in terms of increasing the levels of research validity and reliability.

These criteria include, but not limited to date of publication, credential of the author, reliability of the source, quality of discussions, depth of analyses, the extent of contribution of the text to the development of the research area etc.

3.2 Questionnaire and Data Analyzing

A formal standardized questionnaire is a survey instrument used to collect data from individuals about themselves, or about a social unit such as a household or a school. A questionnaire is said to be standardized when each respondent is to be exposed to the same questions and the same system of coding responses. The aim here is to try to ensure that differences in responses to questions can be interpreted as reflecting differences among respondents, rather than differences in the processes that produced the answers. Standardized questionnaires are often used in the field of educational planning to collect information about various aspects of school systems. The main way of collecting this information is by asking people questions – either

through oral interviews (face to face or telephone), or by self-administered questionnaires, or by using some combination of these two methods. (Sheatsley, 1983).

The questionnaires of this study are based on the pervious articles and researches in the field of knowledge management issues, knowledge sharing elements such as facilitators and barriers and about knowledge brokers and its role at sharing process. Knowledge sharing is one of the most recent published cases at management, the issues and the solutions are discussed among academics and organizations. the questionnaire is divided in three parts and selected from different sources. the first part is about incentives and motivators at knowledge sharing or generally classified as facilitators. In this section the most dominant aspects and are selected and customized for this study. One of the most used sources is an article that published by Christine N.T and T. Ramayah (2014) as “The role of motivators in improving knowledge-sharing among Academics”, their works on the essential problems that empower and motivating academics to share knowledge and classified issues as intrinsic motivators and extrinsic ones. Intrinsic motivators consist of commitment; enjoyment in helping others and extrinsic motivators consists of reputation; organizational rewards, also the other sources used in the facilitators and barriers part commonly because of the intense relationship of them in the sharing process.

One of the other sources that was used in extracting the question is “The Critical Success Factors for Knowledge Management Adoption- A Review Study”, that published Yen-Ching and Te-Chun Lee (2010) at International Symposium on Knowledge Acquisition and Modeling. They discussed about the role of organizational factors as critical success factor of KM, including: Technology infrastructures, management support, sharing culture, training, teaching and learning culture, organization flexibility and willingness at sharing programs, rewards, bonuses, human resource managements. Also in the individual related issues such as sharing incentives ,trust ,timing ,adaptability and communication and collaboration. By helping these published articles and according to the aim of study about knowledge sharing and knowledge broker role the questions were chosen and customized.

The third section that is categorized as knowledge broker is derived from function and role of it in recent researches mostly from the model as the knowledge broker sphere of influence that adapted by Goldfeld from knigdom (1995) and Moor (2007) as below:

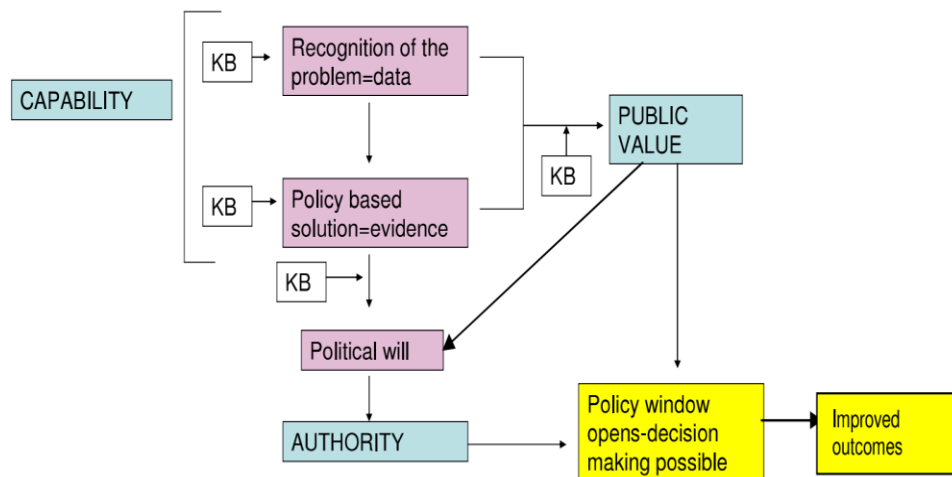


Figure 3.1: the knowledge broker sphere of influence (Moor 2007)

3.3 Hypotheses and Sub-hypotheses

According to the literature and the empirical research, evaluation the role of knowledge broker at knowledge sharing with respect to the facilitators and barriers that includes internal and external source, is the main target of research. for this aim research model, variables and relationships among them will be described, and main hypotheses are as below:

- The knowledge brokers have positive impacts on reducing barriers and obstacles effect during the knowledge sharing among students.
- The knowledge broker has impacts on compensating lack of facilitator's effect during the knowledge sharing among students.

Sub-hypotheses are about barriers and facilitators reaction on each other without knowledge broker, as below:

- The facilitators have positive impact on knowledge sharing process.
- The barriers have negative impact on knowledge sharing process.

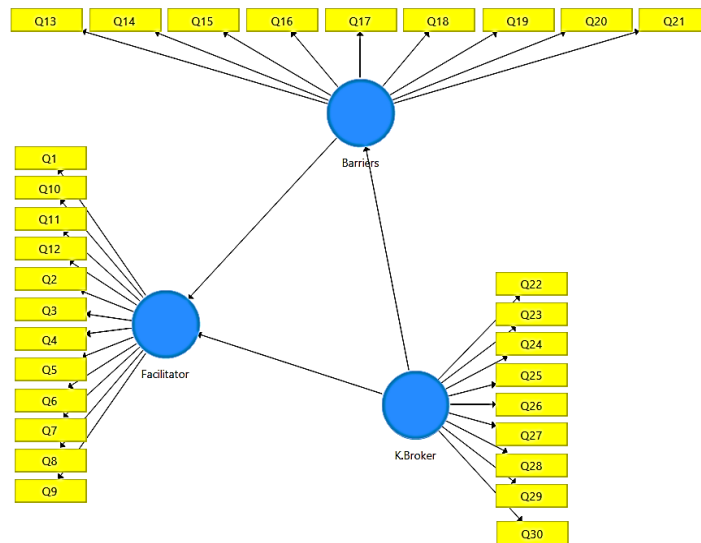


Figure 3.2: Conceptual model for main hypotheses

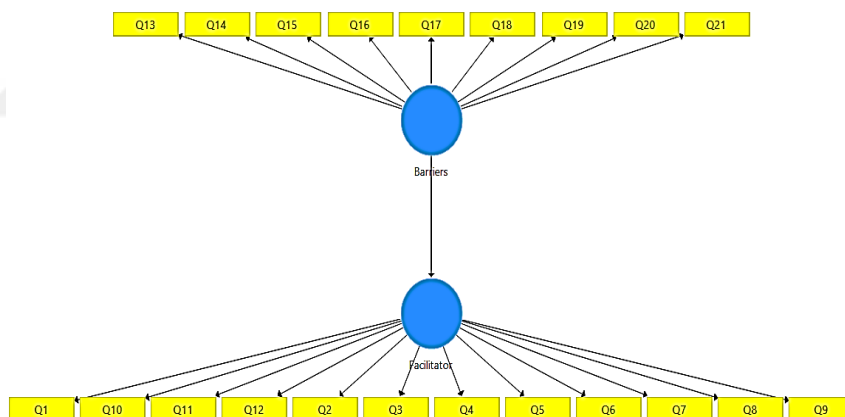


Figure 3.3: Conceptual model for Sub-hypotheses

3.4 Choice of Method

Data analyzing has done by using two software that includes SPSS version 24 and Smart-PLS version 3. SPSS is a comprehensive system for analyzing data. SPSS can take data from almost any type of file and use them to generate tabulated reports, charts, and plots of distributions and trends, descriptive statistics, and complex statistical analysis. And it helps to reach a better understanding of results that obtained from data collection part, in many cases it used as dominant tool for statistic analyzing but it has not powerful at graphical mode, in the other hand Smart PLS is new and

interested tool that has more features than SPSS in graphical aspects. Smart PLS is a software with graphical user interface for variance-based structural equation modeling using the partial least squares (PLS) path modeling method. The software computes standard results assessment criteria (for the reflective and formative measurement models, the structural model, and the goodness of fit), and it supports additional statistical analyses such as confirmatory tetrad analysis, importance-performance map analysis, segmentation, multigraph.

3.5 Exploratory Research

Exploratory Research is a way of investigation when a researcher has a limited amount of experience related to knowledge about a issue. It provides strong, more definitive study that will begin with an inadequate understanding of the nature of problem. Usually, exploratory research provides greater understanding of a concept or crystallizes a problem. Exploratory research is initial research conducted to clarify and define the nature of a problem. The technique and strategy are the beginning way, so it frames commence of more undeniable examination. Likewise, by its help, the similarity of deciding for review arrangement, testing procedure and information collecting. "Exploratory research" carries on dealing with surprising issues in cases from little of previous examination has been done. It has been exhibited that an exploratory investigation will not have inflexible procedure when it is utilized as a part of final examinations, and experiment measurement might be microscopic. Regardless, what executes exploratory examination as intentionally as could sensibly and typical, if it will be utilized for critical election about the way we will facilitate our next investigation. (Nargundkar, 2003).

3.6 Research Variable

Variable is a term that is used as a piece of research period. It is related to describe and perceive components while arranging quantitative research. A variable motivate intensity in any investigation than constants. It is subsequently basic for beginners in research to have clearness about this term and the related thoughts. During application of variable clarification is something that can change as well as can have more than one value. A variable is something like movements. (Polit Denise, 2004).

3.6.1 Independent variable

An independent variable is used to control and find out the value of dependent factors. The dependent variable is a factor that being measured in a test or evaluated in a mathematical condition and the independent variables are the contributions to that.

3.6.2 Dependent variable

The situation or investigation that related to a factor in an experiment is called dependent variable. You are assessing how it responds to a change in the independent variable, so you can think of it as depending on the independent variable. Sometimes the dependent variable is called the "responding variable."

3.6.3 Controlled variable

A controlled variable is one which the analyst holds constant (controls). It is also known as a constant variable or just as a "control". The control variable isn't a piece of an examination (not the independent or dependent variable), but rather it is important because it can affect the outcomes. It isn't an indistinguishable thing from a control group.

3.6.4 Knowledge sharing facilitators

The term of facilitators among knowledge sharing process is portrayed as tools or motivating forces that make the knowledge exchanging happen effectively. It fluctuates from personal range, technological and the organizational sorts, in this case concentrate is on all sorts of perspectives. Facilitators incorporate most important parts because of the current considers knowledge sharing, for example: personal willing to share, organization motivational part and some about innovation issues.

3.6.5 Knowledge sharing barriers

As the same as facilitators barriers are the issues that have adverse effect on the knowledge sharing process and always incorporates all components of knowledge sharing process: people, innovation and organization. Barriers that got some information about them can for the most part categorize as personal and organizational sorts, for example, time, establishment, trust atmosphere.

3.6.6 Knowledge broker

As another piece of late research, knowledge broker is a group of professional people or semi-organization part of any knowledge management that goes about as a catalyst among the knowledge sharing limits and influences it to stream effectively. The inquiries are about direct meaning of the knowledge broker obligation in the organization management.

3.7 Case Studies as a Research

Case analysis has great options to use on researchers to reach a suitable comprehension about an unusual subjects, investigation or problems and has likelihood to extend coverage or incentive to the previous research. Suggestion considers weight to examination of several opportunity or status and availability of them. The case investigation has been used by specialists to explore technique for numerable objects to systematization or modification. Especially, it had helpful for subjective research system to evaluate synchronous unique conditions and authorization to use by examination or increment of strategies. Specialist Robert K. Yin (1984) characterizes case study consider method as an empirical request for researches at contemporary phenomenon inside its and real-life circumference; whereas limits between phenomenon and setting could not be cleared remarkably; in where numerous principal of proof are utilized.

Some notable case study specialists have expounded on case study look into and proposed methods for organizing and directing the exploration effectively. Case study structure suggested six as:

- Exploration questions for determination or characterizing.
- cases choosing, specify data collecting, analysis methods
- Find a way to data storage.
- Collecting data in the proper scope.
- Data evaluation, Data analyzing
- Reportage creation

3.8 Methodologies Used

Inside this thesis work a mix of 2 methodological methodologies is utilized – the expletory approach and the case study with implanted units. This area attempts to clarify how these methodologies are utilized inside the work and how they interact to direct the fundamental analysis and touch base at the conclusions.

As said before, the principle center in this thesis is a knowledge sharing process instrument respects to the facilitators, barriers and knowledge broker issues, for the analysis of knowledge sharing process the exploratory and frameworks approach is utilized. The theory framework is defined as tails: it is a set of segments and the relations among them. Depending whether the framework is analyzed inside its specific situation or as a segregated framework, 2 sorts of frameworks can be recognized – opened frameworks and shut frameworks (Abnor, 1997). In this study two sort of framework are incorporated and the questionnaires were about their limits. Information utilized for understanding the knowledge sharing process is gathered through the questionnaires with the understudies in the college that are some way or another related and need the knowledge sharing in scholastic ways or occupation condition.

3.9 Statistical Sample

The statistical sample includes all master students at Aydin University. According to the designed model and the conceptual model, and the awareness of the management concepts most of the target society selected from those students who related somehow to the concept of management especially Master of Business Administration. by the estimation of total number of present student that are between 250 to 350 persons, questionnaires distributed among 110 students, from the distributed questionnaires 96 sample completed, 13 sample had so many missing data and there is no way to use or complete the data, 11 sample did not deliver at all.

3.10 Data Collection Tools and Method

In the literature section the articles, books, magazines and websites were used, also the needed data to analyze the hypothesis were collected by questionnaires.

The questionnaires were designed as standards including 2 parts: the first part includes general information about volunteers such as, gender, work experiences, nationality, age and educational level. The second part that divided to 3 sub-groups includes facilitators, barriers and knowledge broker. The facilitator part was 12 questions; the barriers part 9 questions and knowledge broker 9 question, totally 30 questions. Table 3.1 has details about part 2.

Table 3.1: Questions detail

NO.	Variable	Number of questions	Questions order
1	Barriers	12	Q1-Q12
2	Facilitators	9	Q13-Q21
3	Knowledge Broker	9	Q22-Q30
	Total	30	Q1-Q30

3.11 Validity and Reliability

Validity is defined as the degree to which an idea is precisely measured in a quantitative study. For instance, an overview intended to explore sadness however which measures anxiety would not be viewed as valid. Credibility and reliability is the secondary degree and value of feature related to quantitative study due to the accuracy of a tool. In other words, the degree to which an examination instrument reliably has similar outcomes on the chance that it is utilized as a part of a similar circumstance on remarkable events. Reliability identifies with the consistency of a measure. A member completing an instrument intended to quantify inspiration ought to have roughly similar reactions each time the test is completed. Although it isn't conceivable to give a correct calculation of reliability, a measure of reliability can be accomplished through various measures. One of the most used tools for measurement of interior

validity and stability is Cronbach's Alpha (α) test. When the questionnaires include different Likert scaling, the validity test of survey or study them is necessary, it helps to consider test as a solid and correct. Measurements of α factor for approved validity in the test have value between 0 till 1. The minimum and maximum value of factor have different meaning, the $\alpha = 0$ is related to the competently autonomous factors, in the other hand when the elements are totally connected to each other and have highly correlation the value of α come close to 1.

In other words, When the object is highly correlated, it is equals to the higher α factor and it may have represented as correct understanding of the idea, so good and standard value must be near the 1.

The measurement factors are entirely overconfident and depend upon the scientific cognition of scaling at the research, limitless methodological assessment stand of α factor, between 0.65 and 0.8, the results are very good. But at value under 0.5, the results are unacceptable because poor or not good enough, whenever scales claim to be having one dimension.

Table 3.2: Complete test of reliability

Statistics of all items				
Questions	Scale Mean	Deleted item Scale Variance	Correlation of all Corrected item	Deleted items Cronbach's Alpha
Q1	62.74	2220.123	0.010	0.976
Q2	63.08	2203.619	0.174	0.976
Q3	62.83	2196.309	0.199	0.976
Q4	63.01	2183.458	0.331	0.975
Q5	62.73	2183.623	0.352	0.975
Q6	62.79	2167.857	0.488	0.975
Q7	62.93	2159.971	0.618	0.974
Q8	62.83	2147.008	0.621	0.974
Q9	62.65	2141.482	0.584	0.974
Q10	62.58	2132.969	0.671	0.974
Q11	62.58	2122.198	0.682	0.974
Q12	62.71	2113.074	0.717	0.974
Q13	62.90	2100.352	0.783	0.973
Q14	63.01	2092.807	0.843	0.973
Q15	63.10	2091.123	0.836	0.973
Q16	63.13	2078.284	0.855	0.973
Q17	63.13	2066.814	0.881	0.973
Q18	62.87	2058.308	0.865	0.973
Q19	63.06	2043.334	0.914	0.972
Q20	63.00	2039.157	0.888	0.973
Q21	63.14	2025.449	0.930	0.972
Q22	63.01	2016.952	0.915	0.972
Q23	63.10	1999.557	0.955	0.972
Q24	63.17	1996.020	0.927	0.972
Q25	62.90	1986.617	0.930	0.972
Q26	63.00	1982.530	0.937	0.972
Q27	63.07	1971.609	0.940	0.972
Q28	63.04	1965.264	0.940	0.972
Q29	62.75	1952.985	0.922	0.973
Q30	62.90	1947.437	0.921	0.973

Table 3.3: Test of Reliability

Reliability Analyzing	
Value of Cronbach's Alpha	Number of questions
0.974	30

As results shows the Cronbach's Alpha is 0.974, more than .07 acknowledged point, and inquiries are profoundly identified with the topics.

3.12 Data Analysis Method

In this segment path multiplication rule was utilized to straight and indirect impacts in the portrayed model; the variable (Knowledge. Broker) directly affects another (BARRIERS) and additionally in indirect impact (from K. BROKER to Facilitator to Barriers). The direct impact is the institutionalized basic coefficient, also called the internal model stacking of Broker on Barriers. The impact of indirect path is related to the result of the route multiplier for Knowledge Broker to Facilitators and the route multiplier for Barriers to Facilitators. Partial Least squares (PLS) have the other name as "Forecast of Hidden Combination "on account of related universal technique. It is better to consider the possibility of being various type of Y ingredient and various type of X ingredient, so when the arrows interfacing ingredients to the models indexes it happen reflective like become visible.

For confirmative Factor Analysis, there will be a column vector, y , including p dependent variables. We will have a similar situation with the vector x that is a q by 1 column vector. In SEM (Structural Equation Model) terms, it is said that y contains the internal variables and x contains the external variables. An internal variable is one that appears at least once as the dependent variable in an equation. On the other hand, variables that do not appear on the left-hand side are external, or "given." In other words, all variances of, and covariances between, exogenous variables are determined outside of the system. They are not at issue. The variances and covariances of the endogenous variables are being modeled as a function of the exogenous variables. The basic model looks like,

$$y = \mathbf{B}y + \mathbf{\Gamma}x \quad (3.1)$$

So, we have p simultaneous equations. Note that for each of the causal parameters, the β 's and the γ 's, the subscripts follow the same pattern. The first subscript refers to the equation, in other words the y variable which is the effect. The second subscript refers to the cause.

- The p by p \mathbf{B} matrix contains the coefficients of the regressions of y variables on other y variables with 0's on the diagonal which implies that a variable cannot cause itself. The p by q matrix $\mathbf{\Gamma}$ contains the coefficients of the y 's on the x 's. The error vector, ζ , is p by 1. These errors are different than factor analysis errors; they represent *errors-in-equations*, in the way that these equations are specified. Thus, they are also called *specification errors*.

To get to a point where we can estimate the model, we need to add some assumptions. To start off innocuously enough, we assume that $E(y) = 0$ and $E(x) = 0$, which has absolutely no impact on the variances or covariances of these variables [see Equation (4.8)]. We then assume that the x and ζ vectors are independent,

Now let us define

$$V(x) = E(xx') = \Phi \quad (3.2)$$

$$V(\zeta) = E(\zeta\zeta') = \Psi \quad (3.3)$$

Note that we have “reused” the Ψ matrix from Chapter 9. In confirmatory factor analysis, Ψ was used for the factor covariance matrix. In fact, the use of Ψ as the covariance matrix of the ζ 's is actually consistent with its Chapter 9 meaning. At this point we are ready to deduce what is known as *reduced form*. Reduced form requires that we solve for the y vector, as below:

$$y = \mathbf{B}y + \mathbf{\Gamma}x + \zeta \quad (3.4)$$

$$y - \mathbf{B}y = \mathbf{\Gamma}x + \zeta \quad (3.5)$$

$$(\mathbf{I} - \mathbf{B})y = \mathbf{\Gamma}x + \zeta \quad (3.6)$$

Now let us look at the path diagram for a causal model.

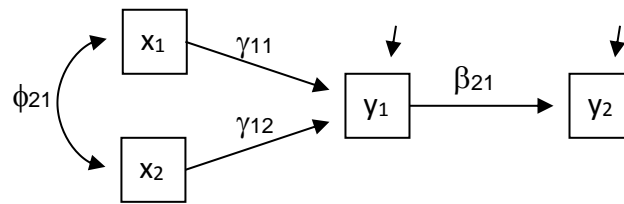


Figure 3.4: Structural Model

The structural equations for this model are

$$y_1 = \gamma_{11}x_1 + \gamma_{12}x_2 + \zeta_1 \quad (3.7)$$

$$y_2 = \beta_{21}y_1 + \zeta_2 \quad (3.8)$$

Next chapter is about analyzing. It starts with demographic analysis on collected data such as gender information, age information, work experiences and educational status. After general information it goes with test of question reliability to study, are the questions related to the study or not? The next step will be the Smart-PLS test such as path coefficients test, direct and indirect effect of hypothesis and conceptual model on each other. Correlation test will be done by using of SPSS and finally factor loading test will help us to find the weak and strong related questions among the study.



4. ANALYSES

In this section the results of the preliminary analyses are described, whereby the focus is on the descriptive statistics, factor analysis, reliability analysis, outliers and normality of distributions. There were 120 distributed questionnaires among students and 96 of those responded completely, 15 had missing data and 9 did not answered, so the all analysis is based on 96 completed papers.

4.1 Demographic Analysis of Elements

The SPSS 24 and Smart-PLS software are used for analysis of demographic elements. Statistic normal for respondents is evaluated by utilizing scalar cryptography and recurrence dispersion is gotten through programming and afterward dissected through realistic portrayal. The inquiries were about ages, sexual orientations, work encounters and instructive degrees.

4.1.1 Gender

The table illustrates the gender condition among questioned students. About 70 percent were male and 30 percent related to female.

Table 4.1: Information of gender

	periodicity	percentage	Accurate percentage	accumulative percentage
Valid Male	67	69.8	69.8	69.8
Valid Female	29	30.2	30.2	100.0
Total	96	100.0	100.0	

4.1.2 Work experience

According to the collected data, the experiences can be categorized as below: 49 percent had 1-3 years, 27 percent between 3 to 5 years, 18 percent between 5 to 10 years, and 5.2 percent more than 10 years.

Table 4. 2: Work experience of the responders

	Periodicity	percentage	Accurate percentage	accumulative percentage
Valid	1-3	47	49.0	49.0
	3-5	26	27.1	76.0
	5-10	18	18.8	94.8
	More than 10	5	5.2	100.0
Total	96	100.0	100.0	

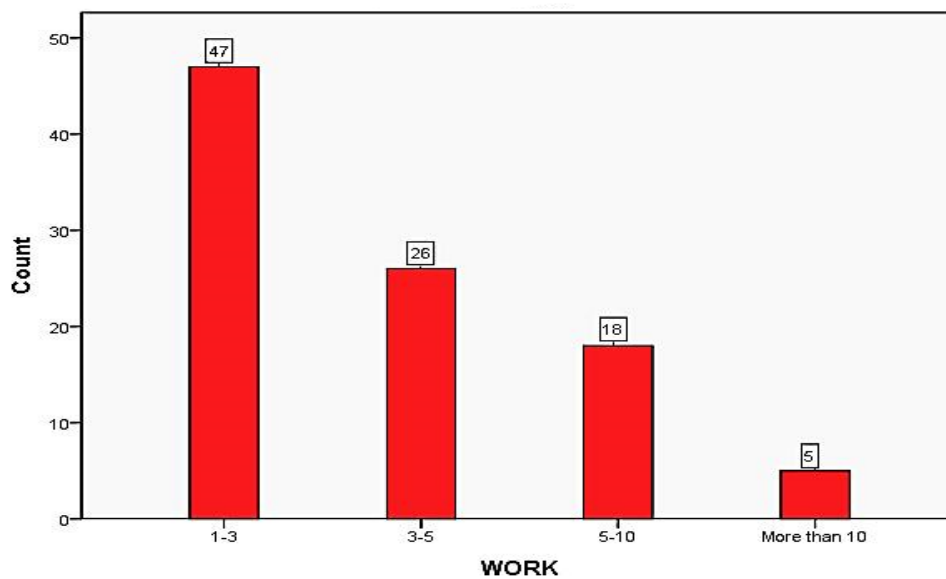


Figure 4.1: Work experience

4.1.3 Age Frequencies

Table 4.3 depicts the information about the responded. according to the analysis: 36.5 percent were under 25 years old, 49 percent were between 25 and 35 years old, 11.5 percent were between 35 and 45 years old and 2.1 percent were between 35 and 45 years old.

Table 4.3: The age information

		Frequency	Percentage	Accurate percentage	Accumulative percentage
Valid	0	1	1.0	1.0	1.0
	Under 25	35	36.5	36.5	37.5
	25-35	47	49.0	49.0	86.5
	35-45	11	11.5	11.5	97.9
	45-55	2	2.1	2.1	100.0
	Total	96	100.0	100.0	

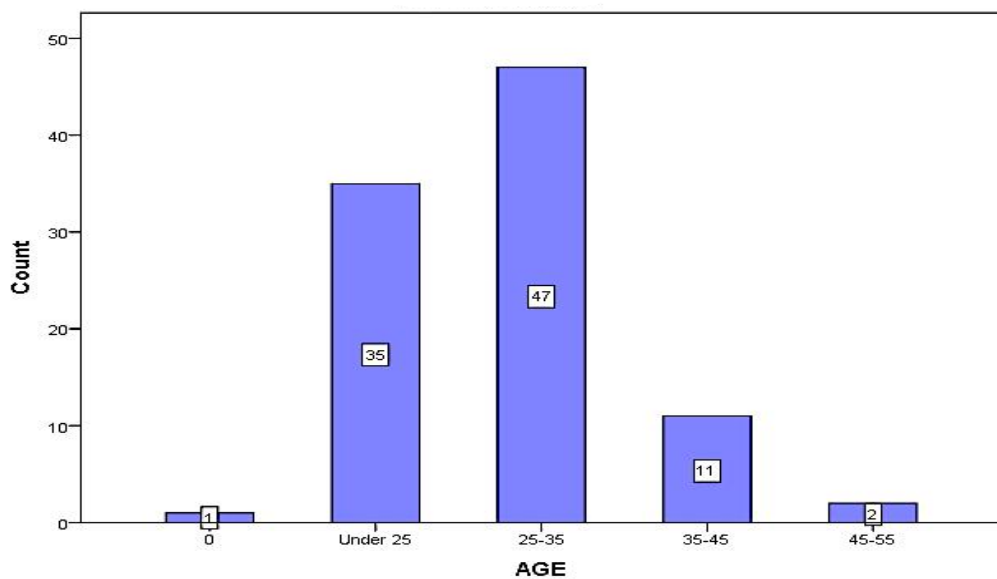


Figure 4.2: The age information

4.2 Appropriate Estimation for Reflective Models

In a model of reflective kind, which arrows leave the factor and reach the representative and changeable ones, pointing that a one dimensional basic develop characterize the quantity of the deliberate and delegate changeable ones. Measurements that combining credibility, it related ad called multiplex validity or Cronbach's alpha and is proper in reflective models but not in derivative ones.

4.2.1 Composite value of reliability

The Composite value of reliability is a better probability related Cronbach's alpha in the same validity in a reflective model. That will be supported as a measure of dependability according to the fact that Cronbach's alpha may over-or have a poor opinion of scale dependability quality, often the last specified. Consequently, one of the favored tools among researchers for testing composite dependability is in PLS-based research. Also, composite dependability may stimulate higher assessments of honest and goodness of significant quality in Smart PLS, compared to Cronbach's alpha. The value related to the composite reliability is between 0 and 1. Having a good results in the descriptive tests need to value outstanding than 0.6 (Button, 1998), according to Henseler and Sarstedt, (2012) , the values same or greater than 0.70 is adequate to the testes that have confirmatory purposes, finally when the value is the same or bigger than 0.80 is good confirmatory research (Daskalakis and Mantas, 2008).

The values more than 0.90 can be inferred that different variables have little effect to each other, instead of showing the exact correlation among factors.

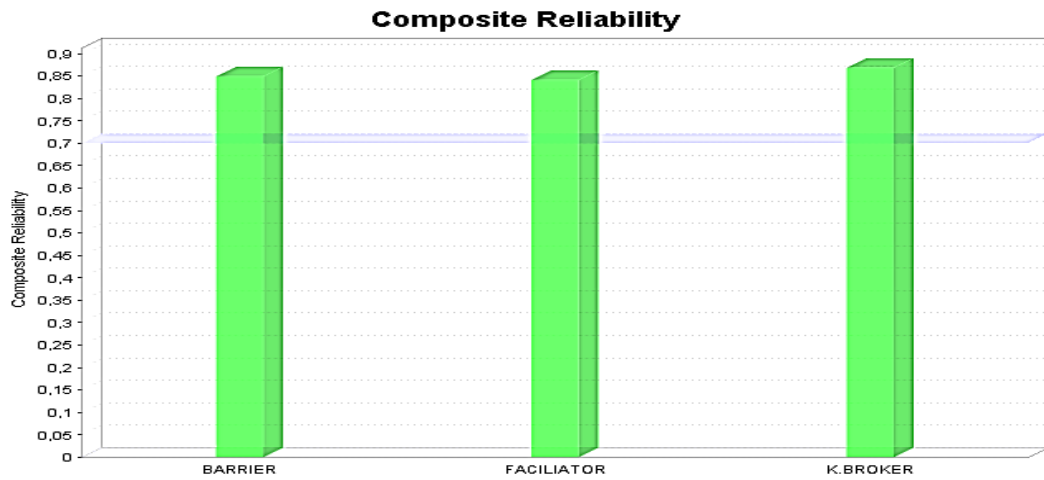


Figure 4.3: Composite reliability

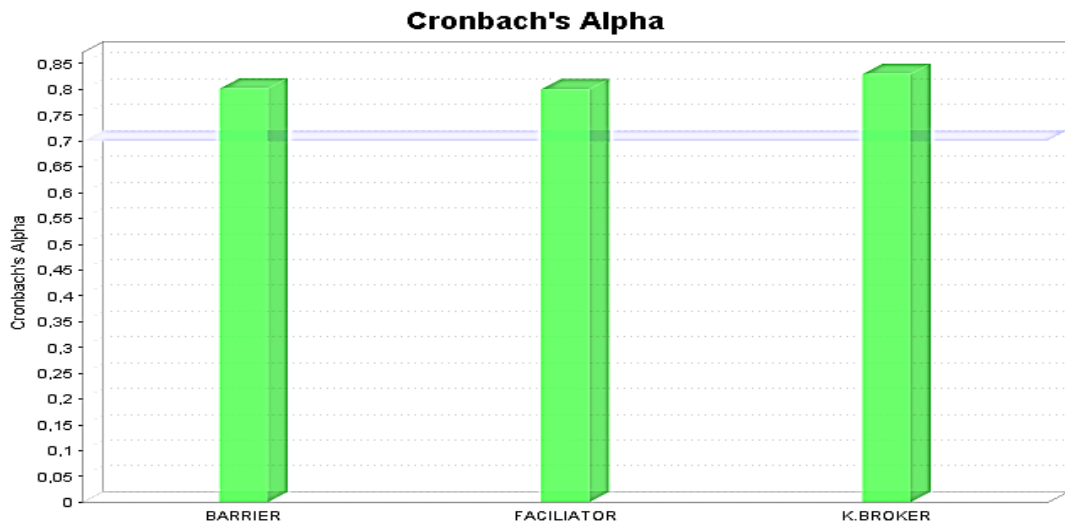


Figure 4.4: Cronbach's alpha

Table 4.4: Construct reliability and validity

Variable	Cronbach's Alpha	Composite Reliability
BARRIER	0.802	0.850
FACILIATOR	0.800	0.841
K. BROKER	0.830	0.869

As a result, and according to the values, the dependability, because of the value 0.80 is appropriate for supporting investigation.

4.3 Statistical Analyze of Explanatory Factors

Explanatory evaluation is about descriptive factors that summarize for the collected data, it can show in graphical form, depends of the expected results it may include total of the data or a part of special sample. Explanatory conception is dividing into two classes; the one is measures of focal tendency or alteration and extension. Focal tendencies related to the mean, middle and mode, provided measures of alteration and extension incorporate the standard deviation, and the kurtosis and skewness test. All explanatory evaluation, free of their type such as mean, middle, mode, standard deviation, kurtosis or skewness, value about centric tendency or size about changeability.

Table 4.5: Descriptive statistics

Variable	N	Mean	Std. Deviation	Variance	Kurtosis	Std. Error
FACILIATOR	96	2.3062	0.83256	0.639	9.501	0.488
BARRIER	96	2.0616	1.59243	2.536	62.816	0.488
K. BROKER	96	2.1322	2.41663	5.84	79.224	0.488
Valid N(listwise)	96					

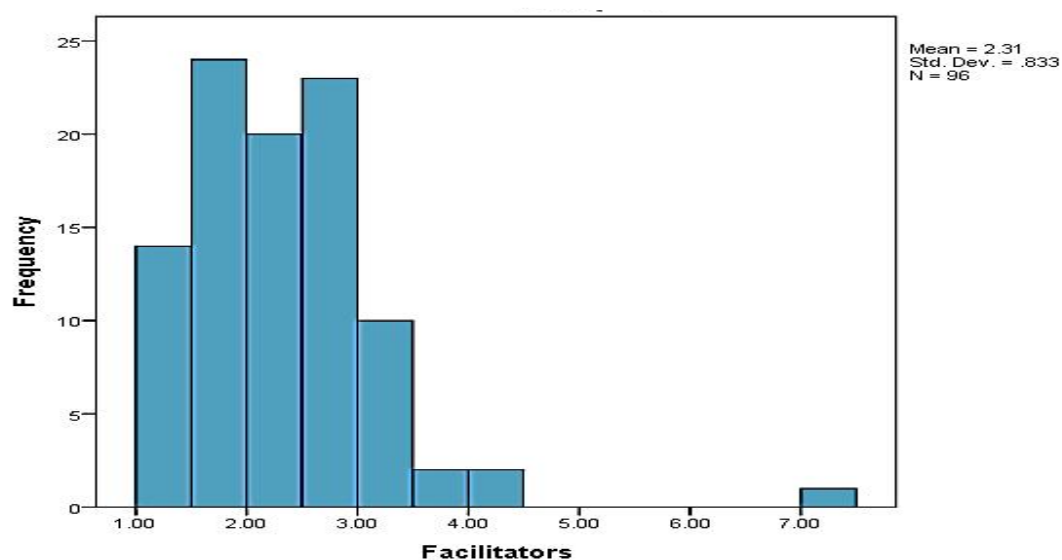


Figure 4.5: Facilitators Histogram

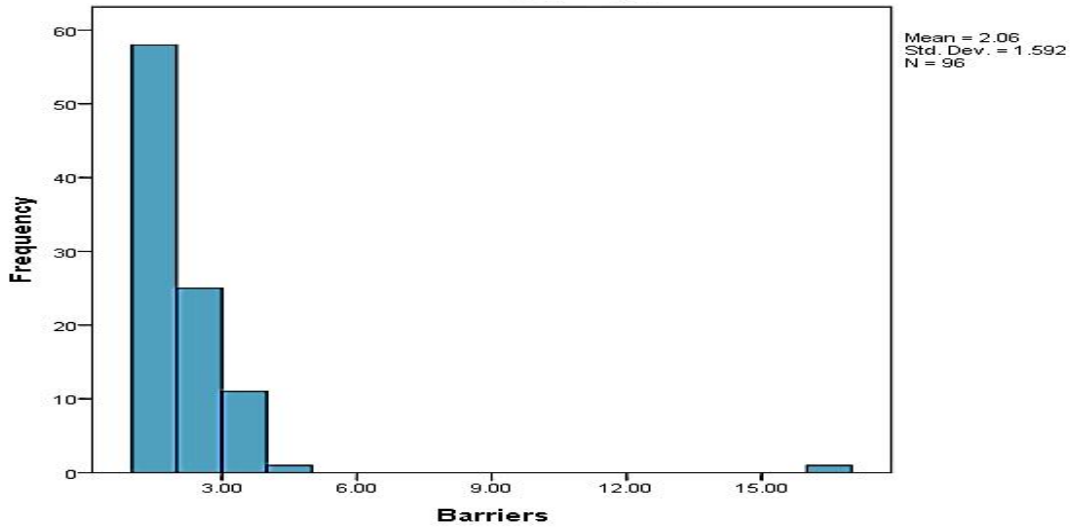


Figure 4.6: Barriers histogram

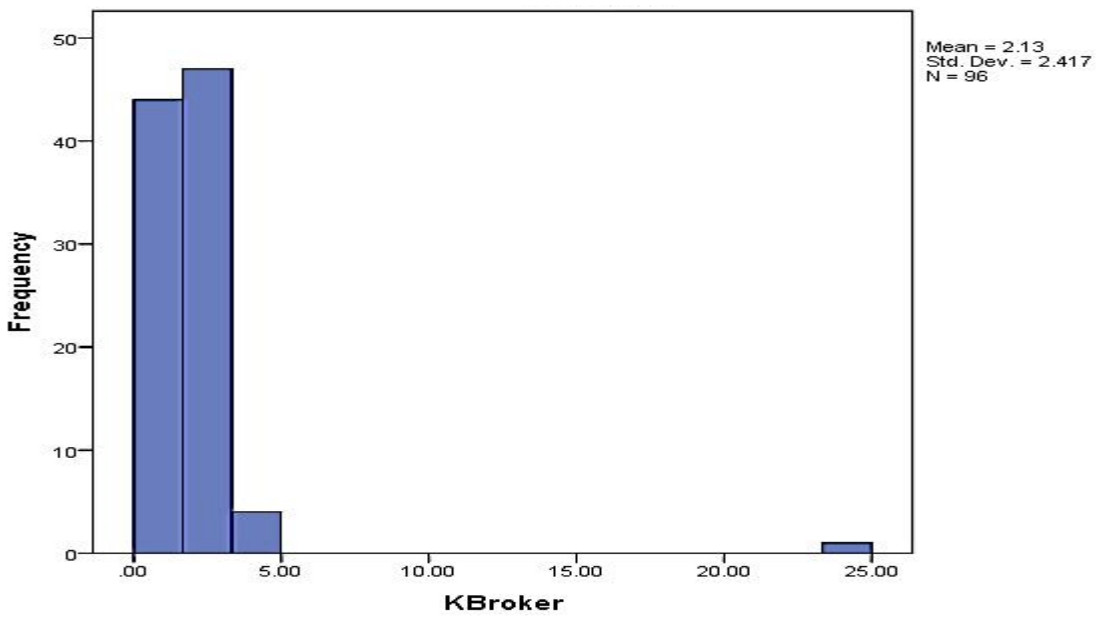


Figure 4.7: Knowledge broker histogram

4.4 Subdividing Direct, Indirect, and Total Effects

In this segment path multiplication rule was utilized to straight and indirect impacts in the portrayed model; the variable (Knowledge Broker) directly affects another

(BARRIERS) and additionally in indirect impact (from K. BROKER to Facilitator to Barriers). The direct impact is the institutionalized basic coefficient, also called the internal model stacking of Broker on Barriers. The impact of indirect path is related to the result of the route multiplier for Knowledge Broker to Facilitators and the route multiplier for Barriers to Facilitators. Partial Least squares (PLS) have the other name as “Forecast of Hidden Combination “on account of related universal technique. It is better to consider the possibility of being various type of Y ingredient and various type of X ingredient, so when the arrows interfacing ingredients to the models indexes it happen reflective like become visible.

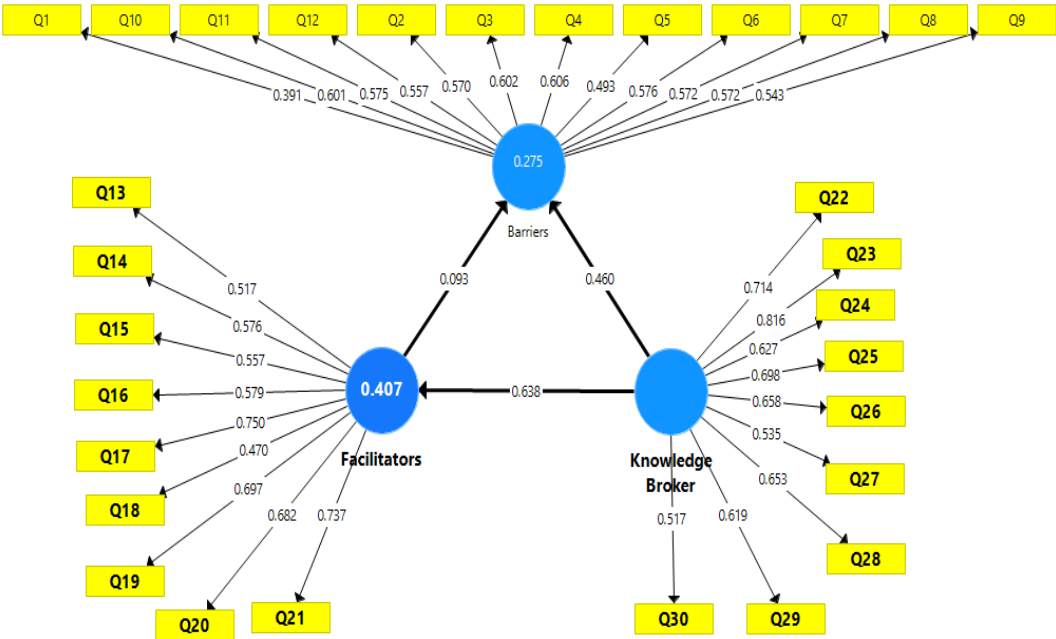


Figure 4.8: PLS algorithms test (Facilitator to Barrier)

Table 4.6: Total effect (Facilitator to barrier)

Path Coefficients			
Variable	Barriers	Facilitators	Knowledge Broker
Barriers	---	---	---
Facilitators	0.093	---	---
Total Indirect Effects			
	Barriers	Facilitators	Knowledge Broker
Barriers	---	---	---
Facilitators	---	---	---
Knowledge Broker	0.059	---	---
Total Effects			
	Barriers	Facilitators	Knowledge Broker
Barriers	---	---	---
Facilitators	0.093	---	---
Knowledge Broker	0.519	0.638	---

According to the results, When the facilitators mentioned as main element of sharing process and Knowledge broker as complementary variable ,Facilitators have very little direct and indirect impact on the barriers , but Knowledge Broker direct path coefficient effect on the barriers is 0.519 and on the facilitators is 0.638 .It means in this case facilitators are not the main issues to overcome barriers ,in the other hand using Knowledge Broker makes more impact on both side .So the total effects of K.B on the barriers drops to 0.519 and on the facilitators 0.093 by choosing the facilitators as a main variable .also it shows that the impact of facilitators on the barriers is very little 0.081.

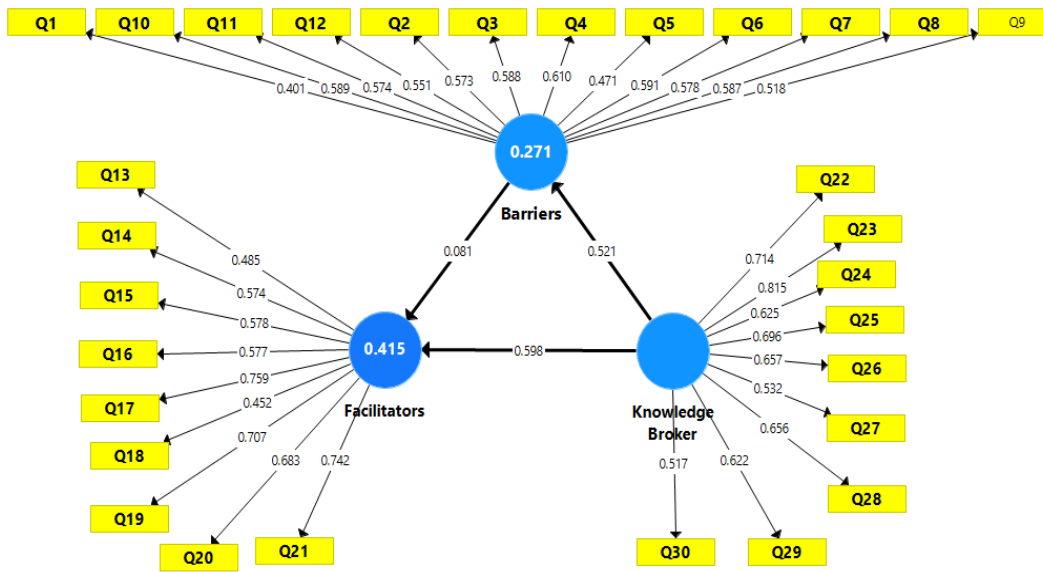


Figure 4.9: PLS algorithms test (Barrier to Facilitator)

Table 4.7: Total effect (Barrier to Facilitator)

Path Coefficients			
	Barriers	Facilitators	Knowledge Broker
Barriers	---	0.081	---
Facilitators	---	---	---
Knowledge Broker	0.521	0.598	---
Total Indirect Effects			
	Barriers	Facilitators	Knowledge Broker
Barriers	---	---	---
Facilitators	---	---	---
Knowledge Broker	---	0.042	---
Total Effects			
	Barriers	Facilitators	Knowledge Broker
Barriers	---	0.081	---
Facilitators	---	---	---
Knowledge Broker	0.521	0.640	---

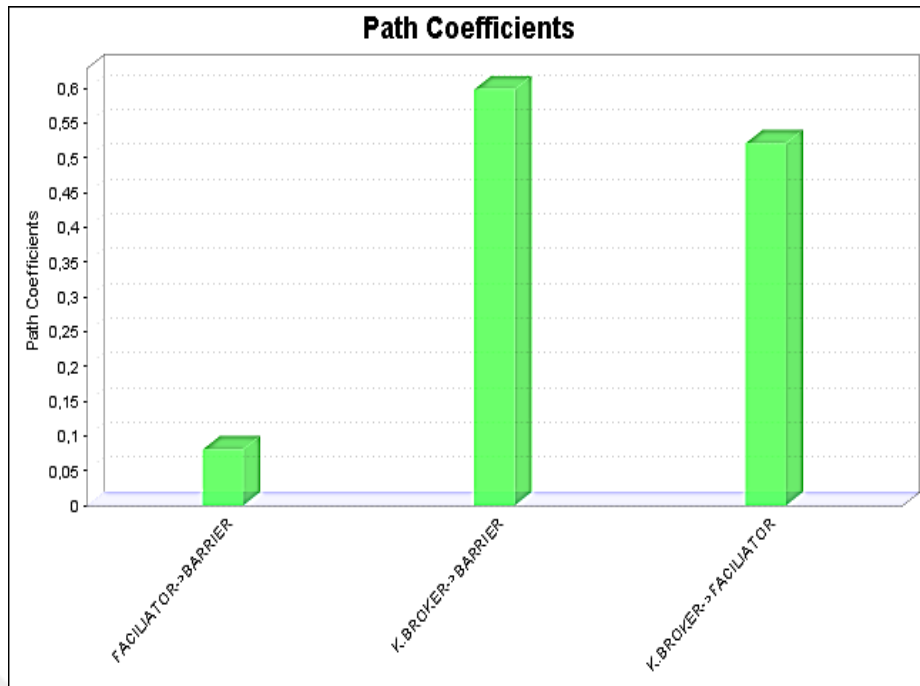


Figure 4.10: Path coefficients chart (Facilitator to Barrier)

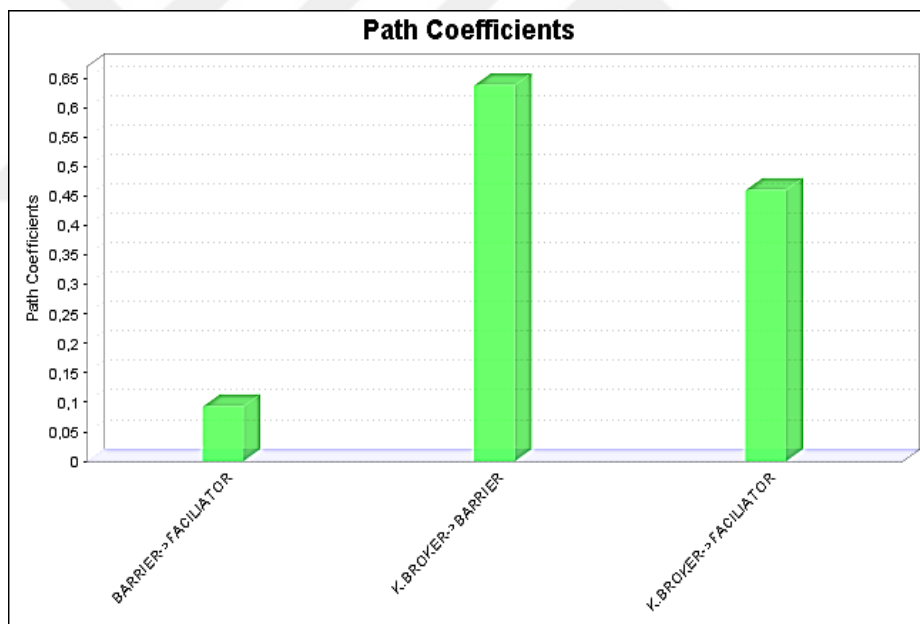


Figure 4.11: Path coefficients chart (Barrier to Facilitator)

By referring to the figure 4.10 and 4.11 the interpretation of route factors and connection number classification, the value of route connection changes from -1 to +1. The nearest value to 1 indicates the powerful routes. Weights that are near to 0 indicate the feeble routes. It is obvious that K.Broker impact on barrier is more that

facilitator but the impact of facilitators on barriers are not significant, the results is about 0.1.

Also the results indicate that K.Broker has direct impact on both facilitator and barriers but the effect on the barrier part is more than facilitators and when the impact parameter changes between two dependent variable, it shows that the impact of barrier on the facilitator (0.093) is more than facilitator on barriers (0.081) .Also the change between those as a control variable has significant impact between Broker as independent variable.

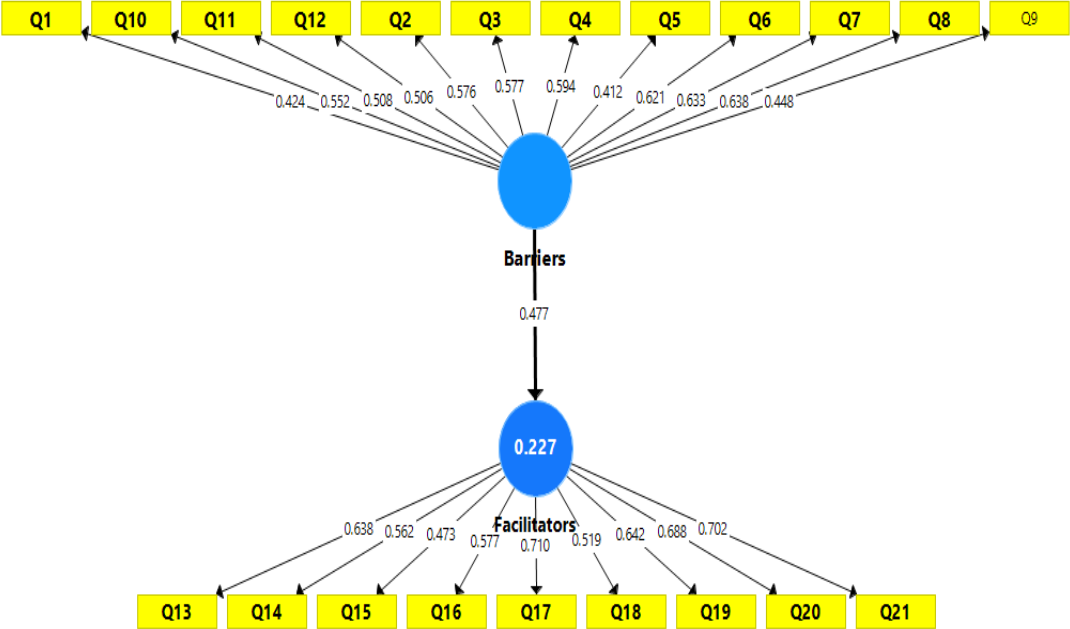


Figure 4.12: PLS algorithms test (Barrier to Facilitator)

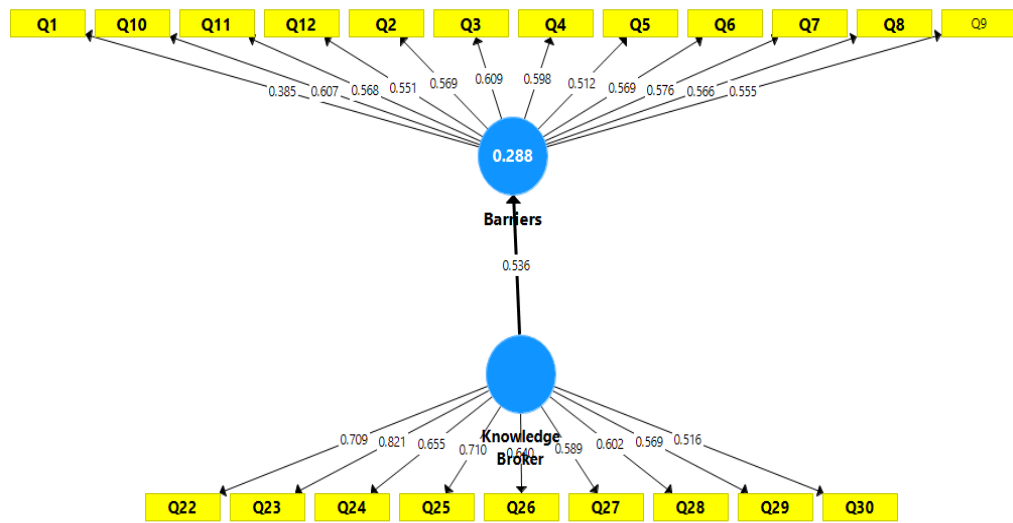


Figure 4.13: PLS algorithms test (Knowledge broker to Barrier)

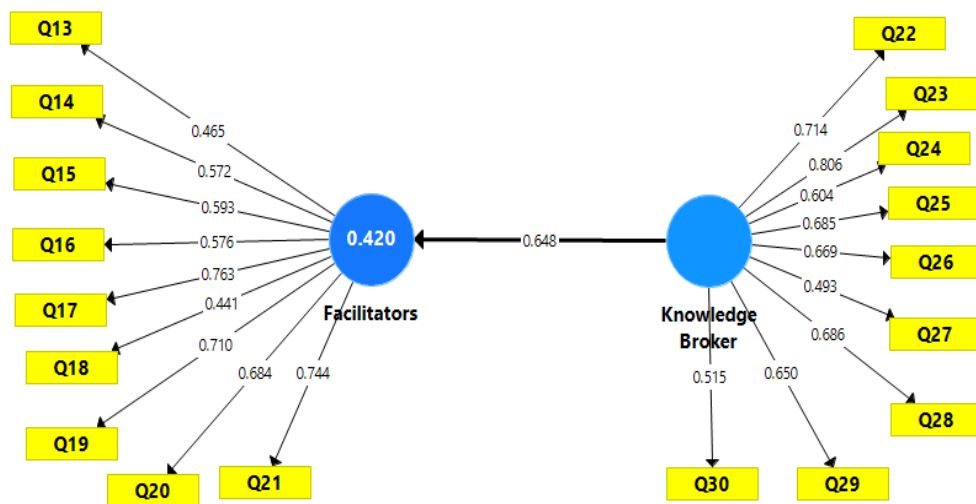


Figure 4.14: PLS algorithms test (K.Broker. to Facilitator)

4.5 Algorithm of Consistent PLS (PLS)

As determined by Dijkstra and Schermelleh-Engel (2014) consistent PLS, acts as a calculation intended to make reliable and alternatively evaluations of route consignments and of connections among hidden factors for demonstrated segments. Consistent PLS gives comparative results tables as conventional PLS yield. Outcomes and correlations value are unlike anything else and significantly modern, in fact that the PLS algorithm modifies for consistency of measurement. Although the coefficients

contrast, explanation of efficiency is like as common PLS except for that for a reflective common factor model; PLS guess though PLS outcomes better solid evaluations.

The figures and tables underneath demonstrate the consistent PLS algorithm for the model by regarding the Knowledge broker as independent variable, facilitators and barriers as dependent variable by exchanging the part of them in two unique positions.

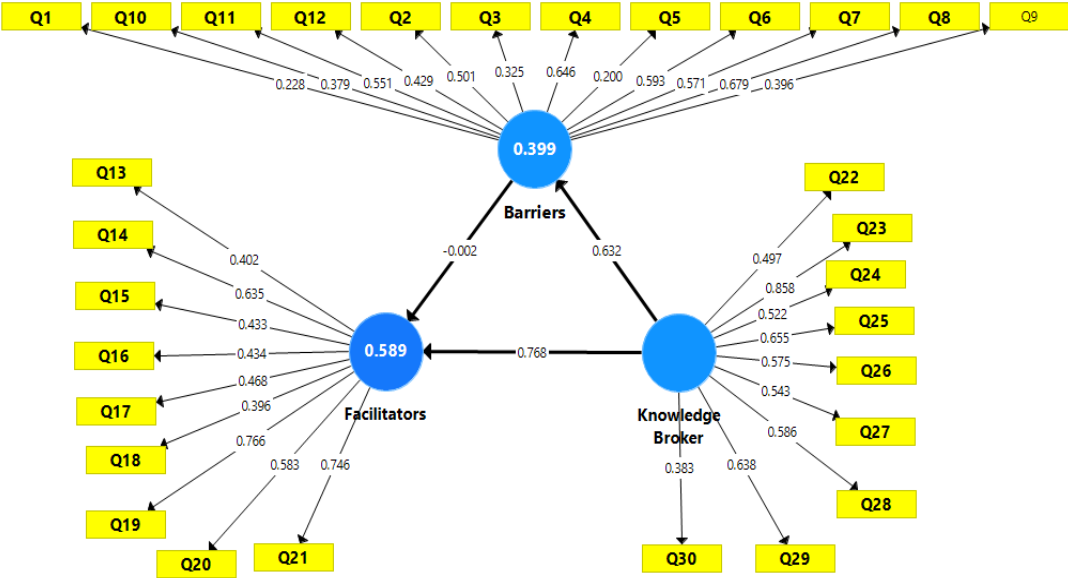


Figure 4.15: Consistent PLS algorithms test (Barrier to Facilitator)

Table 4.8: Path coefficients: (Barrier to Facilitator)

Path Coefficients			
Variables	Barriers	Facilitators	Knowledge Broker
Barriers	---	---	---
Facilitators	-0.013	---	---
Knowledge Broker	0.639	0.767	---

Table 4.9: Total indirect effects (Barrier to Facilitator)

Total Indirect Effects			
Variables	Barriers	Facilitators	Knowledge Broker
Barriers	---	---	---
Facilitators	---	---	---
Knowledge Broker	-0.010	---	---

Table 4.10: Total effects (Barrier to Facilitator)

Total Effects			
Variables	Barriers	Facilitators	Knowledge Broker
Barriers	---	---	---
Facilitators	-0.013	---	---
Knowledge Broker	0.630	0.767	---

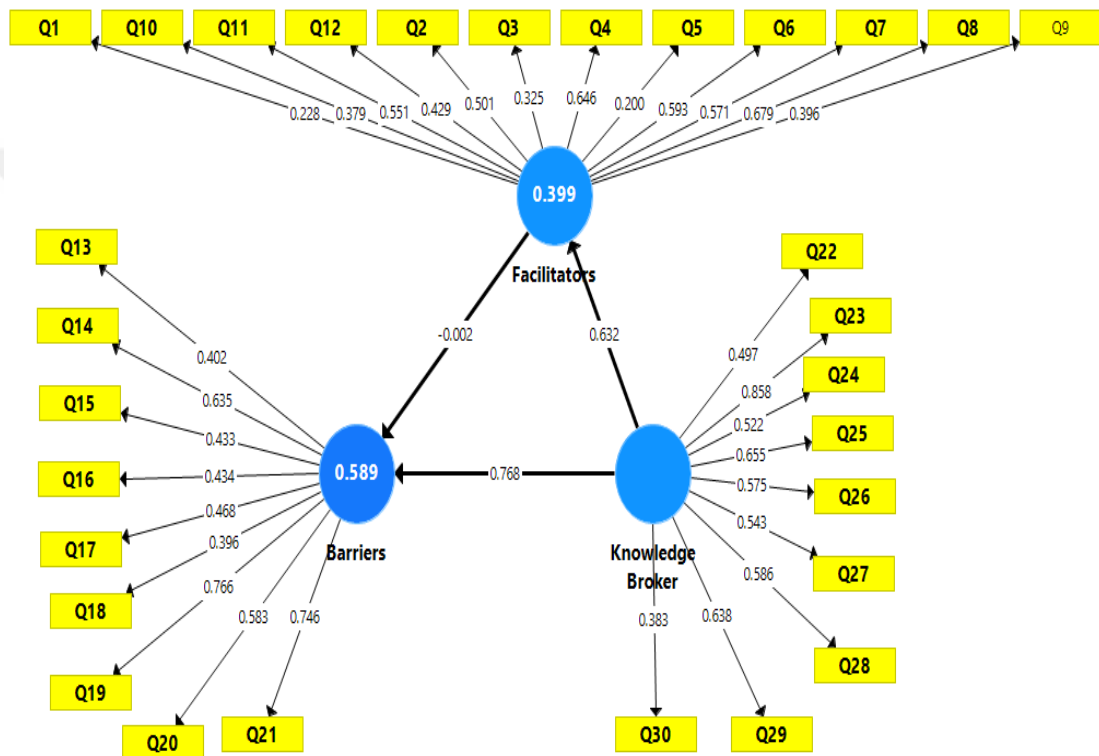


Figure 4.16: Consistent PLS algorithms test (Facilitator to Barrier)

Table 4.11: Path Coefficients (Facilitator to Barrier)

Path Coefficients			
	Barrier	Facilitator	K. Broker
Barrier	--	--	--
Facilitator	-0.002	--	--
K. Broker	0.768	0.632	--
Total Indirect Effects			
	Barrier	Facilitator	K. Broker
Barrier	--	--	--
Facilitator	---	--	--
K. Broker	-0.001	---	--

	Barrier	Facilitator	K. Broker
Barrier	----	---	---
Facilitator	-0.002	---	---
K. Broker	0.767	0.632	---

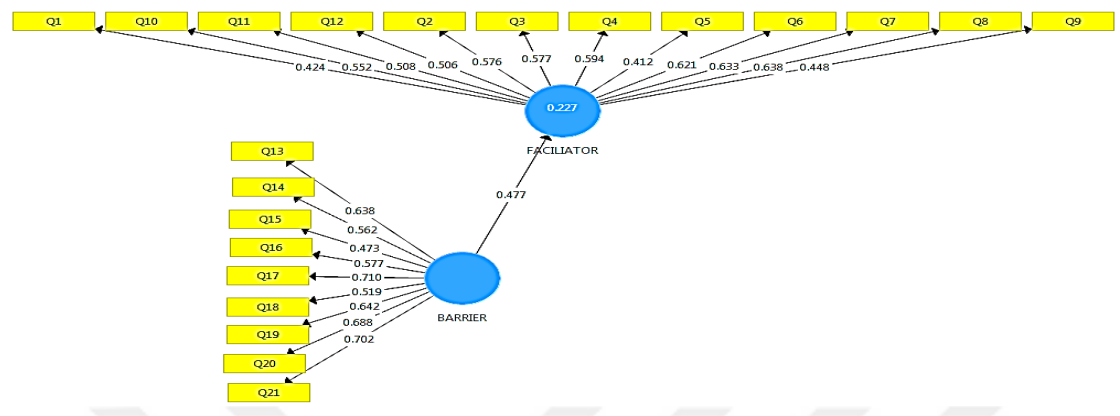


Figure 4.17: Partial least squares (PLS) between two variables

Table 4.12: Path Coefficients

Variables	Barrier	Facilitator
Barrier	--	0.477
Facilitator	--	---

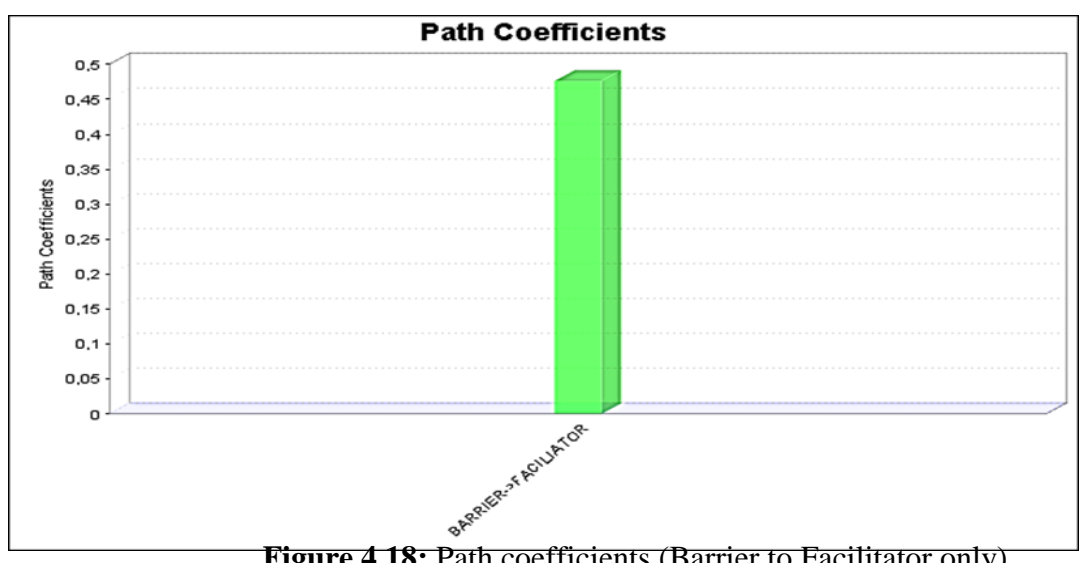


Figure 4.18: Path coefficients (Barrier to Facilitator only)

According to the test results without having Knowledge broker as a controller variable the effect of barrier on facilitators increase highly, the number that represent effect is 0.477 in this situation compare two the 4.5.2 results, 0.093 is very notable .it shows that knowledge broker part has significant impact on solving the problems that have origin as barriers and reduce its impact on the lack of facilitators.

4.6 Bivariate Analysis

In the previous section, each of the variables was characterized by statistical indices and analyzed separately, but in this section, the relationship between two variables is examined by SPSS 24. Since the scale of the variables of the research is the Likert spectrum, The Two-Pair Analysis of Their Relationships, Spearman's correlation coefficient is used. The correlation between the two variables indicates that increasing or decreasing a variable, causes what kind of effects on the other variables.

4.6.1 Correlation between Knowledge Broker and Facilitators

The bivariate Pearson Correlation test makes an example connection coefficient; the r represented size of modality and orientation of straight connection among groups of stable factors. By expansion, the Pearson relevance appraises because, it has statistical demonstration for a direct connection between similar sets of factors inside specialists, as indicated by specialist's correlation coefficient, ρ ("rho"). The Pearson Correlation is a measurement related to parametric value.

The bivariate Pearson Correlation is generally used to gauge the accompanying:

- Relationship between sets of factors.
- Relationship inside group of factors.

The bivariate Pearson correlation demonstrates the accompanying:

- When there is considerable straight connection among more than one significant factor.
- quality of a direct relevance
- The orientation of a straight relevance

The invalid presumption (H_1) and other hypothesis (H_2) of the criticalness assessment for correlation could be communicated in the accompanying routes, contingent upon whether a one-followed or two-followed test is asked:

Two-tailed significance test:

$H_1: \rho = 0$ ("when the value is 0; factors have no relationship")

$H_2: \rho \neq 0$ ("When the value is not 0; factors could have none zero relationship")

One-tailed significance test:

$H_1: \rho = 0$ ("when the value is 0; factors have no relationship ")

$H_2: \rho > 0$ ("When the value is not 0; factors could have none zero relationship ")

OR

$H_2: \rho < 0$ ("When the value is negative; there is negative relationships ").

Table 4.13: Pearson correlation test (Facilitator and K. Broker)

		Correlation	
Facilitators	Pearson Coefficient	Facilitators	K. Broker
	Sig. (2-tailed)	1	0.666**
	N	96	96
K. Broker	Pearson Coefficient	0.666**	1
	Sig. (2-tailed)	0.000	
	N	96	96

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

As results show, according to the calculated number, Sig. is 00 – less than 0.05 – then there a correlation between two variables and the value is 0.66.

4.6.2 Spearman Rank Correlation

Spearman grade connection test deals with frequency distribution that using in quantify measurement of level of relationship among pairs factors. Spearman was the who introduced this method. Spearman grade connection test has not given any expectation of presumptions from the assignment of the information and is the fitting connection investigation when the factors have estimation of scale of any occasion ordinal.

Table 4.14: Correlation of Spearman's rho test (Facilitator and K. Broker)

		Correlation		
Spearman's rho	Facilitators	Correlation		K. Broker
		Coefficient	1.000	0.388
		Sig. (2-tailed)		0.000
		N	96	96
	K. Broker	Correlation	0.388	1.000
		Coefficient	0.000	
		Sig. (2-tailed)	96	96
		N		

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

Table 4.15: Pearson correlation test (Barriers and K. Broker)

		Correlation		
K. Broker	Pearson	Coefficient	K. Broker	Barriers
		Sig. (2-tailed)	1	0.929**
		N	96	96
Barriers	Pearson	Coefficient	0.929**	1
		Sig. (2-tailed)	0.000	
		N	96	96

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

Table 4.16: Spearman's rho correlation test (Facilitator and K. Broker)

		Correlation		
Spearman's rho	K. Broker	Correlation	K. Broker	Barriers
		Coefficient	1.000	0.421
		Sig. (2-tailed)		0.000
		N	96	96
	Barriers	Correlation	0.421	1.000
		Coefficient	0.000	
		Sig. (2-tailed)	96	96
		N		

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

As results show, according to the calculated number, Sig. is 00 – less than 0.05 – then there is correlation between two variables and the value is 0.929.

According to the results, we can say the correlation between Knowledge broker and Barriers is 0.929 stronger than facilitators with 0.666. In this case the effect calculated directly between two pairs without considering the indirect effect of the third variable, which will show in the next section.

Table 4.17: Pearson correlation test (Barriers and Facilitators)

		Correlation	
		Barriers	Facilitators
Barriers	Pearson Coefficient	1	0.627**
	Sig. (2-tailed)		0.000
	N	96	96
Facilitators	Pearson Coefficient	0.627**	1
	Sig. (2-tailed)	0.000	
	N	96	96

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

Table 4.18: Spearman’s rho correlation test (Facilitator and Barriers)

		Correlation	
		Barriers	Facilitators
Spearman’s rho	Barriers	Correlation Coefficient	1.000
		Sig. (2-tailed)	0.000
		N	96
	Facilitators	Correlation Coefficient	0.225
		Sig. (2-tailed)	0.000
		N	96

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

4.7 Measuring Factor Loads

The factor loading measurement is done to examine whether research questions related to hidden variables or not? The load factor is between 0 and 1. The more factor load is closer to number 1; the questionnaire questions have a stronger relationship with the main variables. If the value is 0 it means that questions are not related to the research and in the negative cases it has the opposite effect on the variables. In cases that the values are less than 0.3 it means the factors have not strong impact on the variable and they must be removed from results and analysis, between 0.3 to 0.6 is acceptable but

steel weak, more than 0.6 is a reliable factor to measurements. In table 4.9.1 the factor loadings will show that all questions were related with variables and no need to remove and re assess the tests.

Table 4.19: Factors outer loading values

No	Value
Q1	0.401
Q2	0.573
Q3	0.588
Q4	0.610
Q5	0.471
Q6	0.591
Q7	0.578
Q8	0.587
Q9	0.518
Q10	0.589
Q11	0.574
Q12	0.551
Q13	0.485
Q14	0.574
Q15	0.578
Q16	0.577
Q17	0.759
Q18	0.452
Q19	0.707
Q20	0.683
Q21	0.742
Q22	0.714
Q23	0.815
Q24	0.625
Q25	0.696
Q26	0.657
Q27	0.532
Q28	0.656
Q29	0.622
Q30	0.517

According to the provided test results from collected data, it can conduct that total interpretation as table4.20 in each part of study:

Table 4.20: Factors outer loading Summary impacts

No.	Question	Value	Impact
Q1	Lack of time	0.401	Weak
Q5	Information overload	0.471	Weak
Q4	Lack of motivation	0.61	Strong
Q6	Lack of support from managers	0.591	Strong
Q18	Culture of tolerating failures	0.452	Weak
Q13	Individual's willingness to incur failures	0.485	Weak
Q17	Strong Organizational culture	0.759	Strong
Q21	Education and training	0.742	Strong
Q19	Learning Culture	0.707	Strong
Q30	transforming management issues ability to identify emerging	0.517	Weak
Q27	management	0.532	Weak
Q23	collect, analyze, summarize information	0.815	Strong
Q22	create connections between researchers	0.714	Strong
Q25	ability evidence to shape decisions	0.696	Strong



5. CONCLUSION AND SUGGESTIONS

The aim of this study was to discover how the role of knowledge broker in knowledge sharing process by respect to the facilitators and barriers inside organizations. The purpose of it was to determine if there was any positive relationship between the knowledge broker and reduction of barriers impact and increasing the facilitators' impact. To find out this, the university was selected as a case study and students as responders.

The second chapter included literature review about KM systems and elements that cleared a structural algorithm to what elements and details are basic in three parts of study. This segment created a good and comprehensive reference to find out important factors, categorized them and used them as data collection tool.

Nowadays, organizations are dealing with very intense competitive market place events, in which innovations at products and services are the main subjects of collecting loyal customers and obtain financial benefits. For being better and have permanent progress they need to use all their tangible and intangible assets. Pioneer and advanced organizations have found that accounting on the tangible assets are not the key factor of success, so they have to find the ways to convert intangible assets to financial leverage .

Knowledge management is one of the new and helpful concepts to help them for finding, adapting and reaching to aimed goals. KM includes various sub branches, tools, strategies and components but according to the literature reviews knowledge and the sharing process among individuals of any organization is the most important one. The main challenges are application of facilitators and reduction of barriers.

A structural literature review was done to illustrate the main topics and variables and after those hypotheses, sub-hypotheses and conceptual model for them was structured.

A Quantitative approach was used to collect data and test the hypotheses, for this purpose, a questionnaire was developed divided to three parts based on the literatures and major sources. It used as data collection toll among students of university. The collected data was analyzed by using Smart-PLS and SPSS 24 soft wares. Statistical analyses were completed on collected data such as descriptive statistics, demographic analysis, correlation, path coefficients, direct and indirect impacts of variables and PLS algorithms tests. According to the finding of study and test results, it can be inferred that knowledge broker has positive impact at reducing barriers issues at knowledge sharing and has positive relationship by facilitators to increase sharing and knowledge among engaged individuals at organization, so we can say the hypotheses are accepted.

The first hypothesis was about significant relationship between knowledge broker and barriers at knowledge sharing process. After analyzing collected data from questionnaires filled by the respondents, it is discovered that that knowledge broker has direct and significant impact on barriers by reducing its effect among sharing process, so the hypothesis was accepted.

The second hypothesis was about positive relationship between knowledge broker and facilitators at knowledge sharing process. After analyzing collected data from questionnaires filled by the respondents, it is discovered that that knowledge broker has direct and positive impact on facilitators by increasing its effect on barriers and sharing process so the hypothesis was accepted.

The sub-hypothesis was about impact of facilitators and barriers to each other without knowledge broker factors, which of them is dominant and have more impact on the other. In this section and after analyzing, it showed that the impact of them to each other is the same; it does not important which of them was chosen as dependent or independent variable. Each element has significant impact on each other and showed that assumptions were accepted.

From the conducted results from study, it can be determined that in the process of converting knowledge to assets, many issues are involved and have role of influences. But according to literature reviews by classification them in three main categories such as facilitators barriers and knowledge broker, it is possible to help and improve

establishment of strong and accurate sharing systems. Finding of study shows that facilitators and barriers are the intrinsic factors of any organizations and have direct impact to each other, it shows also by improving one of them the other has the approximate same impact before improvement, so it can say the key role of reaching fluent and flexible sharing systems cannot be created by working only on these two factors. When Knowledge brokers factor come to sharing system, according to the tests and finding, it makes great impact on balancing direct and indirect effects of barriers and facilitators to each other and sharing process. Knowledge broker acts as a catalyst by helping and empowering facilitator's effects and by reducing the barriers effect on the sharing process.

According to Yang (2004) the knowledge that people obtain among doing the jobs is known as job-related knowledge or job knowledge and people's knowledge Job-related knowledge can be in explicit or tacit form; however, Swart and Kinnie (2003) make a refinement between practice-based tacit knowledge and specialized tacit knowledge. Practice-based tacit knowledge expresses the utilization of the knowledge, On the other hand, specialized tacit knowledge is like explicit knowledge, but it is difficult to catch and related to the capacity of systems, it must be educated through shared practice.

In the first place, by looking at results, concepts of job-related knowledge, and importance of knowledge sharing, I will suggest that it is better university starts to complete full study about knowledge sharing issues such as awareness, applications, elements and any related concept to it from entire people among the university whether they are staffs, students, managers or outside partners and market places.

The second suggestion is about having organized knowledge broker systems as expertise, communities or new section of operation part to determine the fundamental issues at sharing process among engaged individuals inside university also themselves as a part of sharing system. Then try to establish outsider connection and complete the knowledge to asset process as a basic creator of knowledge.



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APPENDIX

1)

Evrak Tarih ve Sayısı: 08/03/2018-1606



T.C.
İSTANBUL AYDIN ÜNİVERSİTESİ REKTÖRLÜĞÜ
Sosyal Bilimler Enstitüsü Müdürlüğü

Sayı : 88083623-044-1606
Konu : TAGHI SHAKOURI YOUVALARI'nın
Etik Onay Hk.

08/03/2018

Sayın TAGHI SHAKOURI YOUVALARI

Enstitümüz Y1412.130093 numaralı İşletme (İngilizce) Anabilim Dalı İşletme Yönetimi (İngilizce) Tezli Yüksek Lisans programı öğrencilerinden TAGHI SHAKOURI YOUVALARI'nın "BARRIERS AND FACILITATORS AND THE ROLE OF KNOWLEDGE BROKERS AT KNOWLEDGE SHARING AMONG STUDENT: A CASE STUDY IN THE UNIVERSITY" adlı tez çalışması gereği "Knowledge Sharing System Application" ile ilgili anketi 19.02.2018 tarihli ve 2018/06 sayılı İstanbul Aydın Üniversitesi Etik Komisyon Kararı ile etik olarak uygun olduğuna karar verilmiştir.

Bilgilerinize rica ederim.

Prof. Dr. Özer KANBULOĞLU
Müdür V.



2)

KNOWLEDGE SHARING SYSTEM APPLICATION AYDIN UINIVERSITY (Turkish VERSION)

a) Please Supply the flowing details about by yourself:							
Age: 1) Under 25 2)25-35 3)35-45 4)45-55 6) 55- more							
Gender: 1) Male 2) Female							
Working Experience: 1) 1-3 2) 3-5 3) 5-10 4) more than 10				Nationality :			
Title:	Professor	PHD Candidate	PHD Holder	Assistant Professor	Other :		
I think the followings are barriers for knowledge sharing:					Strongly Agree	N/A	Strongly Disagree
1	Lack of time	1	2	3	4	5	
2	fear that jeopardize job security	1	2	3	4	5	
3	Poor communication skills	1	2	3	4	5	
4	Lack of motivation	1	2	3	4	5	
5	Information overload	1	2	3	4	5	
6	Lack of support from managers	1	2	3	4	5	
7	Weak Organizational culture	1	2	3	4	5	
8	Low-trust interactions culture	1	2	3	4	5	
9	Limited resources	1	2	3	4	5	
10	Cross-cultural constraints	1	2	3	4	5	
11	Lack of integration of IT systems	1	2	3	4	5	
12	Lack of training r of new IT systems	1	2	3	4	5	
I think the followings are faciator for KS							
13	Individual's willingness to incur failures	1	2	3	4	5	
14	Qualified human resources	1	2	3	4	5	
15	Leaders as supporters	1	2	3	4	5	
16	Incentives and reward mechanisms	1	2	3	4	5	
17	Strong Organizational culture	1	2	3	4	5	
18	Culture of tolerating failures,	1	2	3	4	5	
19	Learning Culture	1	2	3	4	5	
20	Trust climate ,family atmosphere	1	2	3	4	5	
21	Education and training	1	2	3	4	5	
there must be people whose job							
22	create connections between researchers	1	2	3	4	5	
23	collect ,analyze, summarize information	1	2	3	4	5	
24	ability to bring people together	1	2	3	4	5	
25	ability evidence to shape decisions	1	2	3	4	5	
26	ability to assess evidence, interpret it,	1	2	3	4	5	
27	ability to identify emerging management	1	2	3	4	5	
28	helping groups communicate	1	2	3	4	5	
29	monitoring and evaluating practices	1	2	3	4	5	
30	transforming management issues	1	2	3	4	5	

3)

KNOWLEDGE SHARING SYSTEM APPLICATION AYDIN UINIVERSITY (Turkish VERSION)						
Lütfen aşağıda istenen kendi hakkınızdaki bilgileri cevaplayınız						
Yaş: 1) Under 25 2)25-35 3)35-45 4)45-55 6) 55- more						
Cinsiyet: 1) Erkek 2) Kadın Uyruk :						
Ünvan:	Professor	PHD Candidate	PHD Holder	PHD Asistan	başkası	
çalışma deneyimi: 1) 1-3 2) 3-5 3) 5-10 4) more than 10				Nationality :		
Bence Bunlar Bilgi paylaşma için Engeldir:			Kesinlikle katılıyorum	N/A	Kesinlikle katılmıyorum	
1	Bilgi paylaşımı için zaman kısıklığı	1	2	3	4	5
2	ya kariyer güvenliğini kaybetme korkusu	1	2	3	4	5
3	İletişim ,yazı ve konuşma yetersizliği	1	2	3	4	5
4	Bilgi paylaşımında isteksizlik	1	2	3	4	5
5	Bilgi ve ilim fazlalığı	1	2	3	4	5
6	Kurumun eksik desteği	1	2	3	4	5
7	Kurumun eksik kültürü	1	2	3	4	5
8	Karşılıklı güvende kültür eksikliği	1	2	3	4	5
9	İletişim için ayrılan kaynakların yetersizliği	1	2	3	4	5
10	Kaç kültür olmanın yarattığı	1	2	3	4	5
11	Merkezi sistemlerin IT alt yapısının eksikliği	1	2	3	4	5
12	Yeni Teknolojilerin yetersiz eğitim	1	2	3	4	5
Bence Bunlar Bilgi paylaşma için Kolaylaştırıcı:						
13	yenilmekten korkmamak	1	2	3	4	5
14	Uzman insan kaynakları	1	2	3	4	5
15	Paylaşmayı destek verecek liderler	1	2	3	4	5
16	İş yapmak için ödül ve destek mekanizması	1	2	3	4	5
17	birliği yapmayı kolaylaştırmak , kurum Kültürünün olması	1	2	3	4	5
18	Hataya dayanan kurum Kültürü	1	2	3	4	5
19	. Kurumların öğrenme kültürü	1	2	3	4	5
20	Güven ortamı ve samimiyete dayalı iş ortamı	1	2	3	4	5
21	Eğitim ve Öğretim	1	2	3	4	5
Bilgi paylaşma Bir Grup olması gerekli dir:						
22	gereken kişiler arasında iletişim kurmak	1	2	3	4	5
23	bilgilerin özetlenmesi , analizi ve toplanması	1	2	3	4	5
24	gruplandırmak ve ilişkilerini kolaylaştırmak	1	2	3	4	5
25	Araştırmaya dayalı Kaynakları bulma becerisi	1	2	3	4	5
26	Bilgilere ulaşma becerisi	1	2	3	4	5
27	Yeni konuları bulmak ve ortamları bulabilmek	1	2	3	4	5
28	Grup ilişkilerine yardımcı olmak	1	2	3	4	5
29	Aşamaları değerlendirip , yönlendirebilmek	1	2	3	4	5
30	grup arasında denge kurmak	1	2	3	4	5



RESUME



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Experiences:

- Iran TCI – BTS supervisor
- PARASP Company - Project Manager - Mobile
- Shakhes Company - Project Manager – Nokia and ZTE
- IRAN TCI – Data Supervisor _Cisco and ZTE

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