International Journal of Business Management & Research (IJBMR)
ISSN 2249-6920
Vol. 2 Issue 3 Sep 2012 81-105

KNOWLEDGE CIRCLE: MAINTAINING INTRA ORGANIZATIONAL KNOWLEDGE FLOW

[1]MOHAMMAD RIZWAN JUNAID,[2]RANA ZAMIN ABBAS, [3]NAZEER AHMED MALIK & [4]MOHAMMAD AJMAL KHURSHID

[1]Dy. General Manager, Pakistan Institute of Management, Lahore, Pakistan

[2,3]Assistant Professor, University of Management & Technology, Lahore, Pakistan

[4]Lecturer, University of Engineering & Technology, Lahore, Pakistan

ABSTRACT

Organizations round the globe are trying their level best to maintain the flow of knowledge across organization in a holistic manner, keeping all the groups, sections and department on board; but most of the time the process of knowledge sharing does not seem smooth, casual and ordinary. On the contrary, it is trouble shooting, particular and situational. This paper encompass the concept of 'quality circle' as described in Total Quality Management and strives to have the same incorporated as 'knowledge circles' in an applied manner across organization in order to establish a comprehensive and cohesive network for intra organizational knowledge sharing that not only facilitates those involved in routine operations but paves the way towards organizational learning.

KEYWORDS: Knowledge Management, Total Quality Management.

INTRODUCTION

Knowledge sharing is a continuous process with the help of which organizational knowledge travels across whole organization. This fact has already been well recognized by the organizations round the globe that in order to create sustainable competitive advantage, knowledge is the core intangible asset needed for this very purpose (Miller & Shamsie, 1996). There are scores of challenges in this process and the most pivotal one is from the employees in the form of change resistance, isolation and groupings (Bock & Kim, 2002). It is evident that in most of the organizations, employees are rewarded for what they know rather than for what they share with others and it is the core reason that they establish a boundary of isolation around themselves and keep the knowledge within the cross folds of their own persona (Dalkir, 2005).

The fundamental source of knowledge is *tacit* (Nonaka, 2009) which is difficult to share and where the role of human beings (employees) seem more significant and central as if they are not open and cooperative then the flow of knowledge cannot be maintained in a manner in which it must be (Snowden, 2002) as knowledge flow ascertains the sharing of knowledge in a holistic manner, means developing a knowledge sharing culture by involving whole organization.

The primary focus of this paper is to look into the problems and challenges that hinder the smooth flow of knowledge across organization, the factors affecting the process, remedies and installation of a successful practice in the form of *knowledge circles* that ensures the knowledge sharing process as a routine activity and by and large enables the repositories of organization to preserve more knowledge which can be used and is used on as and when required basis.

Significance of the Study

This paper re-invents the process of knowledge sharing across organization through knowledge circle in purely an applied fashion and with the help of controlled documentation structure.

Hypothesis

H-1: Knowledge circles ensure the smooth flow of knowledge across organization and helps removing organic and in-organic barriers.

REVIEW OF RELTED LITERATURE

The conventional division (structure) of an organization provides ample opportunities to establish standard performance measures and highlights the role of individual in different decision making processes (Jacobides, 2007) and the intrinsic resource that moves across whole organization is *knowledge.*The knowledge based view (KBV) of the firm maintains that the knowledge is the most significant resource of the firm from an strategic standpoint (Alavi, 2001). This knowledge enroutes across whole organization in the form of routines, procedures, policies, plan, program and processes (Kogut, 2000); it can be said that knowledge exists in organizational members networks, tasks and equipments (Argote & Ingram, 2000). Tacit knowledge covers most of the organizational knowledge and it is even harder to have it articulated (Nonaka & Takeuchi, 1995) and once we can formulate a system for this articulation then the competitive advantage of organization can be accelerated at a rapid pace.

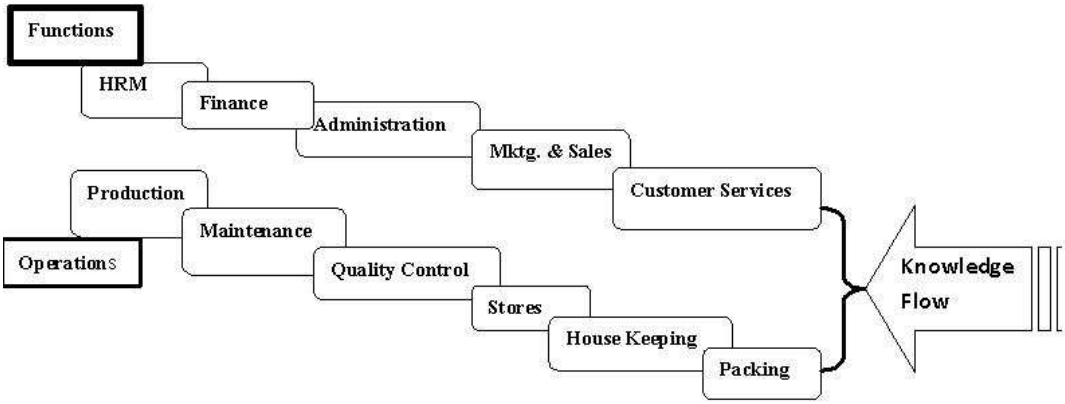

Figure: 1 {Knowledge across whole Organization in a continuous flow}

The above mentioned organizational structure defines the management structure (Walczak, 2005) within its cross fold and success of knowledge flow depends upon the balance between these two and organization structure even plays an important role in establishing inter-staff relationships and paves opportunities to break possible barricades in knowledge sharing (Al-Alawi, 2007). The functional and operational division of every organization even divides the tier of managers in two different fold and it seems complex to guard their interest in the perspective of their specific tasks, if this task-interest balance is shattered (Pierce, 2012) then this imbalance would generate impediments in knowledge management activities. The effectiveness of any organizational structure lies in its strength to facilitate the personal interaction and provide better opportunities to capture tacit knowledge (Anantatmula, 2005).

Knowledge Sharing in Organizational context: Factors Affecting the Process

The effectiveness and comprehensiveness of knowledge sharing in organization has been a topic of core interest for researcher and knowledge scholars as converting Tacit into explicit especially among the sub units of organization (Zander, 1995); in this very regard the nature of relationship is a very significant point to be ponderd [the relationship between both the parties] (Tsai, 2002). In order to develop a smooth knowledge sharing process the informal relationship or reltional approach seems playing a pivotal role (Levin, 2004). Organization culture plays a pivotal role in knowledge sharing across different departments and it rather revels the organizational capability to control the flow of knowledge (Davenport, 1998; Delong, 1997; Davenport, 1998) and it is utmost necessary on the part of top management to derive whole organization through a clear vision in order to get the contribution and involvement of all employees (O'Dell, 1998). It is even important to consider along with vision that emplyees' trust, autonomy and openness give way to eliminate the barriers and manage the smooth flow of knowledge to all relevant quarters (Von Krogh, 1998). In another study the significance of individual knowledge repositories and departmental coordination was emphasized (Soonhee Kim, 2004) as the combination of these two accelerates the process of holistic knowledge sharing.

Organizational norms and employees' attitude towards these norms considered an important factor that affects the process of knowledge sharing (Bock, 2005) as it relates with organizational design and culture, on the other hand social networks and shared goals facilitates knowledge sharing (Chow, 2008) and get all the employees on board in a smooth and agreeable fashion. Individual identification, mutual trust are the key factors (Nahapiet, 1998) affecting contexts of knowledge sharing in an organization. The notion of benefits play a considerable role in taking all the emplyees on a forum and gain consensu reflecting their readiness for knowledge sharing, these benefits and allied costs relates to extrinsic benefits (repute and reciprocity), intrinsic benefits (cooperating with others and self-efficacy), and costs (opportuneness and collaboration) (Chang, 2008; Kankanhalli, 2005). Another trail of benefits as focused by researcher in terms to exemplify them as key factors affecting the sharing process are individual benefits (Constant, 1994; Wasko, 2005), group benefits (Kalman, 1999) and organizational benefits (Kalman, 1999).

Three core factors were highlighted in another empirical study as individual, organizationa and technological (Lin, 2007) that affect not only the knowledge sharing process but also the innovative capacity of the firm. Job related factors were highlighted in a research like job performance, job satisfaction, job characteristics and job involvement (Rehman, 2011) as core in leaving drastic impression over the flow of knowledge within the close proximity of an organization.

A unique Malysian research looked into the significance of demographic factors (gender, age, Organizational tenure, job position and ethnicity) in the process of organizational knowledge sharing; in previous studies gender was not very focused as an influential factor hampering the process but this empirical study took into account the variable of gender and derive its significance as an important factor.

Socio-cultural factors as technology assets, human networks, social capital, intellectual capital, and change management (Ling, 2007) are considered as a comprehensive set of allied factors that accelerates/hinders the knowledge sharing process, and it is evident that organization relies upon a set of coordinated factors to run its functions and operations; so is the case with knowledge that runs like blood in organizational veins.

In align with captioned organizational factors there are number of social factors which affect the individula as well as organizational productivity (Putnam, 2000) which are significant to be considered in the process of knowledge sharing as (social interaction ties, trust, identification, norm of reciprocity, open mindedness, and shared language & goals) develop dual affect on knowledge sharing as these influence the attitudes and expectations on the one hand and quality of knowledge sharing on the other (Nikbakhsh, 2010). More recent socio-cognitive approaches undertook incentive, rewards, trust and relationships as core social factors (Chow , 2008) affecting knowledge sharing at all relevant levels. Other important social factors encircling the said process are Trust, empathy, willingness to help, openness to sharing/ criticism, group identity (Chua, 2002); while social relations as Trust, commitment, communication, influence (Requena, 2003) are considerable driving reasons in knowledge sharing circles, on the other hand Generalized trust and reciprocity (Lang, 2004) among employees create social integration required for effective and uninterrupted knowledge flow. In a recent research study the network connection is emphasized to maintain vertical-horizontal flow of knowledge keeping Relationship strength, relation quality, and Common norms (Rhodes, 2008) as fundamental causes needed to be focused once an organization is designing a knowledge sharing process in a holistic manner.

Intra-organizational networking is a prime focus of every organization as configuration of these networks creates an aura of cooperation among all employees and they begin socializing keeping Mutual trust, norms, obligations and identification (Huysman, 2004) as the foundations of their relationships which is required to establish a knowledge sharing network. Personal attitudes and expectations are closely linked with the process of knowledge sharing (Chiu, 2006). Social outcomes of organizational culture and design envelops many factors trust, collaboration, empowerment, politics, power and autonomy (De Long, 2000) as influencing factors that relate organizational culture and society in a loop.

Knowledge Flow in Organization

Knowledge revolves around whole organization theorugh its patent repositories as in case of *tacit* (human) and if *explicit* (non-human) (Ferlie, 2006) and this continuous movement of knowledge across organization maintains the knowledge flow; this knowledge flow is categorized in six sub-categories as creation, organization, formalization, distribution, application and evolution (Nissen, 2002). The close relationship between knowledfe flow and organizational structure as explained earlier is evident and the hierarchical model which performs the desired function is given as under, in order to comprehend the *structure-flow* relationship

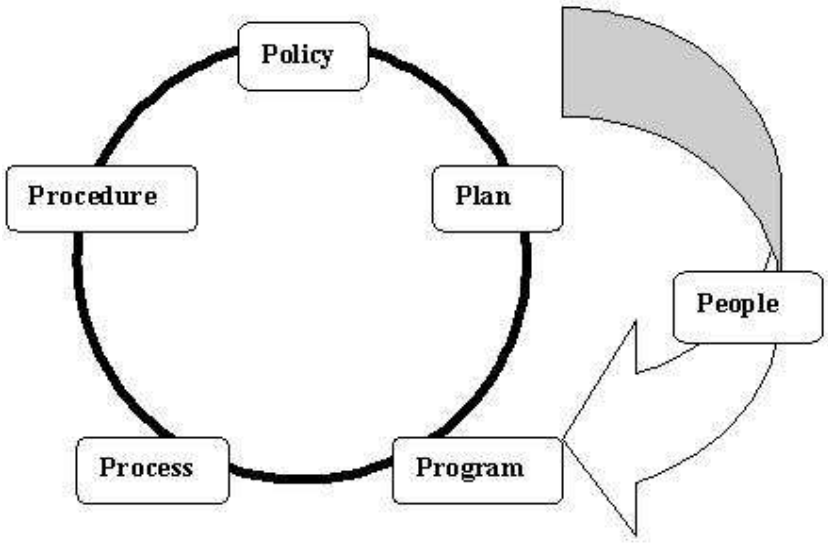

Figure : 2 {Documented Flow of Knowledge across organization

Organizational **policies** are basically" planned or agreed course of action based on particular principles" (Dictionary, 2010) and these laid down priciples are derived in the perspective of set goals that an organization planned to achieve during its course of life. These set of policies provide standard guidelines to all employees so that they may understand the fundamentals of organization they are working for and comply accordingly. On the other hand **plans** are "intended account of future course of actionaimed at achieving specific goals within a specified time frame" (Dictionary B. , 2012); once the plans are derived, the next step is to go for scheduling **(program) "**A plan of action aimed at accomplishing a clear business objective, with details on what work is to be done, by whom, when, and what means or resources will be used" (Dictionary B. , 2012). Business **process** can be defined as a "structured, measured set of activities designed to produce a specific output for a particular customer or market"(Davenport , 1993) and finally the **procedure** is " a set of actions or operations which have to be

executed in the same manner in order to always obtain the same result under the same circumstances" (Cook, 1998) and **people** are the corporate citizens who take along this whole cycle in an orderly, objective, continuous and required manner towards achieving well designed organizational goals.

Organizational and Social factors as discussed earlier, affect employees and eventually affect the functions and processes in which they are involved; especially the process of knowledge sharing and knowledge flow across organization is strongly effected in the presence of these factors which cannot be totally eliminated but it is possible to tame down their severity up to the negligible extent.

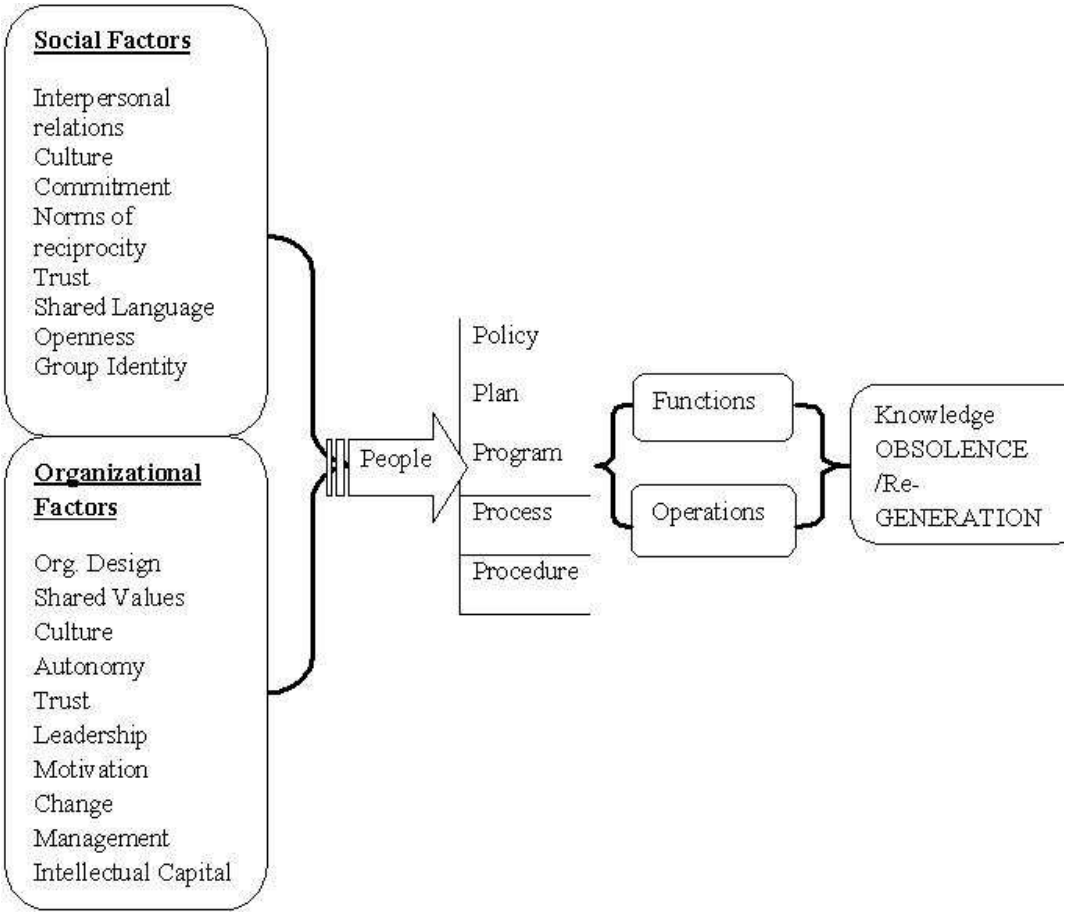

Figure: 3 Theoretical Frame work

Since that people are the key to success in every organization and they are the ones named as human capital comprises of training, experience, judgment, intelligence, relationship and insights (Barney, 1991); they empower a firm to gain sustainable competitive advantage against competitor(s), since that the sole resource that neutralizes mobility threats and provide an edge is managerial talent

(Hambrick, 1987) that is needed even to implement all the chalk down strategies and moves along with knowledge stock across organization. In order to streamline the reluctant flow of knowledge to the firm's boundaries (Kreiner, 1999) protective governance structure (Williamson, 1981) is needed to establish the desired structure. Organization's survival depends upon maintaining plausible balance between different human divisions as labor, practices and knowledge and to establish an uninterrupted flow of knowledge across these divisions (Hoopes, 1999) and this coordination takes these divisions from interpersonal behavior to inter communal/divisional behavior (Schon, 1987) which helps all the concerned individual to talk relevant terms in an understandable manner.

The resultant impact of organizational and social factors on organizational knowledge is that by virtue of experience, inventions, innovations; it becomes obsolete and this obsolescence does not relate with individuals but collective (organizational) which even affects the career of different individuals (Rothman, 1969) and on the contrary new knowledge is inducted in organization to fill the gap. External pressure, economic recession, troubleshooting, deadlines driven production, socio-political compressions and related external factors are pushing organizations round the globe towards drawing situational strategies (Kirkbride, 2001) and knowledge workers are getting more of this pressure as they are the ones carrying organizational load and productive balance.

Shift to avoid Internal/External Pressure

Knowledge workers have to live with organizational and social pressures and not only to live with but to carry forward their responsibilities in allied fashion to achieve desired goals with in due course of time. For this very purpose, knowledge circles are formed so that the flow of knowledge and involvement of workers in the process becomes a routine activity and they feel like living with this knowledge which runs like blood in their veins. Instead of initiating knowledge discussions on specific occasions as technological advancements, strategic changes, Policy shifts and management decisions etc., it must be a continuous process that is undertaken to keep the concerned workers on board with reference to knowledge resources in an organization. Socialization, externalization, internalization and combination (Nonaka & Takeuchi, 1995) are the most important phases that attract employees and establish a favorable environment needed for mental absorption and intellectual change; the more they are habitual of it the more they are into it.

Purpose of Knowledge Circles

The core purposes of knowledge circles are as:

Table: 1 {Functional/Operational Knowledge circles}

Functional Knowledge Circles	Operational Knowledge Circles
Develop strong intra-group and inter-group relationships	Develop strong intra-group and inter-group relationships
Discussion of Issues relating work place behavior and output	Discussion regarding latest technological updates and prevailing mechanism
Provide acquaintance regarding documented guidelines toward knowledge sharing	Provide confidence to all circle members regarding organization technological interfaces and handling
Implementation of every circle outcome and post implantation evaluation	Provide documented procedures to perform the tasks based upon preventive guidelines
Review the corrective actions needed to implement in case of non conformance	Review the preventive/corrective actions needed in case of observations/non conformance
Control the cycle	Control the cycle
Reward the circle members	Reward the circle members

Functional circles are more focused upon human relations, interactions and group behavior as they mostly revolves around the tacit knowledge interfaces and their core output is MAN based which revolves around the issues that are to be identified, recognized and resolved that are to be addressed without zero-waiting of time to avoid lags between individuals that result in knowledge failures. On the other hand the **Operational circles** are more diverted towards explicit side of knowledge as the output is machine based which encircles problems that are to be understood, controlled and solved in order to avoid interruption in related processes and knowledge flow.

Four Step Process

The establishment of knowledge circle in an organization would be a four step process as:

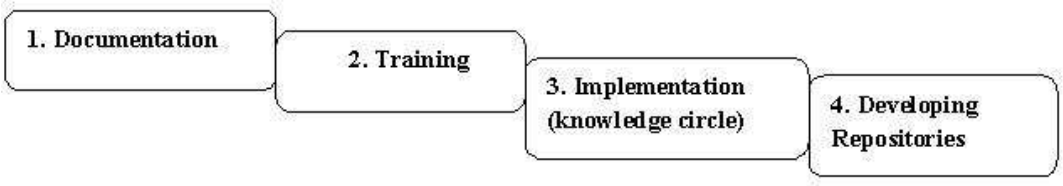

Figure: 4 {Four Step Process}

DOCUMENTATION

In order to initiate the process to establish knowledge circle, we need to start with a set of documents that not only comprehend the whole process but even helpful in defining the role of every circle member, circle boundaries, records, references etc. The best available structure of documents provided by ISO 9001 (Quality Management System) that can effectively be used as it fulfills our core purpose; it is a four tier documented structure as: *see* (dawson, 2006)

Table: 2 {Documentation Process}

1.Manual (Knowledge Manual)	set of company's policies covering all departments, sections and sub-section in the perspective of knowledge related initiatives
2. Procedures	Detailing all policies in the form of system operating procedures/standard operating procedures in order to cover every departmental functions and operations covering knowledge related areas, methodology and output with reference to the personnel involved (the knowledge workers)
3. Work Instructions	Step by step coverage of every member's role and responsibilities in the circle
4. Forms	Recorded information covering the compliance with the documented requirements

In order to establish a comprehensive understanding of how to go on with knowledge documentation, we focus upon every tier separately

KNOWLEDGE MANUAL

Manual is a very comprehensive and fundamental document that comprises all the organizational policies within its cross fold and it is considered as the key document which an organization contains in order to run the show, all the other kinds of manuals need to be aligned with policy manual of the organization. Besides Policy manual, there are other kinds of manual exist in an organization as knowledge manual, quality manual, operational manual, maintenance manual, accounting manual etc., our core concern is Knowledge manual which contains all the organizational policies pertaining to the knowledge related matters in an organization. All the departments, sub-departments and sections are based upon their specific domain of knowledge and these sets of knowledge are specific to their parent departments and isolated from others.

Knowledge manual would incorporate all the peripherals relating to a function/operation in the organization and written down in a precise manner to give a scanned picture of knowledge boundaries. It covers brief description of function/operation, knowledge domain, codification parameters, repositories and retention period (Appendix-1)

SYSTEM OPERATING PROCEDURE

Procedures incorporate the detailed applied guideline regarding how the related function/operation is undertaken, keeping all the concerned personnel on board and describe the purpose, scope, responsibilities, definition of terms, procedure and reference documents detail. It helps the person performing the said function/operation to begin-end the task without any assistance (asking for knowledge backup).

Knowledge workers need these procedures necessarily as rapid technological advancements and behavioral modifications shortened the knowledge life and it is exposed to obsolescence (Zheng, 2011) and it is the reason that procedures are always kept on revising and obsolete copies are saved in record files in order to maintain the continuity representing change in a single procedure. (Appendix-2)

WORK INSTRUCTION

Work instructions and procedures are often confusing, but it is very simple to grasp the difference as procedure covers whole function/operation while work instruction comprehends sole activity (store, 2012) and it belongs to one worker as it represents the out put of one worker. Knowledge workers are normally not given these instructions and most of the time they rely on verbal instructions; on the contrary, things are needed to be standardized in terms to maintain a balance in knowledge sharing process and to save it from being affected with personal changes.

The number of knowledge workers are more in lower tiers and that is the reason of placing work instruction at third level so that those who are involved in sole activity can easily perform their tasks without external assistance and every change that is brought in these instructions are filtered through the respective procedures. (Appendix-3)

FORMS

Forms are blank (to be filled in form of) documents; once filled and signed these become the records and provide detailed back up of the activity/process performed with reference to time, date, output, nonconformance, responsibility, approvals etc. These are duly filled by the person performing the task and kept in record to review on as and when required basis. Usually, knowledge workers filled the form with reference to the activity they perform but in our specific case, these forms are incorporating the knowledge related issues and problems that has been faced by knowledge worker during performance. (Appendix-4)

TRAINING

A knowledge worker is an individual who generate new ideas and/or principally involved in dissemination/communicating knowledge or uses knowledge as the core resource (Kumar, 2004) to perform the task and they need extensive training all the way around to keep themselves update regarding any new/upcoming changes being brought in the organization. When we talk of knowledge circle then it

seems utmost necessary to train all the knowledge workers ahead of their induction in the circle or else, the performance and outcome of the circle would ne be so beneficial as perceived.

Knowledge workers in an organization can be divided into three categories as those involved in knowledge creation, those involved in knowledge sharing and those involved in knowledge utilization (Abadesco, 2004) and all these three categories must be taken on board referencing their training needs which is the most important aspect of this process. This training is *documentation based*; the documents prepared in the first phase belong to different functions/operations and the operators of these functions/opttions are the real custodian of these documents. The focus of training revolves around four areas:

1. Provide conceptual understanding of all the documents (four tiers)

2. Verbal discussion to review the level of knowledge workers understandings

3. Pilot testing regarding usage of documents

4. Post testcing evaluation and corrective actions.

IMPLEMENTATION

The most important phase of this process is the formation of knowledge circles; at least two personnel form every knowledge based category (generation, sharing, and utilization) will be selected including the circle runner (Manager/Head of the department).

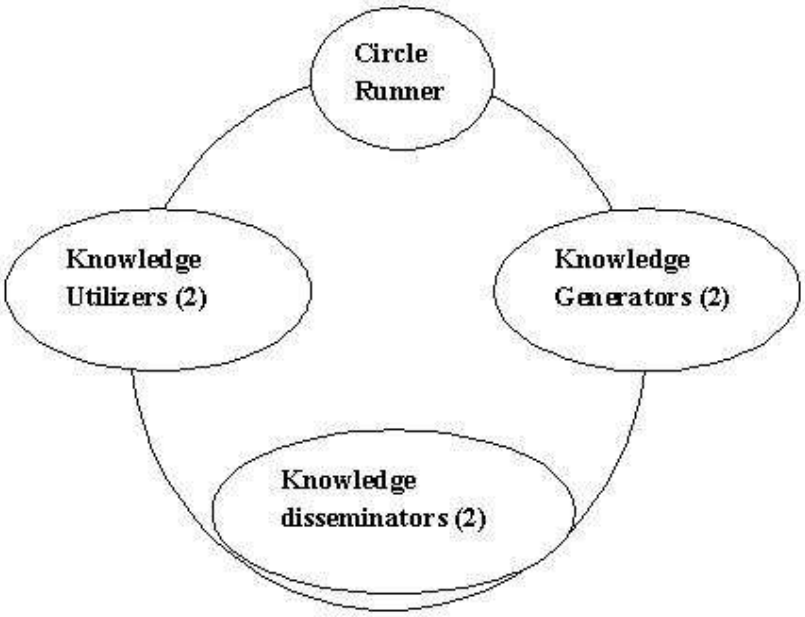

Figure: 5 {Formation of Knowledge Circle}

All of the above captioned members would act as the permanent members of the knowledge circle with extensive training against documents to be used coupled with detailed knowledge of their responsibilities and related functions. It is mentioned here that the perception of their participation is diversified with reference to functional knowledge circles and operational knowledge circles but their presence would remain be the same and they are trained by the circle runner in the context of their involvement in the circle.

OPERATIONAL KNOWLEDGE CIRCLE

Operational departments (as some of them captioned in Figure 1) are a mix of Man and Machine and the output is purely machine based (processes) and knowledge exists in these departments is more of *explicit* in nature and encompasses the technology based matters with in its cross fold. The knowledge obsolescence and re-generation depends upon the technological automation.

Table: 3 {Proceedings of Operational Knowledge Circle

Time	30 minutes
Frequency	Daily
Venue	Any agreed location with in the organization
Participants	Full Attendance or +80%
Agenda	One specific Knowledge Area
Selection Criteria	1.Problem based area needs immediate solution
	2. Prospects based upon observation with potential to appear as a problem
	3. New Knowledge sharing
Discussion basis	Relevant document {if document is not there then immediate preparation of documents to cover the area}
Repository	Documents added in Master document list and hand over to the concerned person for immediate implementation
Evaluation	Deputation of one member from the circle to review the performance once the documented implementation is undertaken and discuss the findings in next meeting
Future Repository	Record in future repository for ready reference and meeting track

Every next meeting of the circle shall discuss outcomes of previous meeting, in case if any new document is generated or any specific steps (corrective actions) have so far been taken to address any problem. Initially the members would take couple of days to get acquainted with the keen usage of documents to perform their activities but in a week days time they feel comfortable and start enjoying the

whole cycle and their respective participation shows sign of intense involvement in the circle and this involvement bears fruit for the whole organization and apart from many social and organizational influencing factors they keep on rotating in the knowledge cycle.

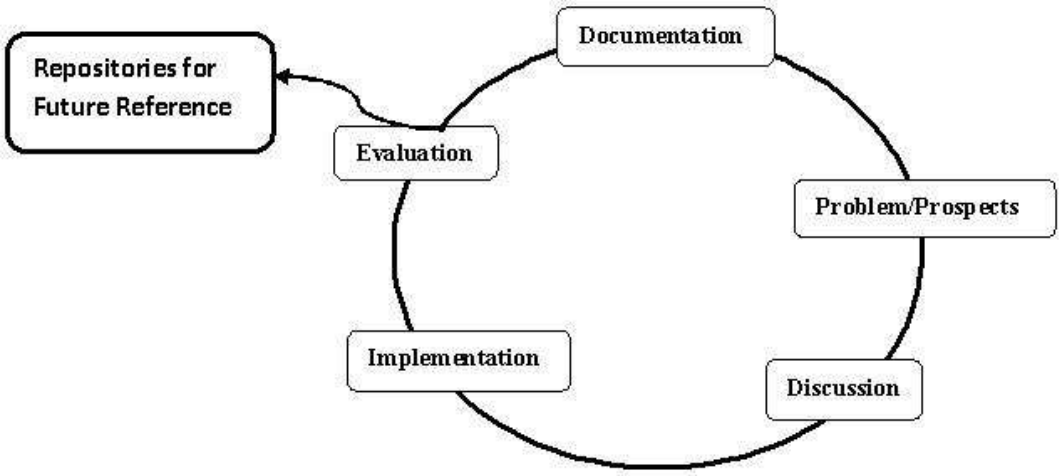

Figure: 6 {Operational Knowledge circle}

Functional Knowledge Circle

Functional departments in an organization revolve around the human element and their outcome is purely *Man based* while machines perform the facilitating part and their presence is secondary in whole process. The knowledge type in these departments is usually *tacit* and close human interaction is the success key to produce profitable and consistent outcomes. These departments are core and fundamental in any and every organization as they are the ones which truly create/generate new knowledge at the first place and support all the other departments. The flow of knowledge is initiated by these departments as they derive policies, expansion plans, human resource automation initiatives, technological automation guidelines, growth matrix etc., and their sole input is knowledge which they initially gain, have it documented and then forward to other departments.

Functional knowledge circles are more into issues that encircle human equation and it is indispensable to keep on resolving any upcoming issues between knowledge workers as if they are not mentally settled then their performance bears a big question mark that eventually hampers the organizational progress, growth and expansion; including their own interest and growth. These circles help in bring new changes to organizational design on lasting basis.

Table: 4 {Proceedings of Functional Knowledge Circle}

Time	30 minutes
Frequency	Daily
Venue	Any agreed location with in the organization
Participants	Full Attendance or +80%
Agenda	One specific Knowledge Area
Selection Criteria	1.Issues of Prime Importance
	2. New Knowledge sharing
Discussion basis	Description of situation with reference to the core issue and generation of records
Fresh up Call	Immediate resolution of issue keeping involved personnel on board
Review	Deputation of one member from the circle to review the situation after resolution and closely vigil the behavior of relevant parties
New Knowledge	In case new knowledge area is introduced then preparation of relevant documents, training plans and implementation process come under discussion and job is awarded to circle member for the same
Future Repository	Record in future repository for ready reference and meeting track

The very next meeting incorporates the findings of the previous meeting as the top agenda and goes on with usual proceedings. It is important to keep under close considerations that functional circles are more dynamic and vibrant as they are related with multi-dimensional issues, organizational and social factors, well being of knowledge workers, work place environment, job satisfaction, peers behavior and other sophisticated matters.

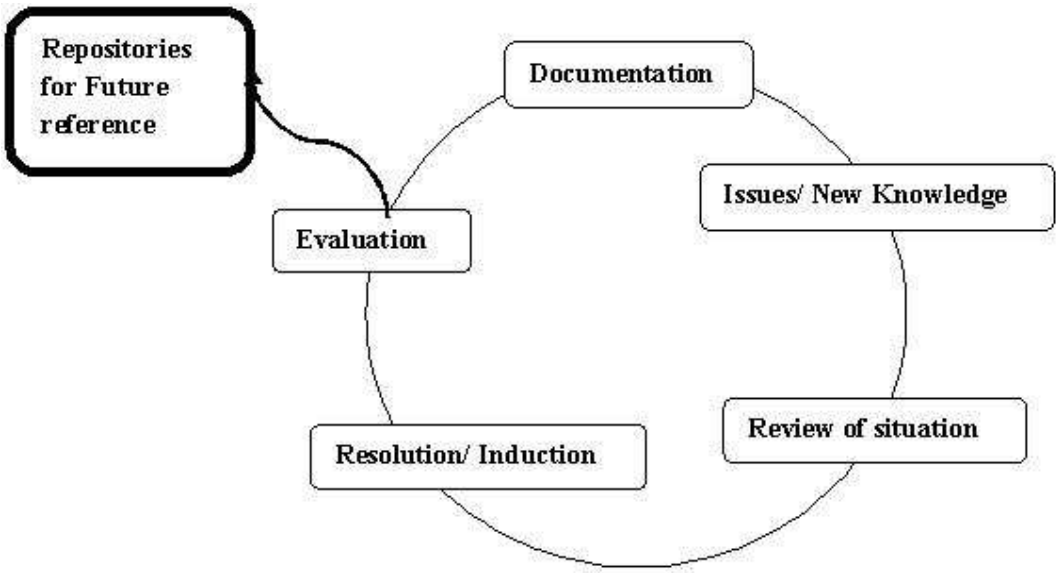

Figure: 7 {Functional Knowledge circle}

Top Management's Review of Performance

Top management must sit together along with the circle runner and review the performance of these knowledge circles in monthly *Management Review Meeting*; the core purpose of these meetings is to review the performance of these circles and finalize rewards for circle members and other knowledge workers who helped implement the findings of the circle meeting in their respective working area and further allocate more resource for better functioning of these circles. The involvement, seriousness and interest shown by the top management would not only accelerate the performance of the circle but be helpful in modifying organizational culture and bring necessary changes in organizational design.

Knowledge Circles enrich Organizational Knowledge and Organizational Learning

The focus of individual knowledge and learning is altogether different as compared to organizational knowledge and learning (Sanchez, 1997) and it would not be adequate to patch individual knowledge and learning phases on that of an organization as the knowledge acquisition and learning process of an individual is uni-dimensional while that of an organization is more complex and spiral (Cook, 1996) where concept of groups and teams dominate the process of knowledge sharing and learning. It must be kept in mind that individual and organizational objectives with reference to learning

are not the same (Antonacopoulou, 2001); the cognitive perspective (Grant, 1996) of knowledge, positions knowledge as a an outcome of sensory interaction with the objective external world and it is individualistic in most of the cases, since that the sesory perception of an individual are different form others. The positivists (Gherardi, 2000) are of the opinion that knowledge can be gained, codified, retained and disseminated across organization and all the processes right from knowledge creation to dissemination are undertake as isolated or auonomous processes with in their very nature. The knowledge repositories in an organization are different in their location and existence; rahter the nature of knowledge is different from one another and it varies from tacit-implicit-tacit; which is in its truest sense is individual knowledge shared by all other member of an organization in purely objective a manner.

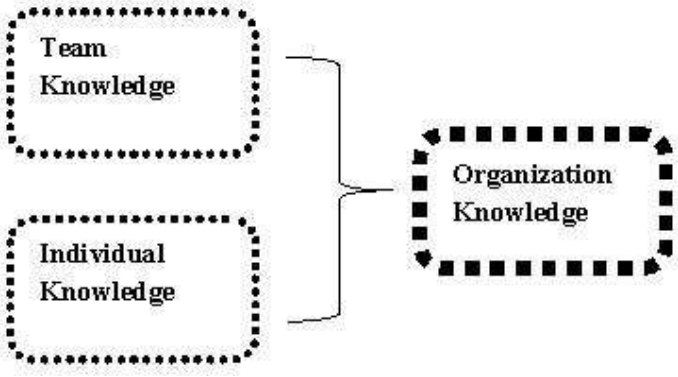

Figure: 8 {Knowledge repositories; Uni-dimensional mode}

Organizational learning arises out of the social interaction between People usually occur at the work place (Huysman M. , 1999) as individual dress their experience in a rational manner or it can be said that individual interpret his/her experience or develop a distinctive sense of it which helps achieving the organizational objective (Oswick, 2000). In fact collective activities, sharing in groups and cultural composition pave the way towards organizational learning (Swan, 2001) that undertakes in a spiral mode taking all those involved on board. The other side of the coin tells us that Organization learning involves many intricate, complex but productive processes and mingles them together in order to achieve a combine goal; interpersonal communication (Dixon, 1997) links people with people in an organization coupled with accommodation, tolerance, compassion and meaningfulness.

Individual knowledge and team knowledge are gained in two different circumstances with two different mind sets while the process of organizational learning is in spiral mode and fundamentally based upon communication and socialization. It is not our intention to discuss the Nonaka's model but just to vitalize the idea that learning is purely a collective process. If we take organization as an in-

organic totality then its interfaces would be closer to that of a human. Learning loops with built in traps, organizational politics (Coopey, 2000) is a major hurdle in the process and it cannot be overlooked in any circumstances.

Knowledge circles create spirals and maintain these spirals in a generative mode, the immediate benefit of this mode is that, it diminished the possibilities of inter-personal, inter-departmental and intra-organizational conflicts with reference to knowledge sharing and dissemination.

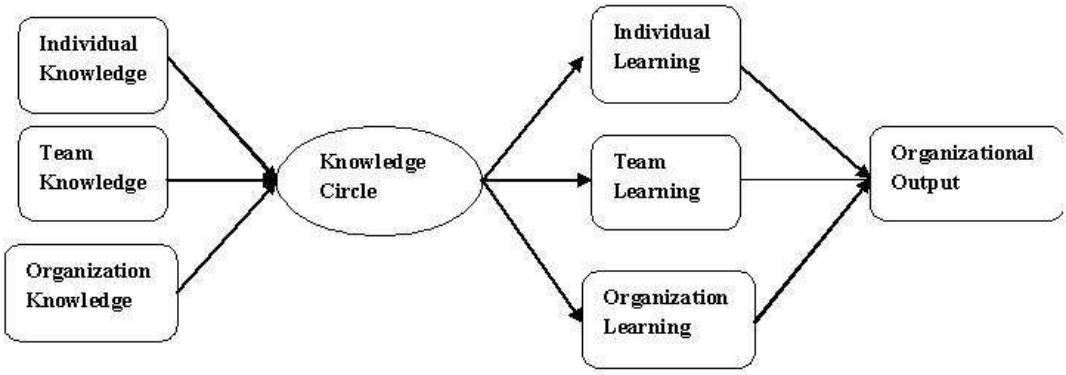

Figure: 9 {Knowledge Circle and OL process}

CONCLUSIONS

It is for sure that knowledge is the most precious resource for any and every organization and human beings are the sole custodian of this resource and this combination creates sustainable competitive advantage for the organization on long term basis. The concept of quality circle as implemented in Production/operations management has been focused in order to replicate the same with reference to counter the knowledge based problems and issues in an organization as normally it is not so mechanically focused and this negligence cost a lot, in terms of unseen losses, to organizations round the globe.

Appendix -1 **(Knowledge Manual)**

Company Logo	Training & Development	Doc #: XYZ/TM/001 Issue #: 01 Issue Date: XX/YY/ZZ Page #: xx of yy

The training and development department of ABC Company (pvt.) Ltd works under the close supervision and control of Director Training and Development who is solely responsible to cater all the prevailing and forthcoming requirements pertaining to training for the organization.

Director training is well subordinated by a team headed by Manager Training and development, four professional trainers (project management, communication skills, general management skills, software) and support staff of six personnel.

Training manuals are prepared, kept updated, and reviewed after defined intervals under the close supervision of Director Training who is assisted by an experienced technical writer. The retention period of every section of every manual is detailed in Document control list.

For details: refer procedure KLM/PR/001

Appendix -2 (Standard Operating Procedure)

Company Logo	Training & Development	Doc #: XYZ/PR/001 Issue #: 01 Issue Date: XX/YY/ZZ Page #: xx of yy

Purpose

The sole purpose of this procedure is to cater all the training requirements of entire organization in accordance with applicable national/international standards (if any).

Scope

This procedure covers all activities, initiatives and records pertaining to the Training and Development Department of ABC Company (pvt.) Ltd.

Responsibilities

Director Training is solely responsible to carry out the activity of training and development in compliance with this procedure. In the absence of director training, Manager training is the person responsible to act in accordance with the same.

Procedure

Training Need Assessment

4.1.1. Manager training (MTD) is responsible to conduct the training need assessment of all the knowledge workers across whole organization covering each and every department and maintain the records.

4.1.2. MTD prepares and maintains Master list (MNO/YY/LLL) of all departments, including their knowledge workers with respect to their job responsibilities and knowledge domain.

4.1.3 MTD prepares training assessment plan (KLM/NN/BBB) on six monthly bases and performs the individual training need assessment of all knowledge workers as captioned in Master list and discuss with Director Training and Development.

4.1.4. MTD maintains the individual need assessment in the personal file of every knowledge worker.

Assessment and Approval of Training Vendors

4.2.1. Manager training and development (MTD) keeps in touch with all reputed training houses cross country to cater the upcoming organizational needs, in case of resource person is not available in-house

4.2.2. MTD prepares vendor master list (OPO/GG/DD) and enlist all the training vendors and keeps the list updated in case of addition/elimination of any vendor.

4.2.3. MTD sends vendor assessment form (FGF/KK/DG) to all the training organizations and receives them back.

4.2.4. MTD maintains approved vendor list (MMM/GG/VV) and send acknowledgement letters to all approved vendors.

4.2.3. MTD categorizes all the vendors according to their areas of specialization.

…… continue the procedure>>>>>>>>

4.3. Knowledge Domains

4.4 Training Manuals Preparation

4.4 Training Plan

4.5. Training Records

4.6. Post Training Evaluation

4.7. Research and Development

5.0. Reference Documents

5.1. Master list	**(MNO/YY/LLL)**
5.2. Training assessment plan	**(KLM/NN/BBB)**
5.3. Vendor master list	**(OPO/GG/DD)**
5.4. Vendor assessment form	**(FGF/KK/DG)**
5.5. Approved vendor list	**(MMM/GG/VV)**

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Appendix -3 **(Training Need Assessment)**

Company Logo	Work Instruction	Doc #: XYZ/PR/001 Issue #: 01 Issue Date: XX/YY/ZZ Page #: xx of yy

Position: Assistant Training & Development (ATD)	**Report to: Manager Training &Development**

1.0 Assistant training and development (ATD) contacts all the departmental heads, in advance of one week, and inform them of the upcoming survey regarding training needs assessment of all the knowledge workers in their respective departments.

2.0 ATD sends the Master list (MNO/YY/LLL) to all the departmental heads three days before the survey for cross verification and confirmation.

3.0 ATD receives the signed copy of Master list and keeps it in separate file named "Approved Master List for first half ranging Jan-June 2---"

4.0 ATD sends the training assessment plan (KLM/NN/BBB) to all the departmental heads to ensure the availability of all knowledge workers in the department at the time of survey.

5.0 ATD performs the survey on individual basis in every department and does not disclose the findings with the departmental heads and keep them confidential.

6.0 ATD prepares comprehensive report titled "Need assessment survey for first half ranging Jan-June 2---"

7.0 ATD submits the report to Manager training and development and discuss in detail

8.0 ATD secures verification signature on every individual assessment and maintains the personal file of all knowledge workers.

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Appendix -4 **(Master List)**

Company Logo	Master List	Doc #: MNO/YY/LLL Issue #: 01 Issue Date: XX/YY/ZZ Page #: xx of yy

Department							
Departmental Head							
Nature							
Knowledge Domain							
Total number of Knowledge Workers							
Knowledge worker(s) in each domain	Domain						
	Worker(s)						
Department							
Departmental Head							
Nature							
Knowledge Domain							
Total number of Knowledge Workers							
Knowledge worker(s) in each domain	Domain						
	Worker(s)						

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