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FACULTY OF ECONOMICS
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MASTER'S THESIS

**THE ROLE OF TRAINING AND
KNOWLEDGE MANAGEMENT IN THE
ORGANIZATIONAL DEVELOPMENT OF
PRASAR BHARATI**

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New Delhi, September, 2006

Author's Statement

I **Rakesh SEHGAL** hereby certify to be the author of this Master's thesis that was written under the mentorship of **Professor Stane MOZINA** and in compliance with the Act of Author's and Related Rights-Para 1,Article 21.I herewith agree this thesis to be published on the website pages of ICPE and the Faculty of Economics.

New Delhi ,Date

Signatures

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LIST OF ABBREVIATIONS

ABU =Asia-Pacific Broadcasting Union
ACR =Annual Confidential Report
AIBD =Asia Pacific Institute for Broadcasting Development
AIR =All India Radio
ARU =Audience Research Unit
BBC =British Broadcasting Corporation
CBT =Computer Based Training
CD =Compact Disc
CEO =Chief Executive Officer
CITO =Chief Information Technology Officer
CKO =Chief Knowledge Officer
COP =Communities of Practice
DCD =Development Communication Division
DDG =Deputy Director General
DG =Director General
DLP =Distance Learning Package
DLP =Distance Learning Package
DTH =Direct to Home
DVD =Digital Versatile Disc
DW =Deutsche Welle
ECS =Electronic Clearance System
E-in-C =Engineer-in-Chief
FAQs =Frequently asked Questions
FLO = Faster Learning Organization
FM =Frequency Modulation
FTII =Film and Television Institute of India
HRD =Human Resource Development
IBM =International Business Machines
IC =Intellectual Capital
ICM =Intellectual Capital Model

ICT =Information and Communication Technologies
ID =Instructional Design
IGNOU =Indira Gandhi National Open University
IIPA =Indian Institute of Public Administration
IMD =International Marketing Division
IPR =Intellectual Property Rights
IT =Information Technology
KCM =Knowledge Chain Model
KM =Knowledge Management
KOEL =Kirloskar Oil Engine Limited
L&T =Larsen & Toubro
LO =Learning Organization
MBO = Management by Objectives
NDTV =New Delhi Television
NGO =Non Government Organization
NPC =National Productivity Council
OD = Organizational Development
OECD =Organization for Economic Co-operation and Development
OL =Organizational Learning
PAIR =Productivity, Agility, Innovation, Reputation
PC =Personal Computer
RCH =Reproductive and Child Health
ROI =Return on Investment
RTI =Regional Training Institute
SAARC =South Asian Association of Regional Co-operation
SBU =Strategic Business Unit
SMEs =Subject Matter Experts
SOP =Standard Operating Procedure
STI(P) = Staff Training Institute(Programme)
STI(T) =Staff Training Institute(Technical)
TV =Television
VANI =Voice Articulation and Nurturing Initiative
VCD =Versatile Compact Disc

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Appendix I

Questionnaire on Training Activities in Prasar Bharati

Note: The questionnaire comprises some statements which are to be evaluated on a scale of 1-5 by putting 'X' in the relevant column. The points on a scale of 1 to 5 mean the following:

- 1= Totally disagree
- 2= Partially disagree
- 3= Can't say
- 4= Partially agree
- 5= Fully agree

		1	2	3	4	5
1.	Sufficient opportunities exist for training and development in the organization.					
2.	Training needs are appropriately identified in the organization.					
3.	Nominations are made for training based on a fixed objective criterion such as employees' survey or recommendation by the immediate superior.					
4.	Generally training is viewed as something sacrosanct in the organization.					
5.	On-the-job training is given due importance.					
6.	Training programmes conducted in the organization help in organizational development.					
7.	I feel that I am sufficiently trained for my job.					
8.	I think that I would have performed better in some other task within the organization.					
9.	My immediate superior(line manager) always motivates me to learn.					
10.	I get full co-operation and encouragement from my peers to learn and upgrade my skills.					
11.	I always get opportunity to apply learning from training programmes to my job.					
12.	I am always rewarded for learning and applying my knowledge and skills to my job.					

- 1= Totally disagree
 2= Partially disagree
 3= Can't say
 4= Partially agree
 5= Fully agree

		1	2	3	4	5
13.	Training in the organization is always relevant to the job requirement.					
14.	The trainers generally have enough practical and field experience.					
15.	Training material provided during the training programmes is comprehensive and useful.					
16.	There is enough opportunity available for classroom discussion and for clarifying doubts.					
17.	Apart from lecturing, other methods of training such as case studies, group work and problem solving are used.					
18.	Transfer of learning to job is carried out successfully in the organization.					

Note: Please strike off whichever is not applicable in the following statements.

19. I attended an induction course at the time of my recruitment. Yes/No
 20. I attended a foundation course prior to/immediately after my promotion. Yes/No
 21. I have attended a Refresher Course during the last 5 years. Yes/No

Note: Please give response to the following question (optional).

Please give your suggestions for improving training and development activities in Prasar Bharati.

Name(optional):
 Designation:

Appendix II

Questionnaire on Knowledge Management in Prasar Bharati

Note: The questionnaire comprises some statements which are to be evaluated on a scale of 1-5 by putting 'X' in the relevant column. The points on a scale of 1 to 5 mean the following:

- 1= Totally disagree
- 2= Partially disagree
- 3= Can't say
- 4= Partially agree
- 5= Fully agree

		1	2	3	4	5
1.	In my organization, people share knowledge with each other freely.					
2.	I have enough scope to share my knowledge with others.					
3.	Information Technology is used adequately in the organization for knowledge storage and dissemination.					
4.	The past mistakes made by the organization have been documented so that lessons for future can be drawn from them.					
5.	Adequate efforts are made to convert tacit knowledge(knowledge in people's heads)into explicit knowledge(knowledge accessible by everyone in the organization).					
6.	The line manager consults me for taking decisions in important matters.					
7.	Innovative ideas are given due recognition in the organization.					
8.	The organization learns from best practices of other organizations in the field.					
9.	The organization learns from best practices of other public funded organizations.					
10.	I discuss work-related problems with my peers.					
11.	The organization has a culture of learning and has appropriate environment for learning.					
12.	The core competence of the organization is given adequate consideration and resources.					

		1	2	3	4	5
13.	The organization is able to communicate the organizational goals to the employees.					
14.	Personal goals of individuals are well integrated into organizational goals.					
15.	The items of works are clearly identified in the organization and drills for their execution are available with my Section.					
16.	A system of identifying knowledge gaps and closing them through well-defined processes exists in the organization.					
17.	The organization has formalized the process of transferring best practices throughout the organization.					
18.	All organizational manuals and documents are kept updated.					
19.	The management of organizational knowledge is the key to the organization's strategy.					
20.	The commercial exploitation of knowledge is done satisfactorily by the organization.					
21.	Teamwork is crucial to perpetuating the core competencies in the organization.					
22.	A climate of openness and trust has been built up in the organization.					
23.	Customer value creation is considered a major objective of knowledge management in the organization.					
24.	The quality of programmes produced/acquired/commissioned by the organization is satisfactory.					
25.	There is a plenty of archival material available within the organization which can be retrieved, packaged and marketed.					
26.	It is easy to access any information in the organization.					
27.	Multiskilling is required for making the organization more competitive and versatile.					
28.	Regular Sectional meetings are held to discuss work.					

Note: The response to the question below be please recorded (optional)

Could you give some suggestions for improvement of knowledge management in Prasar Bharati with respect to knowledge creation, dissemination, embodiment, measurement and use (including commercial exploitation)?

Name(optional):

Designation:

1. INTRODUCTION

1.1 Definition of the Problem

In to-day's competitive world in the field of broadcasting, various broadcasters are vying with one another to increase their market share. For Prasar Bharati (Broadcasting Corporation of India), a public broadcaster, the main thrust is on the achievement of its organizational objectives to inform, to educate and to entertain the masses. Since the private broadcasters only have profit motive at the core, they would definitely not like to get involved in activities which are loss making and would prefer cream skimming only. Unlike other private broadcasters, Prasar Bharati has a special obligation towards the people of India with the profit motive being secondary. In order to fulfil its organizational objectives, intellectual capital is of vital importance which underlines the need for training and knowledge management.

Training is an attempt to focus influence on people in order to refashion and improve their job-related knowledge, skills and behaviour. The employees are expected to apply knowledge, skills and behaviour learnt during training to their day-to-day activities. However, it is an established fact that to offer a competitive advantage, training has to involve more than just basic skill development. Training is moving from a primary focus on teaching employees specific skills to a broader focus of creating and sharing knowledge. Training must be viewed as a means to create intellectual capital. Intellectual capital includes basic skills, advanced skills, an understanding of the customer or manufacturing system and self-motivated creativity

Prasar Bharati needs to have a clearly defined training policy and a perspective training plan covering various disciplines. A greater thrust needs to be given to the training efforts in keeping with National Training Policy notified by the Government of India. The training effort at present is confined only to the training institutes of the organization whereas in the field offices, there is no organized effort to train the employees. There is also a need to allocate greater resources to training to enable the organization to fulfil its role as a public broadcaster in an effective and efficient manner.

The other important issue is of knowledge management which has grown in interest in today's business and academic circles since the beginning of 1990s. The recent progress and modernization in Information Technology have played an important role in emergence of knowledge management. Knowledge has become the most valuable and strategic resource for the organizations. They believe in managing their intellectual resources and capabilities in order to become and remain competitive. Most knowledge management literature treats knowledge broadly and uses it to cover all that an organization needs to perform its functions. It may involve formalized knowledge, patents, laws, programmes and procedures or may involve intangibles such as know-how, skills and the experience of people. It may also include the way organizations

function, communicate, analyze situations, develop new solutions to problems and develop new ways of doing business.

Knowledge Management systems must deal with both explicit and tacit knowledge. Tacit knowledge is a deeply personal experience, aptitudes, perceptions, insights and know-how that are implied or indicated but not actually expressed. Ford elaborates the purpose of knowledge management stating that it enables the organization to gain access to the knowledge held within the individuals of the firm(Ford,2004.p-559).Knowledge should be so embedded in the organization that it essentially remains accessible, even if key individuals leave. Network technologies and databases have accelerated the emergence of modern Knowledge Management systems. The employees possessing the requisite knowledge and those who are always keen to learn more and more are undoubtedly the greatest assets of an organization. It is the quality of human resources that gives a competitive edge to an organization.

Prasar Bharati has a vast reservoir of knowledge which is yet to be codified and is consequently lost on the change of incumbents. The Manuals existing in the organization particularly on the Programme side need to be updated. There are numerous instances of individual excellence and best practices which do not get disseminated throughout the organization. In order to properly structure and update the wealth of knowledge created over the years, Prasar Bharati is required to go in for knowledge management in an organized manner.

The following **research questions** arise out of the above research problem:

1. What are the challenges faced by Prasar Bharati as a public broadcaster in fulfilling its role of informing, educating and entertaining the masses?
2. How can training of personnel be helpful in meeting the challenges faced by Prasar Bharati?
3. How could the existing training efforts be brought in consonance with the organizational objectives of Prasar Bharati?
4. How can knowledge management be applied in meeting the challenges faced by Prasar Bharati?
5. What should be the role of senior management of Prasar Bharati in the spheres of training and knowledge management?

Accordingly, the **research objectives** can be summed up as follows:

1. To identify the challenges faced by Prasar Bharati as a public broadcaster in fulfilling its objectives.
2. To identify specific areas of functioning having performance deficiencies and evolve training strategies to remove them.
3. To establish suitable effectiveness criteria for training efforts to bring them in consonance with organizational objectives.
4. To identify suitable knowledge management strategies for Prasar Bharati.
5. To identify the initiatives which could be taken by the senior management for successful implementation of training and knowledge management in Prasar Bharati.

The research will be based on the proposition that training and knowledge management are vital for organizational development of Prasar Bharati and for nurturing intellectual capital in the organization. This leads to the hypothesis that effective implementation of training policy and knowledge management will improve the quality of content as well as transmission thus resulting in customer satisfaction and achievement of the organizational goals by Prasar Bharati.

1.2. Definition of the Purpose

The purpose of my master's degree thesis is to underline the significance of training and knowledge management for the organizational development. As employees are the greatest assets of an organization, the need for investing in them cannot be overemphasized. The possession of intellectual capital is in fact as important as possession of physical infrastructure. The challenges of fast changing technologies, competitive market scenario and the ever increasing appetite of the radio and TV audiences for better content as well as high quality production and transmission of programmes can be met by Prasar Bharati only by responding to them in a positive manner. While the importance of the possession of the state-of the-art equipment cannot be denied, as is commonly acknowledged, the man behind the machine is equally important. Accordingly, the purpose of the thesis is to suggest ways and means to nurture the intellectual capital of Prasar Bharati through various initiatives in the spheres of training and knowledge management. I shall analyze whether the training imparted by Prasar Bharati is in consonance with its organizational objectives. The existing infrastructure and resources available for training will be evaluated and recommendations made for their optimal utilization as well as improvement.

It is extremely important for Prasar Bharati to tap, embody, disseminate and utilize the knowledge available within the organization in order to provide quality services to the people all over India in keeping with its organizational objectives of informing, educating and entertaining. The managers as well as employees have an important role to play in this respect.

1.3. Definition of the Goal

The basic goal of my thesis is to critically examine the role of training and knowledge management in organizational development in general and for Prasar Bharati in particular with reference to the literature on the subject, various policy papers, data regarding training programmes and trainees, etc available within the organization and to propose the whole cycle from identification of training needs to implementation and evaluation. I shall also examine various models of Knowledge Management and suggest measures for improving KM in Prasar Bharati. The better management of training functions and appropriate management of knowledge bases in the organization will enable it to cope with the challenges of a competitive market, improve the quality of content as well as transmission and fulfil its role as a public broadcaster effectively. The improvement in quality of

services would in turn benefit the audiences. It would also help Prasar Bharati to communicate public policies and programmes relating to development of backward areas, education, agriculture, women empowerment, health, etc to the masses in a more effective manner

I expect my thesis to act as a catalyst in enabling the organization to take concrete steps for evolving a training policy ,preparing a perspective training plan for the next 5 years, identifying its training needs more accurately, improving the organization and implementation of training programmes, monitoring the benefits accruing out of training at higher management level, making evaluation and validation of training more effective and creating a learning environment in the organization. I am of the view that importance of codification and updatation of various types of knowledge bases available in the organization will be brought into sharp focus through my thesis. A manager is a knowledge worker who uses, measures and disseminates knowledge in the organization. Novel ideas and innovations also need to be encouraged and rewarded in an organization. I expect my thesis to facilitate Prasar Bharati in becoming a knowledge-centric organization.

1.4. Methodology adopted

In the first part of my thesis which is mostly theoretical, descriptive method has been adopted for which purpose academic literature on the subject has been consulted. In the second part of the thesis, I have used the Case Study strategy for establishing the relevance of training and KM for Prasar Bharati. Both the main Training Institutes of Prasar Bharati i.e. Staff Training Institute (Programme) and Staff Training Institute (Technical) at New Delhi were selected for an empirical investigation within their real life context and interviews were held with their heads. Open (unstructured) questions were asked so as to elicit a detailed response regarding various issues related to training such as training objectives, training methods, training management, evaluation, etc. Besides, data relating to number of courses held, number of trainees, dropout rate, etc has been collected from the Training Institutes. A questionnaire was also circulated to the trainees who were attending an on-going training programme as well as the officers at junior level for assessment of training efforts made by Prasar Bharati. The National Training Policy evolved by the Government of India was also studied. Finally, a gap analysis was carried out to identify the deficiencies in training efforts. The use of organizational documentation such as internal reports, planning documents and schedules proved to be helpful in triangulating data collected through primary sources.

So far as knowledge management is concerned, the study is more exploratory in nature since there is no formal knowledge management set up in Prasar Bharati at present. I involved middle level and senior officers of Prasar Bharati in the study on KM and obtained their responses to a questionnaire on KM. Intellectual Property Rights issues relating to protection of copyrights for programme content have also been touched upon in the Study. Terms of reference of National Knowledge Commission set up in August 2005 and its recommendations on e-governance were also studied.

1.5 Structure of the Thesis

The thesis consists of 9 Chapters. Chapter 1 is the introductory Chapter. Chapter 2 defines Organizational Development, various models of OD and techniques of OD. Chapter 3 focuses attention on organizational learning and distinguishes it from the concept of a learning organization. Chapter 4 defines Knowledge Management, outlines various models of KM and also addresses the issues of knowledge sharing, knowledge mapping and knowledge measurement. Chapter 5 is about the role of Training in organizational development and deals in detail with the training cycle. Chapter 6 describes the role of managers and employees in Training and KM. Chapter 7 depicts the existing system of Training and KM in Prasar Bharati and the scope for improvement. Chapter 8 incorporates recommendations and suggestions for more effective implementation of training and KM in Prasar Bharati. Chapter 9 gives the conclusion of thesis.

2. ORGANIZATIONAL DEVELOPMENT

2.1 Introduction

In today's fast changing world, the organizations are in a state of flux. They have to continuously adapt themselves to the changing requirements whether it is the adoption of new technology or the challenges of an increasingly competitive market. Organizational Development (OD) equips an organization to cope with the continuous changes in an effective and efficient manner. An organization can achieve its stated objectives only by effecting requisite changes to keep pace with the changes in both internal and external environment. It would involve a whole gamut of technological changes, retraining and re-orientation of manpower and all other measures that are necessary for optimizing the performance of an organization.

The development of OD traces its origin to 1960s when the term was first used in the USA. At that time, the managers were autocratic and did not feel the need for associating their employees in decision-making. The improvement in the organization's performance was exclusively the preserve of the managers and policy-making their prerogative. There was no interaction between the managers and the employees at various levels and they worked in watertight compartments.

OD perceives an organization as an embodiment of interacting forces rather than an entity where forces for change and those against change are in constant conflict. OD has decisively supplanted the old command/obedience style of management with a more participative style where every member of the organization contributes to its functioning. The practitioners of OD firmly believe that the apparently conflicting interests of organizations and their members can be reconciled through appropriately designed OD interventions. OD's fundamental principle is that organizations can do better and the lives of those who constitute an organization can be better.

2.2 Definitions of Organizational Development

Organizational Development has been defined differently by different authors. The focus of OD is on the people which are the real assets of any organization. The process of OD refers to the process of developing organizational responses to internal and external environments when basic condition of environmental stability is no longer present.

OD has been defined by Beach as "a complex educational strategy designed to increase organizational effectiveness and health through planned intervention by a consultant (or other change agent) using theory and techniques of applied behavioural science" (Beach in Thomason, 1991, p 470).

The above definition emphasizes the role of a 'change agent' in OD. The 'change agent' could either be a consultant brought in from outside the organization or could be an in-house specialist. He acts as a stimulant for

change in the organization. A similar definition of OD has been given by Beckhard (Beckhard in Buchanan and Huczynski, 1997, p 487) who defined OD as:

- (1) a planned effort
- (2) organization-wide
- (3) managed from the top
- (4) to increase organizational effectiveness and health
- (5) through planned interventions in the organization's 'processes', using behavioural-science knowledge.

This definition is more comprehensive than the definition given by Beach since it introduced two additional attributes. Firstly, that the OD encompasses the whole organization which implies an attempt to understand and to influence the entire organization involving everyone about everything. Secondly, it is monitored and steered by the top management in an organization. The introduction of OD at the top of the organization facilitates acceptance at the lower levels and is more likely to achieve positive results for organizational improvement. The organizational culture can be changed more quickly and comprehensively through an intervention at the top instead of some efforts in certain isolated pockets of the organization. This definition, however, is silent about the role of the 'change agent'. It also does not visualize any role for collaboration or interaction amongst its members both vertically and horizontally in the development of an organization.

It was French and Bell who not only laid emphasis on the importance of collaboration in resolving various problems in an organization but also felt that improvement was a continuous process in an organization. According to them (French and Bell in Ellis and Dick, 2003, p 235),

“OD is a top management-supported long-range effort to improve an organization's problem solving and renewal processes, particularly through a more effective and collaborative diagnosis and management of organization culture”.

According to Bennis, organization development (OD) is a complex strategy intended to change the beliefs, attitudes, values, and structure of organizations so that they can better adapt to new technologies, markets, and challenges and the dizzying role of change itself (Bennis in Buchanan, Huczynski, 1997, p 488). Thus he focused more on change and adaptability in an organization.

OD intervention does help in bringing a change in an organization but that change is not the lasting solution as an organization has to gear up for further changes. Patten and Vaill (1976, p 20-8) have stated that Kurt Lewin's original change model of “unfreezing-moving-refreezing” has become obsolete today. The focus of OD is only on “unfreezing” of the existing structure and culture of the organization. In today's turbulent world, “refreezing” metaphor has become anachronistic as the changes cannot be perpetuated forever. Thus there is a need for constant OD intervention to enable an organization to cope with the changes in an effective manner.

On examination of the foregoing definitions, it is evident that individual development and organizational effectiveness are the twin objectives of OD and intervention to achieve these objectives are deliberate, planned and systematic. The application of social and behavioural science knowledge and techniques seeks to enhance both organizational effectiveness and the quality of work experience for the organization's members. There must be a clear link between the strategic planning process and OD to ensure that strategic decisions actually work at the operational level.

2.3 Objectives of Organizational Development

The fundamental objective of OD is to achieve a sense of commitment, self-direction and self-control among all within the ambit of the programme. Other major objectives are as under (Thomason, 1991, pp 473-474):

1. Secure a decentralization of decision making, moving away from highly centralized decision and control systems to ones which emphasize decision close to the point of action.
2. Achievement of a climate of co-operation in place of the common power struggles and destructive competition amongst managers or between managers and workers.
3. Achievement of a system in which disagreements and conflicts are brought into the open and dealt with realistically, rather than one in which they remain bottled up until a major disruption has to occur to clear the blockages.
4. Changes in the ways in which people conduct themselves or in which they carry out their work, making them more responsive to the real needs of the situation-for example, where technological changes indicate a new way of working.
5. Increase the openness of communication, between individuals, groups, divisions, and departments; so that real issues can be confronted in place of the shadow-boxing which often characterizes organized activity.
6. Modification of organizational structures and procedures where the existing ones appear to impede progress or performance.
7. Improve the capacity of people caught up in the enterprise to deal with work problems and work situations, thus contributing to their development as persons.

The objectives listed above are, however, more relevant for the high technology and large organizations as compared to others. Moreover, all of them may not be present in a single scheme.

There is also empirical evidence to prove that OD has met its objectives in a number of organizations. A case in point is the survey carried out by Porras and Hoffer (1986,p 477-494) of 42 OD specialists which revealed that their successful assignments led to the following:

1. more open communications
2. more collaborative relationships

3. more willingness to take responsibility
4. maintenance of a shared vision
5. more effective problem solving
6. more respect and support shown for colleagues
7. more effective interaction with other members of the organization
8. more inquisitiveness to ensure that things were being done right
9. more openness to experiment with new ways of doing things

It is evident from the above that the practice of OD is based on several key values. To realize these values, OD employs its knowledge of behavioural science in planned interventions in the processes of the organization. As the problems dealt with by OD are unique in every organization and each organization has a different culture, OD has to be innovative.

2.4 OD : Levels of Intervention

The problems in an organization can arise at individual level, group level, inter-group level or organizational level. At each level, the nature of the problem is different. An individual may find the work too difficult, not challenging enough or without any future prospects. Team or group's ineffectiveness may stem from lack of leadership, poor interpersonal relations, ego clashes or absence of cohesion. An inter-group conflict may be attributable to unwillingness to co-operate or liaise, differences in outlook or perspective, physical distance or conflict of priorities or interests. The organization as a whole may owe its problems to low morale, lack of direction or a clear strategy, absence of an effective or pragmatic structure or incompatibility with its environment.

The most important step in problem diagnosis is the identification of the level at which the problem has arisen. It is quite common for the problems to crop up at more than one level simultaneously. Therefore, more often than not problem diagnosis is a complex task which in turn necessitates a solution package instead of individual solutions. Derek Pugh evolved an OD matrix(See Table 1,p 10) to address the issues of diagnosis and choice at various levels with respect to behavioural factors, organization structural factors and wider contextual factors (Pugh in Buchanan and Huczynski,1997,p 492-93).Each cell in matrix identifies, in italics, potentially relevant OD interventions. For instance, if the problem lies with the individual and the cause is contextual, a training intervention may solve the problem whereas in case of an organization, change in strategy or culture would be the only answer to the problem.

However, OD matrix cannot be applied in a straightforward mechanistic manner. A judicious combination of systematic diagnosis, local context knowledge and judgment is required to diagnose the problem and select the most appropriate solution.

Table 1 : Organizational Diagnosis and choosing the appropriate OD intervention : the Pugh OD Matrix

	Behaviour <i>What is happening?</i>	Structure <i>What is the system?</i>	Context <i>What is the setting?</i>
Organizational level	Poor morale, pressure, anxiety, suspicion, weak response to environmental changes <i>Survey feedback, organizational mirroring</i>	Inappropriate and poorly defined goals, strategy unclear, inappropriate structure, inadequate environmental scanning <i>Structure change</i>	Geography, product market, labour market, technology, physical working conditions <i>Change strategy, change location, change conditions, change culture</i>
Inter-group level	Sub-units not co-operating, conflict and competition, failure to confront differences, unresolved feelings <i>Inter-group confrontation, role negotiation</i>	No common perspective on task, difficult to achieve required interaction <i>Redefine responsibilities, change reporting relations, improve liaison mechanisms</i>	Differences in sub-unit values and lifestyles, physical barriers <i>Reduce psychological and physical distance, exchange roles, arrange cross-functional attachments</i>
Group level	Inappropriate working atmosphere, goals disputed, inappropriate leadership style, leader not trusted or respected, leader in conflict with peers and superiors <i>Process consultation, team building</i>	Task poorly defined, role relations not clear, leader overloaded, inappropriate reporting structures <i>Redesign role relations, autonomous groups, socio-technical system redesign</i>	Lack of resources, poor group composition, inadequate physical facilities, personality clashes <i>Change the technology, change the layout, change group membership</i>
Individual level	Individual needs not met, frustration, resistance to change, few learning and development opportunities <i>Counselling, role analysis, career planning</i>	Poor job definition, task too difficult <i>Job restructuring or redesign, job enrichment, clear objectives</i>	Poor individual-job 'fit', poor selection or promotion, inadequate training, inadequate recognition and reward <i>Improve personnel procedures, improve training, align recognition and reward with objectives</i>

Source: Pugh in Buchanan and Huczynski, 1997, p 493

2.5 Models of Organizational Development and Change

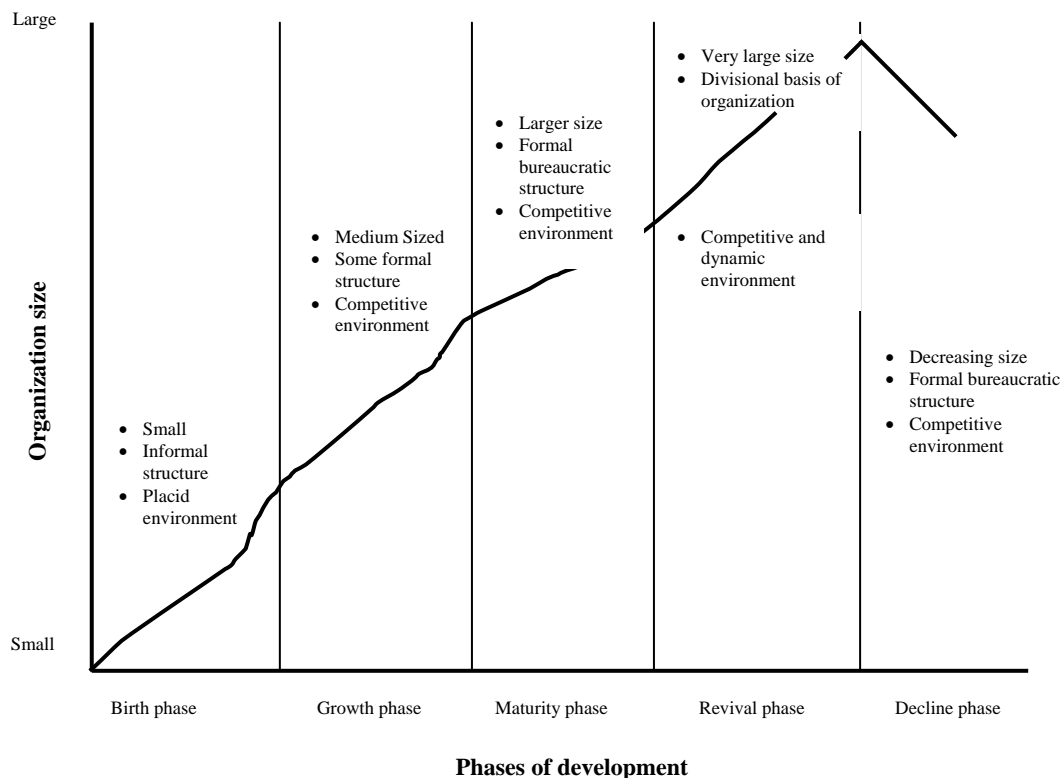
Models of organizational development and change reflect the various stages in OD intervention. They are based on research of past practices and provide

vital inputs about the usefulness of OD. A few major models are described as under:

i) The organization life-cycle model

This model was devised by Smither, Houston and McIntire. The model envisages that with the passage of time most organizations become larger and more complex (Ellis and Dick, 2003, p 237). Accordingly a typical organizational life-cycle has five phases from an organization's birth to decline. (Fig 1).

Fig 1: The organizational life-cycle (adapted from Smither et al, 1996)



Source: Ellis and Dick, 2003, p 237

In each phase of the cycle, a different management style is required. In the birth phase, an organization can survive with a fairly informal structure without any strict hierarchies or rulebooks. Entrepreneurial flair to seize opportunities is of vital importance to the organizations at this stage.

With the growth in the complexity of the organization, need for a management cadre is felt to oversee existing and future actions. In growth phase, increased specialization within the organization often leads to functional division and the subsequent redistribution of managerial responsibilities from senior to middle management.

During the maturity phase of the cycle, growth becomes sluggish and the management's endeavour is to get the maximum out of established relationships. During this phase, internal processes of the organization slow down and decision-making takes longer owing to increased layers of bureaucracy which have been built up to support the growth of the earlier phase.

The revival phase involves restructuring and innovation in order to ensure return of the organization to growth and even rapid expansion.

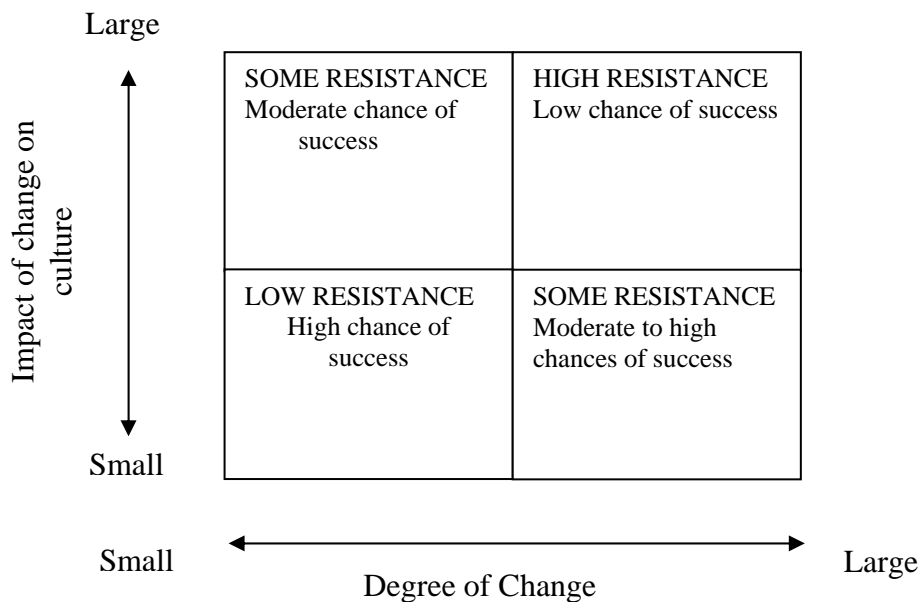
The final phase is that of decline involving stagnant growth and greater preoccupation with internal instead of external issues. The products and services become obsolete in this phase. A possible strategy in this phase is one of diversification into other markets and replacement of potentially declining product lines with more profitable growth areas.

The life-cycle model is useful in identifying the phase of an organization and recommending appropriate OD intervention for it.

ii) Harvey and Brown's Change Model

For any change to be successfully implemented in an organization, it is extremely important to predict the level of resistance to such a change. The model of change developed by Harvey and Brown (Harvey and Brown in Ellis and Dick, 2003, p 239) is useful in predicting resistance (Fig 2).

Fig 2: The Harvey and Brown Change Model



Source: Ellis and Dick, 2003, p 239

The model depicts that the easiest interventions are those leading to small changes and having little impact on the culture. However, in practice, OD interventions are unlikely to lie in the quadrants to the left; there is a greater

likelihood of their lying in the two quadrants to the right when the change is large and the impact on culture is either moderate or large.

iii) The Planning Model

The importance of two other OD intervention models i.e. Planning Model and Action Learning Model outlined by Thomas Cummings and Christopher Worley (Cummings and Worley in Buchanan and Huczynski, 1997, p 495) cannot be overlooked.

The Planning Model assumes that the change can be implemented in seven related stages:

1. **Scouting:** Sharing of information and ideas by the Consultant and the client, with respect to problems and the appropriate approach.
2. **Entry:** Establishment of a formal consulting or helping relationship between the Consultant and the client.
3. **Diagnosis:** Gathering of information for definition of the problem and identification of causes therefor.
4. **Planning:** Joint establishment of the goals of an OD intervention and the proposed approach.
5. **Action:** Implementation of intervention strategies
6. **Stabilization and Evaluation:** Stabilization of change and assessment of outcomes.
7. **Termination:** Withdrawal of the Consultant and movement on to another OD Project.

The above seven steps are not always followed in the same sequence for effecting change in an organization. There may be a need to repeat some of the steps several times and some of the steps could even be omitted or passed over quickly.

iv) Action Research Model

The Action Research Model differs from traditional planning model in two respects. First, it is cyclical or iterative process. It involves a process of cyclical intervention and feedback which helps in implementing further changes and improvements to organizational effectiveness. Though cyclical intervention is possible in the Planning Model as well, in Action Research, this intention is enshrined in the approach ab initio.

Second, the word 'research' connotes the objective of creation of knowledge that can be used in other organizational settings. The knowledge is generated out of active attempts to change the organization and not from passive observation. Thus Action Research is more participative and dynamic in nature. It is a collaborative method involving Consultant and members of the organization.

Buchanan and Huczynski (1997, p 496) have enumerated the stages of an Action Research programme as under:

1. Problem identification
2. Preliminary diagnosis
3. Data gathering from the client group
4. Data feedback to the client group
5. Joint evaluation of data
6. Joint action planning
7. Action on implementation of proposals for change
8. Repetition of the cycle-fresh data gathering and feedback of results of change

Just like traditional planning model, an Action Research Model also does not strictly follow the stages in a sequential manner. While the Planning Model envisages ‘one-off’ intervention, Action Research Model underlines the cyclical nature of OD and change. Likewise, Planning Model is more concerned with improved personal and organizational effectiveness whereas Action Research has an additional goal of generating new knowledge and insights that can be utilised elsewhere.

2.6 OD Intervention Techniques

It is important to keep in mind the nature of problems of a client as well as his culture while selecting OD techniques. In fact selection of OD techniques involves a lot of imagination and creativity. There cannot be a standard solution to the problems of all the organizations rather OD toolkit is to be prepared keeping in mind the specific requirements of an organization and the acceptability of the solution. Some of the major techniques are elaborated as under:

1. Change of structure: The structure and design of an organization can be changed through techniques such as job rotation, job enlargement and job enrichment. These techniques target the individuals and involve change or increase in duties and responsibilities of certain routine jobs with a view to minimizing their unpleasant features. The inclusion of meaningful tasks rather than highly specialized repetitive operations in the jobs serves as a motivating factor for the employees. The factors which motivate the individuals are “growth” factors or those which give the employees a sense of personal accomplishment through the challenge of the job itself. In other words, motivation is in the content of the work, the internal dynamics that the employee experiences in completing his or her task. Particularly in Job Enrichment (JE), the emphasis changes from rigid management direction and control to more participative modes, where much of the planning and controlling associated with doing the work are restored to the employee (Patten Jr and Vaill, 1976, p 20-15).

Structural changes in an organization can also be brought about through business process re-engineering which affects organizational processes. Other structural changes could be the change in degree of centralization or decentralization in an organization or flattening or extending organizational structure. Another change could be the change in organizational design from region to product or vice versa.

Structure has a significant influence over access to information and other resources, over work experience and career opportunities and over the degree of discretion or autonomy an individual has (Buchanan and Huczynski, 1997, p 497). It also signifies as to which departments are marked for growth and which for decline. Structural changes can be used to signal changes in the organization's future direction and priorities.

2. Process Consultation: It involves an external consultant who is in a supportive, facilitating and advisory role. His role is to help specific individuals to improve their understanding of internal organizational problems and to identify problem-solving action. The diagnostic and problem-solving activities of the process consultant are joint activities carried out with the client and not for the client. The focus is mainly on the process and hence the label 'process consultation'.

3. Internal Consulting: The proper role of OD facilitator is that of internal consultant. The organizations are either creating such positions or redefining the role of training manager so that the incumbents of them become internal consultants or change agents.

Internal consultants play an organizational role in which they provide three important kinds of help. First, they help in strategic planning by being sensitive to management's needs and by contributing their knowledge. Second, they help in solving problems. They concern themselves with immediate and specific problems and provide help to managers on all organizational levels. Third, they help with managerial controls but not as policemen running rigid systems rather they act as diagnosticians who find practical ways to capitalize on self-control and build it into the way work is planned, assigned, conducted and the like (McGregor in Patten Jr and Vaill, 1976, p 20-16).

Internal consultants in an OD effort possess the knowledge to make interventions in the organization and help management manage better. Due to vast differences in organizational cultures, environments and structures, it is difficult to define a standard role for an internal consultant. An organization has to redefine the role of an internal consultant each time it undertakes OD.

4. Survey Feedback: It is an OD intervention in which results of an employee survey are fed back to the managers and employees in an organization with a view to identifying the action points that would boost organizational effectiveness. An opinion survey may include questions on leadership and management style, aspects of organizational culture such as motivation, communications and decision-making and satisfaction of the employees with their job, their supervisor, their pay and their work group (Buchanan and Huczynski, 1997, p 498).

The respondents are invited to contribute to the initial design of the questionnaire suggesting significant issues for inclusion therein. While such surveys help in highlighting the major problem areas, they also reflect the

differences in perceptions around an organization. Group discussions, task forces and project teams are used to resolve the differences and to identify the solutions.

5. Team Building: Team work is fundamental to the functioning of an organization. Team building seeks to improve team performance by helping the members to understand their own team roles more clearly and to achieve unity of purpose by improving their interaction and collaboration. Generally managerial teams in the organizations are collections of individual relationships with the boss with each individual vying for greater power, prestige and recognition; there is no unity of purpose in them and they fail to accomplish objectives.

Patten Jr and Vaill list out the characteristics of a good team (Patten Jr and Vaill, 1976, p 20-14 to 20-15). They state that a good group has an informal, comfortable and relaxed atmosphere which is conducive for discussion in which virtually everyone participates. The group members actively listen to one another and the disagreement is worked through to a consensus. There is frequent, frank and relatively comfortable criticism and people are free to express their feelings as well as their ideas and have no hidden agenda. The clear work assignments are made and accepted and leadership in the group shifts as needed to draw forth and utilize all the human resources in the group. There is no struggle for power and control because the main concern is to get the job done consistent with cultural values in the organization. Finally the group itself examines periodically as to how well it is doing as a group in accomplishing its tasks and how the feelings and behaviours of members are contributing to the group and its work. Team building as an OD intervention attempts to move the group forward in all the aforementioned directions.

6. Intergroup Development: It is quite common in the organizations for various groups or Departments to develop their functional boundaries which may sometimes lead to dysfunctional conflict. As various groups have different goals, backgrounds and working practices, their functional effectiveness is adversely affected. Intergroup Development aims at changing perceptions and attitudes of different groups and improving their interaction and co-ordination. This OD intervention is also known as 'Intergroup Confrontation' and 'Peacemaking'. Buchanan and Huczynski mention two techniques of Intergroup Development i.e. **Mutual Expectations approach** and **Organizational Mirroring** (Buchanan and Huczynski, 1997, p 500).

Mutual Expectations approach envisages the meeting of two groups initially separately. The members of each group are asked to note:

- i) how they see themselves
- ii) their expectations of the other group
- iii) what they think the other group expects from them

These lists are exchanged by the groups and then they meet together to explore the similarities and differences in their perceptions and expectations. Such an exchange can be confrontational. The role of OD consultant is to keep the

discussion and emotions under control and to achieve a positive outcome. The causes of differences between the groups can then be analyzed and mutually acceptable solutions found for removal of barriers to collaboration.

Under **Organizational mirroring approach**, the 'target group' seeks feedback from other groups in the organization on how it is seen and perceived. In this approach, several groups may be involved and representatives from the other groups are only involved in providing information and ideas rather than in full negotiation or confrontation with the target group members.

7. Role Negotiation: This approach is similar to intergroup development but instead of reconciling differences between two groups, it envisages reconciliation of differences between two individuals having an ineffective working relationship. The technique assumes that interpersonal friction is caused by a lack of shared awareness and by misunderstanding. Its objective is to make individual perceptions and mutual expectations explicit so that differences can be identified and resolved.

8. Sensitivity Training: It is perhaps the oldest OD intervention and also known as laboratory training-groups or encounter groups. It is a technique for enhancing individual self-awareness and self-perception and for changing behaviour through unstructured group discussion (Buchanan and Huczynski, 1997, p 501). The sensitivity training group may be with or without a facilitator. However, the facilitator, if present does not assume any leadership role. The participants in the group can get emotionally charged while discussing about how they feel about themselves and about other participants. The feelings and emotions exposed in this setting can be sometimes personal, confrontational and awkward. While some participants claim that they develop a profound insight about themselves, others feel quite uncomfortable and stressful due to lack of structure and sharing of emotions.

9. Management by Objectives: It is a goal-oriented OD technique the purpose of which is to create a situation in which a subordinate can achieve his goal best by directing his efforts and energies toward the objectives of the enterprise. It involves integration of personal objectives and organizational objectives. The MBO idea is a simple one: People who pay unremitting attention to purpose are more likely to attain their objectives than people who lose sight of them because they are diverted from them (Odiorne, 1976, p13-1). MBO is a flexible, rational, participative way for the manager to plan and control the accomplishment of work (Lasanga in Patten Jr and Vaill, 1976, p 20-15).

MBO is a closed-loop system designed for managing managers and professional employees in which a superior and his subordinate sit down and jointly work out the specific objectives which are to be accomplished within a definite timeframe and for which the subordinate is held accountable. Thus the subordinate knows in advance the criteria of good and bad performance. This tends to improve the subordinate's performance and facilitates his motivation and growth.

To summarise, the design of an OD intervention involves constructing an appropriate package of interventions. The construction of the package requires knowledge of the organizational context, judgement and creativity. The following set of assumptions that underpin OD efforts are reflected in the toolkit of OD techniques (Buchanan and Huczynski, 1997, p 503-04):

- Individual and organizational goals are not incompatible.
- Conflict is caused by misunderstandings.
- Conflict is resolved by openly confronting differences in perception.
- The open display of emotions and feelings is valuable.
- People have a capacity and desire for personal growth.
- Working relationships can be improved by enhancing self-awareness.
- Collaboration and trust are better than conflict and secrecy.

OD interventions invariably rely on the free and open sharing of information and emotions. It is vital for these values not to be compromised for OD to be successfully implemented.

3. ORGANIZATIONAL LEARNING AND LEARNING ORGANIZATION

3.1 What is Organizational Learning and Learning Organization?

Argyris and Schon have divided the literature concerning organizational learning into two categories:(1)the so-called literature of the learning organization(LO) which is more practically oriented and prescriptive and is mainly published by consultants and members of organizations and companies and(2)the descriptive literature of organizational learning(OL) produced mainly by academics (Argyris and Schon in Chiva-Gomez,2003,p 102).While the LO literature focusses on the development of normative models for the creation of a learning organization which includes proposing several facilitating factors, the OL literature is centered on understanding the nature and processes of learning.

There are numerous definitions of organizational learning and learning organization. The definitions given below emanate from LO, learning in organization and OL literature. However, most of these definitions are not consistent and sometimes not comprehensive enough. Some of them are as under:

“A learning organization is an organization skilled at creating, acquiring and transferring knowledge, and at modifying its behaviour to reflect new knowledge and insights (Garvin, 1998, p 51).”

“The essence of organizational learning is the organization’s ability to use the amazing mental capacity of all its members to create the kind of processes that will improve its own learning capacity (Nancy Dixon in Skyrme, Amidon, 2002,p 264).”

“Organizational learning is a process of detecting and correcting error (Chris Argyris quoted in Garvin, 1998, pp77-78).”

“Learning in organization means the continuous testing of experience and the transformation of that experience into knowledge accessible to the whole organization and relevant to its core purpose (Senge, 1994, p 49).”

“Organizational learning is combination of four processes: knowledge acquisition, information distribution, information interpretation and organizational memorization (Huber, 1996, p127).”

From the definitions above, it may be seen that some authors focus on behavioural change while others lay a great emphasis on experience in the process of learning. There are others who insist on the importance of adaptability to one’s environment. It is also seen that sometimes organizational learning is confused with knowledge management by some authors. Actually knowledge acquisition, storage and transfer belong more to the realm of knowledge management than organizational learning. The

definition which I find the closest to my understanding of organizational learning defines learning organizations as “*organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to learn together (Senge in Skyrme,Amidon,2002,p 264)*.” This definition underlines the importance of collective learning by constant interaction and interdependence amongst people. It also brings into sharp focus the importance of generation of new ideas and patterns besides emphasizing the capacity building for achievement of desired results. It also perceives learning as a continual process wherein individual aspirations are subordinated to collective aspirations.

There are two perspectives of organizational learning: **cognitive perspective** and **social perspective**. The literature representing the cognitive approach stresses the importance of workers who want to learn, experiment and risk making mistakes as essential factors to organizational learning. It is based on psychology and individual learning and is more oriented towards rationalism. According to the social perspective, organizational learning can be achieved through teamwork, collaboration and communication. Instead of attempting to understand what kind of cognitive processes and conceptual structures are involved in organizational learning(cognitive perspective),the social perspective seeks to define the social context which is the most suitable for organizational learning and focuses on the group, community and organization rather than the mind of the individual (Chiva-Gomez, 2003,p 102-04).

‘Organizational learning’ means the changing of organizational behaviour. The changing of organizational behaviour is a collective learning process. A learning process takes place in and through interaction with and between a number of people. The learning by individual members leads to organizational learning. Individual learning is a pre-requisite for organizational learning. However, an organization may not learn despite learning by individuals in the organization. Individual learning is a *necessary* but *not a sufficient* condition for organizational learning (Swieringa, Wierdsma, 1994, p 33).

3.2 Need for a Learning Organization

The character of organizations is changing constantly. There is a perceptible shift from hierarchical organizations to markets and networks. There is a speedy movement towards collaborative processes. The processes of thinking, deciding, doing and reflecting will all be integrated in the organizations of the future. Thus organization will induce learning at all levels and by all groups which will lead to continuous learning (Swieringa, Wierdsma, 1994, p 147). With the dismantling of hierarchical structures, individuals no longer work behind iron curtains and there is a constant flow of ideas and information amongst them and learning plays a stellar role in transforming these ideas into insights and eventually for achieving a competitive advantage.

Most significant consequences of changes for the organization are as under (Swieringa,Wierdsma,1994,p 79):

1. Companies have less and less time in which to build up carefully planned organizations.
2. Radical changes are taking place in working processes due to progressive automation and information structures.
3. In growth areas there is increasing emphasis on research, development, service and consultancy.
4. The significant increase in the level of education combined with the tendency towards individualization means that people are beginning to make different demands on co-operation.
5. Individual and collective competences acquired become out of date at an ever increasing rate which implies that there is no room for complacency and competences are to be constantly upgraded.

The competitive advantage that an organization has today is difficult to sustain particularly in the face of a cut-throat competition. It is quite possible for a competitor to change the ground rules of the game in an industry thus wiping out the competitive advantage of companies playing by old rules. Guns suggests that there are four routes open to an organization (Guns, 1998, p 2) when it is faced with this danger (1) Learn faster how to adapt to ground rules that have already changed. (2) Learn faster what the next change in ground rules will be and start preparing for it. (3) Learn faster how to develop a vigorous competitive strategy that will withstand significant change in the ground rules. (4) Learn faster how to change the ground rules to your advantage and preempt the competition. Thus in the aggregate, it is a faster learning organization (FLO) that carries the day.

3.3 The Importance of a Learning Organization

A learning organization encourages individuals to look for information in their environment, create their own information and combine the both to generate knowledge which finally enables them to gain new insights. The newly created knowledge and insight are then used by the organization to achieve its strategic goals. By the above criterion, all organizations qualify as learning organizations and rightly so, because if they were not, they would not have survived in a changing environment. However, there are some organizations that excel others in compiling information and its transformation into knowledge and adapting to their environment. The primary focus of the learning organization has to be the transformation of individual knowledge into information, which could be used by other members of the organization in order to be more productive than they otherwise could be alone (Jensen, 2005, p 63).

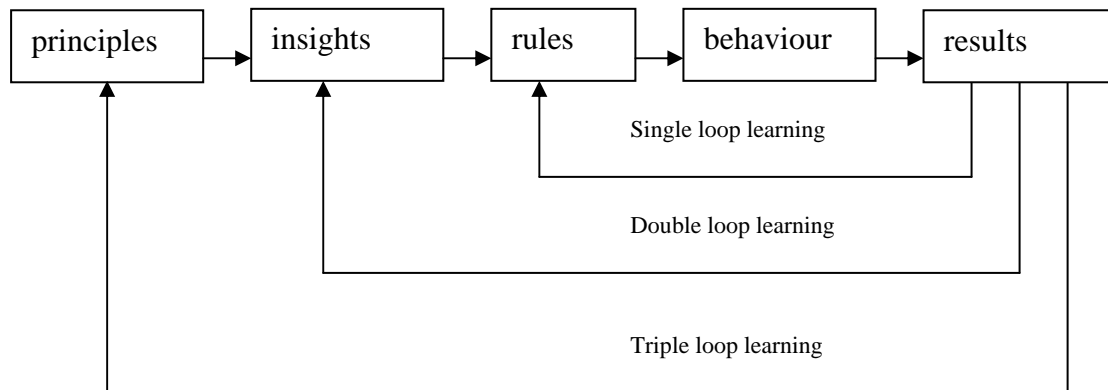
A learning organization learns multilaterally which means that it learns at all levels of learning: rules, insights and principles. A learning organization is designed to ensure that there are sufficient differences to keep the dialogue at all these levels of learning going and open. A learning organization consciously permits *contradictions* and *paradoxes* (Swieringa, Wierdsma, 1994, p 76-77). The conflicts are perceived not as a threat in a learning organization but a challenge which is to be met.

In the real learning organization, work is organized in such a manner that the learning takes place as a natural corollary. However, learning takes place through incremental changes and not abrupt jumps. While in the unreal learning organization, the employees possess 'know-how', in the real learning organization they 'know why' (Jensen, 2005, p 62). 'Know-how' is founded upon partial knowledge, norms and routines and the equipment at hand whereas 'know-why' is more fundamental as it is rooted in fundamental relations and can be used to tackle exceptions, adaptations and unforeseen events (Garvin in Jensen, 2005, p 62).

3.4 Levels of Learning in an Organization

There are three levels of learning which can be called **learning loops** (See Fig 3). Collective learning can consist of *single loop* learning, *double loop* learning and *triple loop* learning (Swieringa, Wierdsma, 1994, p 37).

Fig 3 :Collective Learning Loops



Source: Swieringa, Wierdsma, 1994, p 36

Single loop learning is the learning at the rules level. In it collective learning leads to changes in the existing rules. The insights (theories, assumptions, arguments) underlying the rules are generally not discussed. It does not involve any significant changes in the strategy, the structure, the culture or the systems of the organization. This level of learning poses the 'how' questions ignoring largely the 'why' questions. Single loop learning improves the rules and looks for solutions within the existing insights and principles. It consists of becoming better at doing what one can already do.

Double loop learning not only involves changes in rules but also changes in the underlying insights. This phase represents learning at the level of insight. It requires a higher level of insight and the learning process lasts longer. Here 'why' questions are posed and the *raison detre* of the existing rules and the system is put to question. The values guiding the existing context and strategies are also questioned.

Triple loop learning deals with the essential principles on which the organization is founded. It examines questions regarding the vision and

mission of an organization. It makes a critical appraisal of the existing role of an organization as well as its businesses and tries to answer the question whether there is a need to review its goals and objectives. It initiates a process of radical changes in an organization. Triple loop learning is necessitated when changes at the double loop level of learning are ineffective, when the option of reorganization or structural changes is unlikely to succeed and when competent key figures leave the organization. It comprises development of new principles with the help of which an organization can hope to move to a subsequent phase.

Single loop learning, double loop learning and triple loop learning have been termed as *improving*, *renewal* and *development* respectively (Swieringa, Wierdsma, 1994, pp 38-42).

For a learning organization double loop learning and triple loop learning are more important than single loop learning as they question existing assumptions, norms, structures, processes and even underlying principles of an organization.

Literature on learning organization also offers another explanation of the learning process. It states that learning means passing through the four stages of *unconscious incompetence*, *conscious incompetence*, *conscious competence* and *unconscious competence* (Reay, 1997, pp 31-35). *Unconscious incompetence* manifests itself when you don't know that you don't know while *conscious incompetence* is when you know that you don't know. *Conscious competence* is when you know that you know and you make a conscious effort to perform a task and *unconscious competence* is when you don't know that you know and performing a task becomes a second nature. Irrespective of the stage they are in, the employees need regular supervision, support and advice for graduating through various stages.

In order to test whether organizational learning has occurred, three steps could be observed. The first step is the phase of cognition. The members of the organization are exposed to new ideas, expand their knowledge and begin to think differently. The second step is a phase of changed behaviour. In this the employees begin to take this new way of thinking into consideration when moderating their behaviour. The third step is the one in which changes in behaviour lead to measurable changes in the form of improvements of results (Garvin in Jensen, 2005, p 62).

In an organization, three levels of learning also refer to individual learning, team learning and organizational learning.

Individual Learning

Learning effects change in behaviour. It leads to a more effective behaviour on the part of the learner. Swieringa and Wierdsma prefer to call it competence (Swieringa and Wierdsma, 1994, p19). The goal of learning is to improve the quality of a learner's actions. The learning is often identified with the

acquisition of knowledge and insights. It can be acquired both consciously and unconsciously.

In his book *'The Silent Language'*, Hall has distinguished three types of learning: informal learning, formal learning and technical learning (Hall in Swieringa, Wierdsma, 1994, p 20).

Informal learning is learning by imitation of other people's skills. It is probably the earliest form of learning. A child learns by observing his environment and imitating actions of others. This form of learning is equally important for an adult. Generally people would imitate those whom they consider skilled or whom they admire or like. In this kind of learning, the role of an educator is played by other people who are considered to be role models by a learner.

Formal Learning is learning by means of *rewards* such as compliments, incentives or bonuses and *punishments* such as disapproval, reprimands or refusals. This is also an early form of learning. The manners as well as attitudes of an individual are shaped to a great extent by this form of learning. In this case learning takes place via the reactions of others and the significance of the other person is very crucial to the learner.

Both formal and informal learning generally involve learning processes which often take place unconsciously and are often termed as **learning by experience**. There is also a significant difference between formal and informal learning. Emotions play a vital role in formal learning whereas in informal learning, they only have a peripheral role. For instance, in formal learning, rewards arouse feelings of pleasure and punishment may cause frustration.

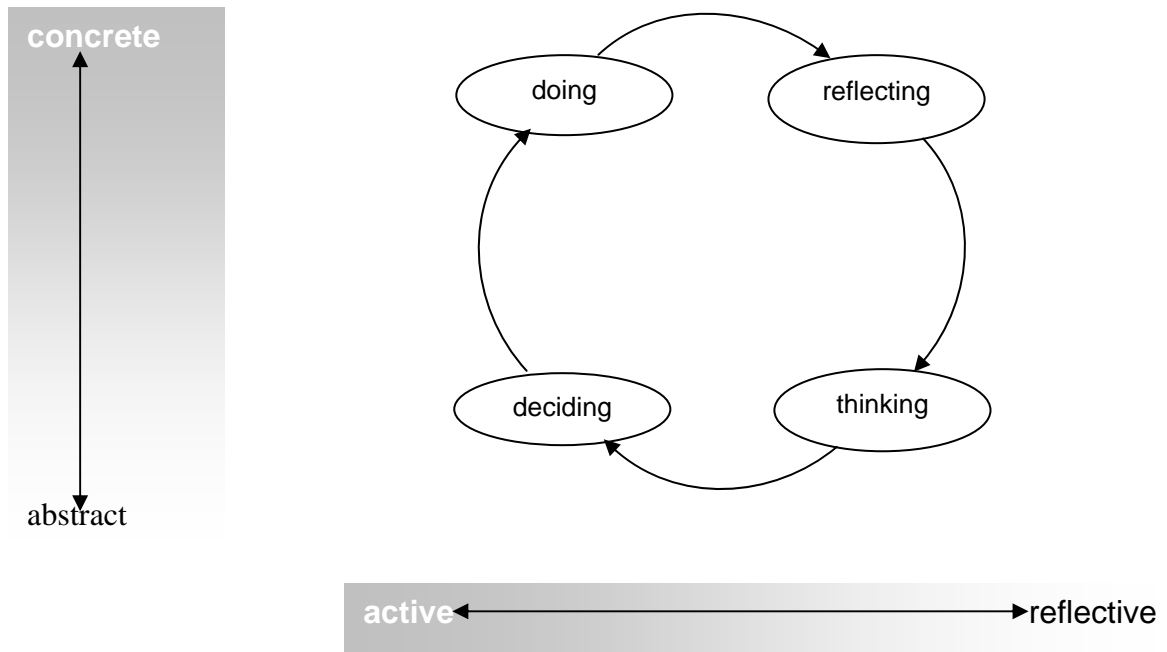
Technical Learning is *conscious* learning. It is imparted through consciously chosen learning methods. One of the methods could still be imitation. Alternatively, rewards and punishment could also be a part of conscious learning. In this type of learning, education plays an important role and it comprises learning in classrooms, lecture halls, seminars or workshops. It could also include distance learning packages, instruction manuals, simulation exercises, etc.

Conscious learning leads to a higher level of competence as it is more organized and additive. It leads to **learning potential** i.e. the potential to control one's own learning. On the contrary, unconscious learning is repetitive and is devoid of any innovation or change in perspective. Unlike conscious learning, it is always controlled and decided by others. Learning is often implicitly equated with conscious learning. However, collective behaviour is learned unconsciously both formally and informally. The difference between conscious and unconscious learning is often identified with the difference between learning through education and learning through experience.

There has been a long debate on the superiority of education over experience and vice versa. It was Kolb (Kolb in Swieringa, Wierdsma, 1994, p 23) who resolved this matter by building a bridge between both these methods of

learning. He maintains that learning is a cyclic process; doing-reflecting-thinking-deciding-(re) doing (See Figure 4).

Fig 4 :The Kolb Learning Cycle



Source :Swieringa, Wierdsma, 1994, p 23

One gains experience through **doing**, meditating on this experience is carried out through **reflecting**, **thinking** is the attempt to understand that experience by means of analysis and conceptualization followed by **deciding** which implies making of choices and thereafter the cycle repeats itself. The circle recognizes two axes showing the poles around which learning takes place; one extends from *action* to *reflection*, the other from *concrete* to *abstract*. This approach treats learning as a never-ending and constantly repeated process. The essence of the Kolb model lies in its belief that everyday activities can be a component of learning processes. It states that these often unconscious activity processes can be raised to the level of conscious learning in conjunction with thinking and deciding.

Team Learning

Teams have become more important for companies because of their superior ability to cope with complex problems. While an individual may be an expert in one particular field, teams help in optimizing a business process. The diverse nature of expertise of various team members lends a decisive edge to a team over an individual. Teams create synergies giving an opportunity to the individuals to excel. Since teams are generally cross-functional, they facilitate

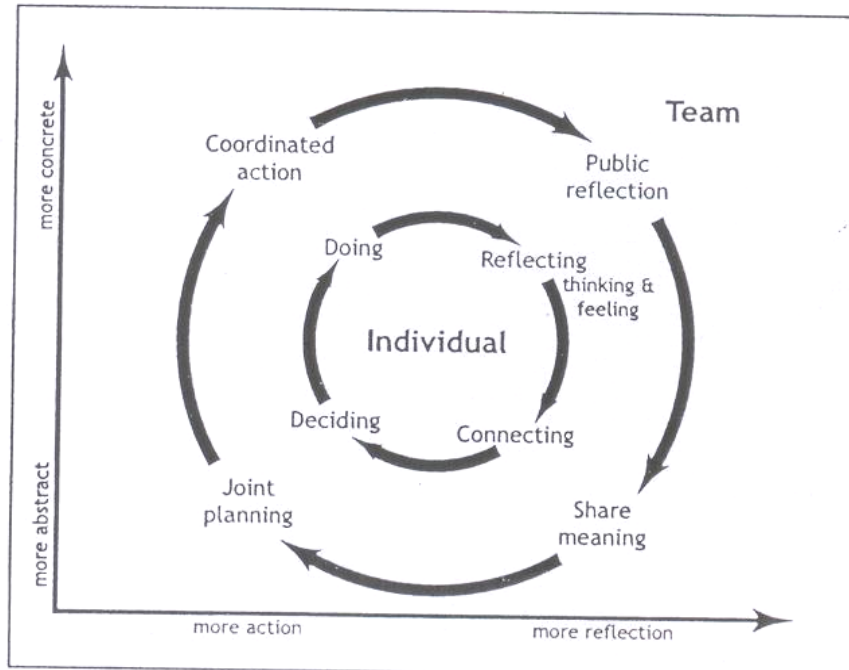
cross-functional learning and sharing of ideas. Team learning enables people to look for the larger picture that lies beyond individual perspective.

In a team, the members are part of the same context and share the same artifacts which form a constant dialogue amongst them and lay the foundation for reflections and creation of new knowledge. Through this dialogue the participants regard both the information they share and the information which is unique to them in a novel way and are able to integrate their individual perspectives into a new common perspective (Nonaka, 1991, p 104). However, there may be a problem in communicating that perspective to other individuals and teams in the organization as the meaning of the communicated information is highly context-dependent. Therefore, individual responsible for converting the new perspective into information has to use metaphors, analogies, symbols and concepts to promote this conversion (Nonaka, 1991, p 103).

Just like individuals, teams also learn in a cyclical way. The **wheel of learning** for teams (See Fig 5, p 27) also comprises four stages which are analogous to four stages of Kolb's learning cycle referred to above. These four stages are: public reflection, shared meaning, joint planning and co-ordinated action (Senge, 1994, pp 60-62). The reflection stage is public since it is carried out behind the table in discussion. On establishment of a common ground, people share mutual understanding which corresponds to the stage of shared meaning. The team then moves on to joint planning of action steps that are later performed through a co-ordinated action of all members. Thereafter the cycle keeps repeating itself.

The free flow of ideas and creativity are vital for team learning. Teams serve as a vehicle for organizational change and revitality. Every member of a team contributes technical skills to a team regardless of the fact whether the team is functional or cross-functional. Technical skills are very important and should be continuously nurtured. There is a high probability for the members of cross-functional teams not keeping pace with new developments in their field and thus rendering their technical skills obsolete. One way of maintaining and developing technical skills is for each person to be a member of two teams i.e. a technical team which is primary, everyday work team and a cross-functional one which is a secondary team that meets regularly but less often. Depending on what the organization requires at different times, the primary-secondary order can shift (Guns, 1998, p 98). One of the most important skills that every team member must possess is collaboration which comprises consensus decision making, conflict resolution and communication. The other skills manifest themselves in different roles that can be developed in a team setting, shared and even exchanged amongst team members.

Fig 5: The wheel of learning for an individual and a team



Source: Senge, 1994, p 62

3.5 Measures for sustenance as a Learning Organization

It is not only important to achieve the competitive position but also to retain it for all times to come. In order to sustain the competitive edge, the following measures are of paramount importance (adapted from Guns, 1998, p 112):

1. Regular review of the vision and strategic framework within which the organization is carrying out learning.
2. Ensuring that all learning targets are challenging but attainable.
3. Presentation of learning tasks in a realistic, relevant and motivating way, making sure that the employees understand how their learning contributes to the organization's success and linking learning to personally important matters such as promotability or employability.
4. Celebration of even the smallest learning successes and rewarding people for their success.
5. Preparation and implementation of a full-scale collaborative-coaching plan with learners having a negative view of their learning abilities.
6. Obtaining views of people in the organization selectively about the effect of competition on the organization's present and future performance as well as their individual careers and their willingness to cope with it.
7. Ensuring close monitoring of targets and setting a new target as soon as one target is met.
8. Continued benchmarking of an organization's learning against that of other organizations.
9. Optimum use of technology to its greatest advantage for creating learning, reframing the business as necessary, and providing interactive learning as well as for documenting, speeding up, transferring, and reinforcing learning.

10. Creation of organization's future by changing the ground rules for the industry and study of the intersections of changes in technology, lifestyle, regulation, etc for seizure of future opportunities.

An organization has to have a vision for itself and for realizing the same, it requires to evolve strategies. An organization requires to work on three different strategies which are to be led by different groups within the organization. They are *Surge Strategy* led by the executive group, the *Cultivate Strategy* steered by the human resource personnel; and the *Transform Strategy* led by leaders and members of entrepreneurial teams (Guns, 1998, p7).

The above three strategies are different from other organizational strategies in the following manner:

1. They all focus on faster learning to sustain competitive advantage.
2. They encourage organizational leaders to think strategically.
3. They integrate faster learning into the processes of strategic design and implementation.
4. They are led by three different parts of the organization, thereby broadening participation and increasing people's sense of ownership.

These strategies complement the already existing organizational strategies. The Surge Strategy identifies and pursues key leverage points such as core competence, unique product lines, niche markets, proprietary knowledge, etc around which learning can be accelerated for the purpose of surging ahead of the competition. The Cultivate Strategy creates a profile of a fast learner that is used for hiring and developing people. The Transform Strategy creates an environment that challenges and supports faster learning (Guns, 1998, p 55).

It is quite evident from the above that no organization can afford to be complacent in today's competitive scenario and consistency in imbibing new ideas and transforming them into new products and services coupled with imaginative thinking make a learning organization a force to reckon with.

3.6 Activities of Learning Organizations

The learning can be managed more effectively if five main activities are integrated into systems and processes of an organization. Each activity is accompanied by a distinctive mind-set, tool kit and pattern of behaviour. They modify organization's behaviour to reflect new knowledge and skills. These activities are: **systematic problem solving, experimentation, learning from one's own experience and past history, learning from the experiences and best practices of others and transferring knowledge** quickly and efficiently throughout the organization (Garvin, 1998, pp 53-66).

Systematic problem solving is deeply related to philosophy and methods of quality movement. It requires expertise in scientific methods for diagnosing problems, decisions based on data not assumptions and use of statistical tools to organize data and draw linkages. Employees learn how to focus on details

and diagnose real causes of problems instead of being misled by symptoms of the problem. They also become more disciplined.

Experimentation activity implies systematic searching for and testing of new knowledge with the use of scientific methods. It enables employees to search for new opportunities as well as to expand their mental horizon. It consists of two main forms: *ongoing programs* and *one-of-a-kind demonstration projects*. Its purpose is to delve deep for creation of real knowledge. *Ongoing programs* involve a continuing series of small experiments designed to produce incremental gains in knowledge. Most of the continuous improvement programmes in an organization hinge upon them. Ongoing programs ensure a continuous flow of new ideas both from inside and outside the organization and are propped up by an incentive scheme that rewards risk taking activities. However, success of these programmes depends largely upon employees skilled at statistical methods, graphical techniques and creativity techniques. *Demonstration projects* are usually larger and more complex because they involve holistic, system wide changes, introduced at a single site, and are often undertaken with the objective of developing new organizational capabilities. They are usually the first projects to embody principles and approaches that the organization hopes to adapt later on a large scale. They are normally dealt with by strong multifunctional teams reporting directly to the senior management and in order to create an impact on the rest of the organization, they need to be accompanied by explicit strategies for transferring learning.

Learning from past experiences is a valuable source of knowledge, therefore companies need to review their successes and failures, assess them systematically, and record the lessons in a form that employees find open and accessible (Garvin,1998,pp61-63). There is a tendency amongst managers to shove past mistakes under the carpet and by failing to reflect on them, they allow valuable knowledge to escape. There is a predisposition to 'revisionist history' in the corporate world involving erasure from the corporate memory all discontinuity in the form of mistakes, errors in judgment or misconceptions in an attempt to present a smooth 'evolutionary view' of decision-making and policy-setting which deprives posterity of an important learning instrument i.e. experience (Demarest,1997,p 383). It is important to recognize the value of a productive failure as contrasted with an unproductive success. A productive failure leads to insight, understanding and thus an addition to the commonly held wisdom of the organization. On the other hand, an unproductive success occurs when something goes well but nobody knows how or why. In fact don'ts are as important as do's for the success of an organization.

Learning from experiences can be carried out through four approaches: *intuitive, incidental, retrospective* and *prospective*. *Intuitive learning* involves learning from experience through an unconscious process. Learning is an inevitable consequence of having experiences but what is learned is hard to articulate. *Incidental learning* involves learning by chance from activities that failed, performing a post mortal analysis. *Retrospective learning* implies looking back at what has happened in a more structured way. Lessons are drawn from mistakes and successes. Reviews are done in heads or in discussion or are put on paper. *Prospective learning* includes everything from

retrospective learning with addition of planning to learn before an experience. This perspective perceives future events as opportunities to learn.

Learning from others is learning activity that instead of reflecting oneself provides new knowledge from external environment (Garvin, 1998, pp 64-65). An organization can learn not only from the companies in the same business but also those in other businesses. A broader term for it is benchmarking which is an ongoing investigation and learning experience. Benchmarking ensures that best industry practices are spotted, analyzed, adopted and implemented. It is a disciplined process that begins with a thorough search to identify best-practice organizations, continues with a measurement of one's own practices and performance against those of its competitors, progresses through systematic site visits and interviews, and concludes with an analysis of results, development of recommendation and implementation.

The customers are other source of ideas. Interaction with customers can provide up-to-date product information, competitive comparisons, insights into changing preferences and immediate feedback about service and patterns of use. In cases where the customers cannot articulate their needs or remember even the most recent problems they have had with a product or service, it is advisable for the managers to observe them in action. Irrespective of the source of outside ideas, learning will only occur in a receptive environment. Managers cannot be defensive and should learn to accept criticism or bad news. This is a difficult challenge, but is essential for success.

For learning to be more than a local affair, knowledge should spread quickly and efficiently throughout the organization. Ideas carry maximum impact when they are shared broadly. A variety of mechanisms spur this process, including written, oral and visual reports, site visits and tours, personnel rotation programmes and standardization programmes (Garvin, 1998, p 66). This is called **transferring of knowledge** which is primarily a part of knowledge management process as distinct from learning.

It is the challenges in the social, economic and scientific environment that have underlined the need for learning. For better adaptation to the changing environment, various organizations have realized the importance of expanding learning, empowerment of employees, openness of mind and employment of the latest technology. People are the most important asset in today's organizations who with their skills, seminal mind and efficiency give a competitive edge to an organization which is not easy to imitate.

4. KNOWLEDGE MANAGEMENT

4.1 Importance and Meaning of Knowledge Management

The various organizations have been managing knowledge since times immemorial but the need for knowledge as a systematic strategy was never greater than it is to-day. This is attributable to various factors. **Firstly**, the older system of craft guilds or professional networks which ensured transmission of tacit knowledge from one generation to another is being replaced by a system where codification of knowledge is imperative. Now the learning by the word of mouth or learning by doing is only supplementary to the learning from manuals and documents. Another significant development is the disappearance of the principle of lifelong careers and long-term attachment to a company. Earlier the knowledge of an individual was an integral part of the knowledge of a company. However, due to increased turnover, mobility and flexibility, a need has arisen to invent new forms of knowledge retention through either codification or the implementation of strong legal mechanisms to protect the company's intellectual heritage or through human resource policies that are better suited to maintaining skills (OECD,2003,p 14).

Secondly, today introduction of planned strategies for the collection and documentation of ideas and suggestions by employees has assumed importance in view of the need for constant innovation by any organization to survive in business. The management of innovation is essentially about the management of knowledge-the creation, reformulation, sharing and bringing together of different types of knowledge (Quintas,2002,P 6). Therefore, importance of explicit forms of knowledge management gets underlined.

Thirdly, the extension of knowledge markets, the dissemination of information technologies and new methods for the evaluation of intangible assets are three characteristics of the new economy which require the introduction of explicit knowledge management methods (OECD,2003,p 14).

Fourthly, importance of cross-boundary knowledge transactions is growing with the increasing globalisation. The globalisation of markets and organizations has led to accessing and sharing of knowledge across cultural and national boundaries. Thus knowledge interdependence has created new management challenges resulting from the risks and difficulties of knowledge transactions across boundaries. These challenges can be coped with the help of knowledge management.

Fifthly, it has been realized that people are pivotal to organizational knowledge. While in 1980s,many organizations resorted to downsizing, by 1990s they were quick to realize that in absence of experienced people, instead of innovating, they were busy 'reinventing the wheel' and also repeating past mistakes. In a few cases, they even had to rehire the same people as consultants whom they had fired. People again came to be recognized as possessing knowledge and know-how, as having the ability to create knowledge and value and as the repositories of organizational memory.

Sixthly, it was discovered that knowledge and intangible assets were an important source of creation of wealth. The greatest impact was created by Microsoft in 1990s when it overtook IBM in terms of market capitalization. Microsoft's market value squarely depends on its intangible assets. This trend has continued ever since and knowledge-creation has occupied centre-stage.

Different authors have tried to define Knowledge Management differently. Some have given very broad definitions covering all an organization needs to perform its functions while others have focused only on processes. The general emphasis is on the necessity of continuous creation of new knowledge for retaining the competitive advantage as also on sharing and dissemination of knowledge within the organization. Besides importance of knowledge in achieving the organizational objectives has also been recognized. There are two themes in the literature on knowledge management which run parallel to each other. While on one hand, knowledge can be described as facts, opinions, ideas, theories, principles and models, on the other knowledge can be alluded to as experience, concepts, values, beliefs and ways of working that can be shared and communicated. We need to have a look at some of the definitions on KM:

“Knowledge management is the discipline of creating a thriving work and learning environment that fosters the continuous creation, aggregation, use and re-use of both organizational and personal knowledge in the pursuit of new business value (Cross in Quintas,2002,p 9).”

“Knowledge management is the systematic, explicit, and deliberate building, renewal and application of knowledge to maximize an enterprise's knowledge-related effectiveness and returns from its knowledge assets (Wiig in Beckman,1999,p 1-6).”

“Knowledge management is a process of capturing a company's collective expertise wherever it resides-in databases, on paper, or in people's heads-and distributing it to wherever it can help produce the biggest payoff (Hibbard in Beckman,1999,p 1-6).”

“KM is getting the right knowledge to the right people at the right time so they can make the best decision (Petrash in Beckman,1999,p 1-6).”

“KM involves the identification and analysis of available and required knowledge, and the subsequent planning and control of actions to develop knowledge assets so as to fulfil organization objectives (Macintosh in Beckman,1999,p 1-6).”

Knowledge management means “attending to processes for creating, sustaining, applying, sharing and renewing knowledge to enhance organizational performance and create value (Alle in Ellis and Dick,2003,p 249).”

“Knowledge management involves the acquisition, storage, retrieval, application, generation and review of the knowledge assets of an organization in a controlled way (Watson, 2003,p 5).”

I think that the final word on KM comes from Skyrme who states, “Knowledge Management is the **explicit** and **systematic** management of **vital knowledge** and its associated **processes** of creating, gathering, organizing, diffusion, use and exploitation. It requires turning personal knowledge into corporate knowledge that can be widely shared throughout an organization and appropriately applied (<http://www.skyrme.com/insights/22km.htm>).” This definition of KM is very comprehensive as it emphasizes the importance of both knowledge and its related processes. Its focus is the management of only vital knowledge thus avoiding the perils of information overload. It takes into account all aspects of knowledge management from collection of knowledge to its ultimate use. It talks of sharing and dissemination of knowledge for the development of the whole organization. It also advocates integration of personal knowledge into corporate knowledge thus empowering the organization as a whole while seeking to break the stranglehold of a few individuals or groups who tend to monopolise all knowledge in an organization.

4.2 History of Knowledge Management

From Adam Smith in the 18th century and Alfred Marshall in the 19th to Edith Penrose and Peter Drucker in the 20th century, the economic importance of knowledge and its centrality to organizations has been emphasised. Marshall wrote, “Capital consists in a great part of knowledge and organization...Knowledge is our most powerful engine of production” (Marshall in Quintas, 2002, p 1). It shows that the importance of knowledge as a source of economic wealth is not a new idea. Edith Penrose observed in her *Theory of the Growth of the Firm* in 1959:

“Economists have, of course, always recognized the dominant role that increasing knowledge plays in economic processes but have, for the most part, found the whole subject of knowledge too slippery to handle” (Penrose in Quintas, 2002, p 3).

Peter Drucker wrote in 1969 that knowledge had “become the central capital, the cost centre and the crucial resource of the economy” (Drucker in Quintas, 2002, p 3). He meant that knowledge was beginning to add to the cost of the organization while adding to the profit indirectly.

Though knowledge was all along being practised, KM (Knowledge Management) formally was born as a discipline in mid-1990s when many organizations recognized the challenges of managing their knowledge. The first international conference ‘Knowledge: the Strategic Imperative’ was held in Houston in Sept 1995 and it took another two years before a few periodicals on KM were launched in 1997. The talk of knowledge economy has since caught up with the creation of the posts of CKO (Chief Knowledge Officer) and Director of Intellectual Capital in many organizations.

4.3 Knowledge Management Models

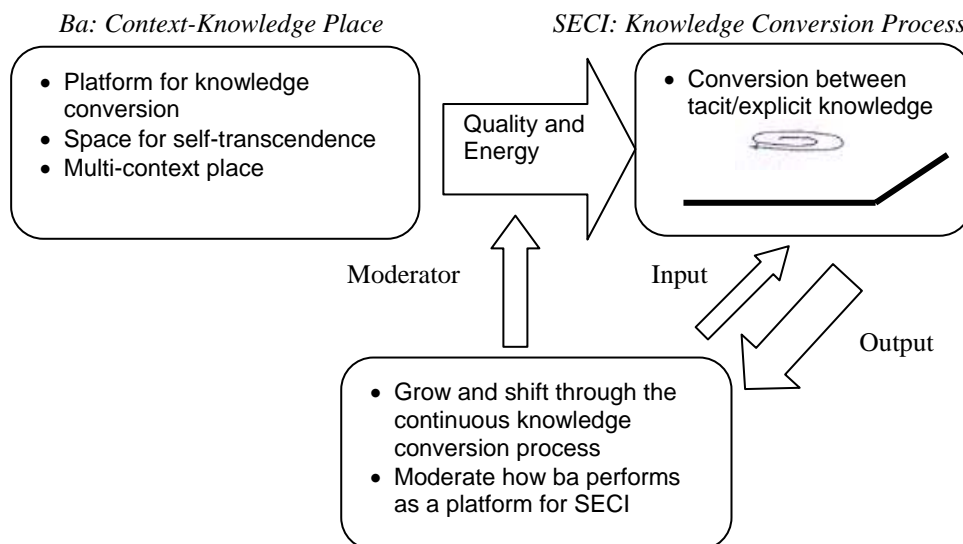
Many KM models with different approaches have been proposed in literature. McAdam and McCreedy have identified three broad categories of KM models, viz *knowledge category* models, *intellectual capital* models and *socially constructed* models (McAdam and McCreedy in Shankar and Gupta, 2005, p 260).

4.3.1 Knowledge category models

These models advocate categorization of knowledge into discrete forms such as codified and unmodified knowledge, diffused and undiffused knowledge and tacit and explicit knowledge. Two main types of knowledge have been defined by Nonaka as explicit knowledge and tacit knowledge (Nonaka et al, 2002, p 43). Explicit knowledge can be expressed in formal and systematic language and shared in the form of data, scientific formulae, specifications, manuals and suchlike. It can be processed, transmitted and stored relatively easily. On the contrary, tacit knowledge is highly personal and hard to formalize. Subjective insights, intuitions and hunches fall into this category. It is difficult to communicate tacit knowledge to others. Knowledge is created through interactions between tacit and explicit knowledge rather than from tacit or explicit knowledge alone.

A model of knowledge creation consisting of three elements has been proposed: (1) the SECI process, the process of knowledge creation through conversion between tacit and explicit knowledge; (2) *ba*, the shared context for knowledge creation; and (3) knowledge assets-inputs, outputs and moderator of the knowledge-creating process (Nonaka et al, 2002, p 44-56).

Fig 6: Three Elements of Knowledge-creating Process



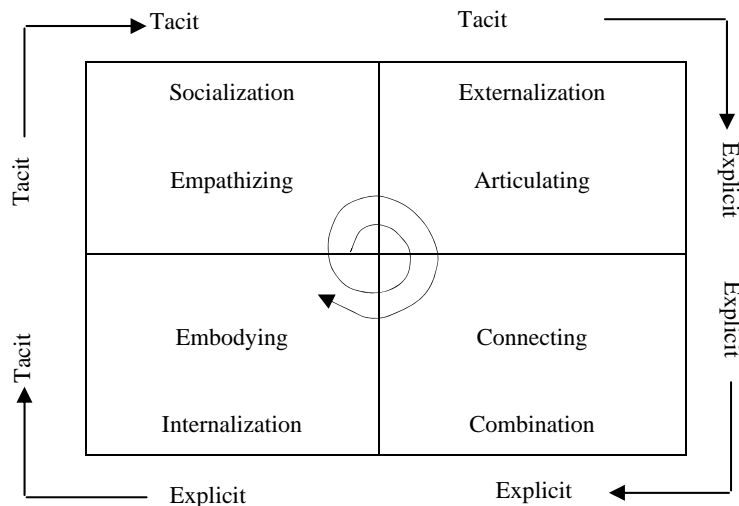
Source: Nonaka et al, 2002, p 44

The three elements of knowledge creation have to interact with each other to form the knowledge spiral that creates knowledge (See Fig 6).

There are four modes of knowledge conversion. They are: socialization (from tacit to tacit knowledge), externalization (from tacit to explicit knowledge), combination (from explicit to explicit knowledge) and internalization (from explicit to tacit knowledge). **Socialization** involves distribution of knowledge from one person to another through shared experience such as spending time together or living in the same environment. **Externalization** leads to crystallization of knowledge by articulation of tacit knowledge into explicit knowledge thus allowing it to be shared by others and also making it the basis of new knowledge. Concept creation in product development is an example of this conversion process. **Combination** involves collection of explicit knowledge from inside or outside the organization which is then combined, edited or processed to form new knowledge. This new explicit knowledge is then disseminated among the members of the organization. Creative use of computerized communication networks and large-scale databases can facilitate this mode of knowledge conversion. **Internalization** is closely related to 'learning by doing'. Explicit knowledge contained in manuals and documents is internalized by the employees to enrich their tacit knowledge base in the form of shared mental models or technical know-how. This tacit knowledge accumulated at individual level can then set off a spiral of knowledge creation when it is shared with others through socialization.

Knowledge creation is a continuous process of dynamic interactions between tacit and explicit knowledge. Knowledge created through each of the four

Fig 7: The SECI Process



Source: Nonaka et al, 2002, p 47

modes of knowledge conversion interacts in the spiral of knowledge creation. It is important to note that the movement through four modes of knowledge conversion forms a spiral, not a circle (See Fig 7). Knowledge created through

the SECI process can trigger a new spiral of knowledge creation, expanding horizontally and vertically across organizations. Organizational knowledge creation is a never ending process that upgrades itself continuously. This interactive spiral process takes place both intra and inter-organizationally.

Knowledge needs a physical context to be created. Ba (which roughly means 'place' in Japanese) offers such a context. Ba is defined as a shared context in which knowledge is shared, created and utilized. It provides the energy, quality and place to perform the individual conversions and to move along the knowledge spiral. It does not necessarily mean a physical space but a specific time and space. It is a concept that unifies physical space such as an office space, virtual space such as email and mental space such as shared ideals.

At the base of knowledge-creating processes are knowledge assets. They are the inputs, outputs and moderating factors of the knowledge-creating process. Knowledge assets can be categorized into four types: experiential knowledge assets, conceptual knowledge assets, systemic knowledge assets and routine knowledge assets (Nonaka et al, 2002, p 55). Experiential knowledge assets refer to skills and know-how acquired and accumulated by individuals through experiences at work. Experiential knowledge assets are tacit in nature, hence are difficult to imitate and thus give a sustainable competitive advantage to an organization. Conceptual knowledge assets consist of explicit knowledge articulated through images, symbols and language. Brand equity which is perceived by the customers, and concepts or designs which are perceived by the members of the organization, are examples of conceptual knowledge assets. Since they are tangible in form, it is easier to grasp them as compared to the experiential assets. Systemic knowledge assets comprise systematized and packaged explicit knowledge such as product specifications, manuals and intellectual properties such as licences and patents. They are the most 'visible' type of knowledge asset and can be transferred relatively easily. Routine knowledge assets consist of the tacit knowledge that is reutilized and embedded in the actions and practices of the organization. They include know-how, organizational culture and organizational routines for carrying out day-to-day business of the organization. Their most important characteristic is that they are practical.

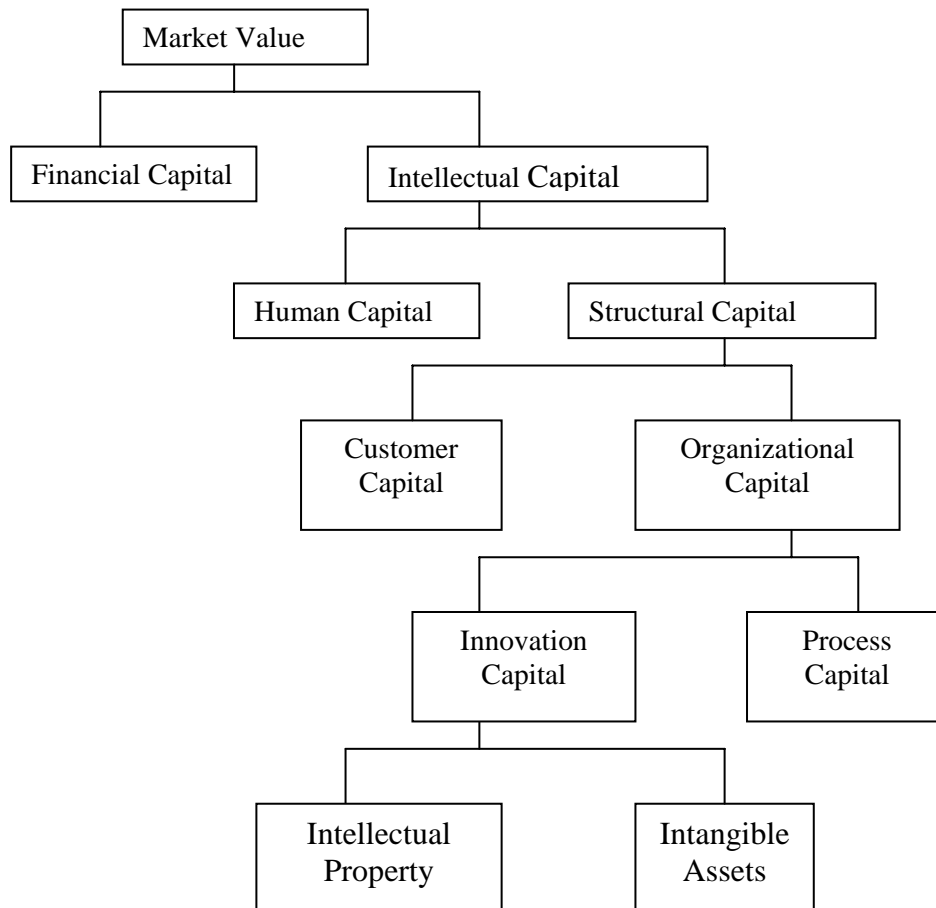
The above model mainly deals with the processes of knowledge creation. It does not say anything about exploitation of knowledge for strategic advantage in an organization.

4.3.2 Intellectual Capital Models

These models treat knowledge as an asset and segregate the organizational knowledge in correspondence to its intellectual assets. Intellectual capital is

broadly defined as the difference between a company's market value and its book value. Skandia Intellectual Capital model explains IC model well. The model is based on the value scheme shown in Fig 8.

Fig 8: Skandia Intellectual Capital Model



Source: Edvinsson, 1997, p 369

Wiig (1997, pp 400-401) explains the value scheme very lucidly. According to him, value of a commercial enterprise, its market value, consists of its financial capital and 'everything else'. Financial capital represents the enterprise's book value and consists of the value of its financial and physical assets. 'Everything else' defined as the intellectual capital, consists of assets created through intellectual activities ranging from acquiring new knowledge (learning) and inventions to creating valuable relationships.

Human capital consists of skills, tacit knowledge, talents and capabilities of the individuals associated with an organization. Structural Capital consists of the processes and packages that allow human capital to be used effectively to create value. This includes the information systems and the management competencies that leverage human capital.

Customer Capital consists of the value of an organization's relationships with the people with whom it does business. Some people broaden this concept to include all the firms with which a company does business and call it relationship capital. Organizational capital consists of embedded knowledge assets in the process and innovation areas.

Process capital comprises the enterprise's value creating processes such as its organizational structure, management practices, systems and procedures, infrastructure, computer systems and the like. Innovation capital consists of both explicit knowledge and hard-to-identify intellectual assets such as positive culture.

Intellectual property consists of documented and captured knowledge such as innovations, operational practices, patents technology, educational programmes, corporate knowledge bases and designs and specifications of products and services. Intangible assets consist of the value of positive culture, community, image, etc.

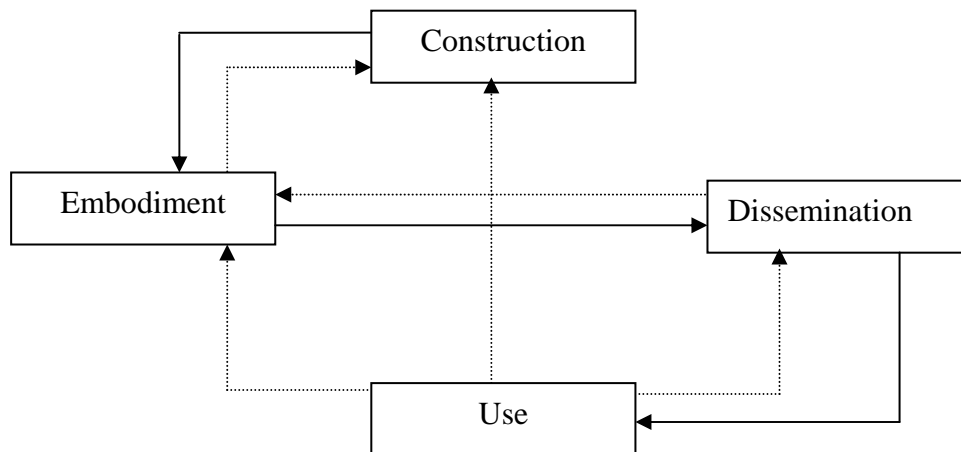
Edvinsson (1997, p 372) remarks that ICM is more than just KM. ICM is leveraging human capital and structural capital together. The goal of ICM is to improve the company's value generating capabilities through identifying, capturing, leveraging and recycling IC. This includes both value creation and value extraction. The goal of KM, on the other hand, is to improve the company's value creation capability through the more effective use of knowledge.

4.3.3 Socially Constructed Models

This group of models views knowledge as being intrinsically linked within the social and learning processes within the organization. Marc Demarest's model is highly relevant in this group. Demarest opines that the objective of KM is to manage commercial knowledge. Two important attributes of commercial knowledge are that firstly, it is social i.e. produced and shared among a network of human and non-human actors within the firm and also across the firm's boundaries. Secondly, all commercial knowledge is traded by knowledge workers in knowledge economies that are today operating within every knowledge intensive firm in the world (Demarest, 1997, p 376).

Demarest adapted a model of knowledge economy to further elaborate his point (Fig 9, p 39).

Fig 9: Model of Knowledge Economy



Source: Demarest, 1997, p 376

The continuous arrows in the figure above show the primary direction of the flow of knowledge in a firm while the dotted arrows show the more recursive flows. The model is explained below:

Construction refers to the process of discovering or structuring a kind of knowledge: how to sell a particular product to a particular market, for example, or how to diagnose a particular kind of problem.

Embodiment refers to the process of choosing a container for knowledge once it is constructed. The container is most often a document.

Dissemination refers to the human processes and technical infrastructure that make embodied knowledge (i.e. documents) available to the people within the firm who use the documents and the bodies of knowledge those documents contain to perform: to do work for customers, suppliers, business partners and the firm itself.

Use refers to the ultimate objective of any knowledge management system: the production of commercial value for the customer.

Demarest further emphasizes the role of construction, embodiment, dissemination and use (1997,p 380) for creation of robust bodies of knowledge that work for the firm. Construction would mean the ‘making’ of knowledge through complex processes involving creation, theft, trade and reinterpretation. Embodiment would mean the transformation of a knowledge that is tacit into processes, practices, machinery, materials and cultures. Dissemination refers to the distribution of embodied knowledge throughout a firm or value chain. Use implies application of disseminated, embodied knowledge to particular problems and classes of problems with a view to producing results i.e. making knowledge work.

Out of the above models, socially constructed models are the most appropriate as they have a knowledge process-based approach which is the most suitable

for KM implementation. McAdam and McCreedy have made certain suggestions for improvement of Demarest model (McAdam and McCreedy in Shankar and Gupta, 2005, p 261) which are as under:

- (i) to incorporate the recursive and circulatory flow of knowledge across knowledge processes
- (ii) to set up 'use' element for employee and business
- (iii) to include both social and scientific aspects of KM implementation

The incorporation of these elements in Demarest's model would provide the best solution.

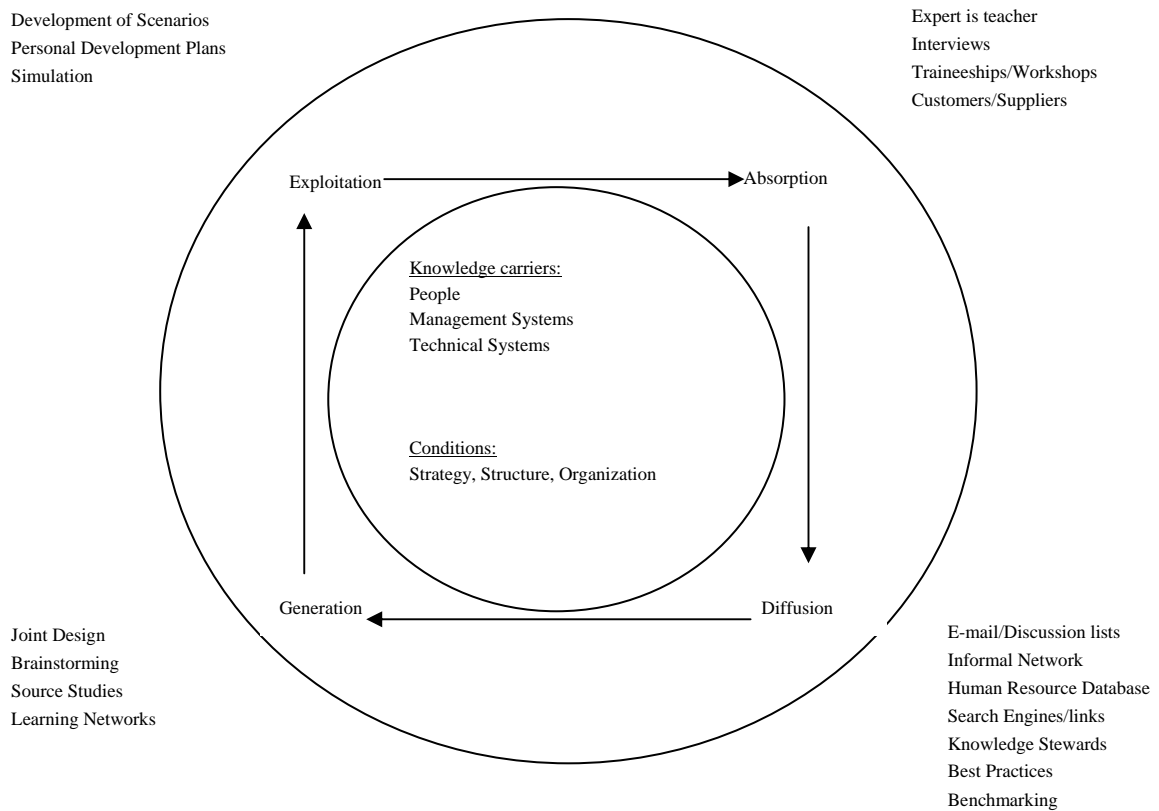
The modern researchers have also suggested many models of KM. One of the most relevant and comprehensive models has been evolved by three researchers from Rotterdam School of Management, Netherlands treating knowledge processes as competencies. They consider competencies to be permanent organizational abilities that can be supported in various ways. Four competencies of a learning organization (i.e. absorption, diffusion, generation and exploitation) as spelt out by Sprenger have been adopted by them to form their model (Kerkhof et al, 2003, p 79). (See Fig 10, p 41).

Absorption is the process of obtaining new knowledge from external environment of the organization. *Diffusion* concerns the distribution of knowledge among the members of the organization. *Generation* involves the development of new knowledge and the process of making explicit existing tacit knowledge. *Exploitation* is considered to be commercialization of knowledge. These four phases in the introduction of knowledge management will not normally be introduced all at the same time. Priority is given to the absorption of knowledge and the diffusion among the members of the professional organizations. This forms the basis for the generation of new knowledge and the explication of implicit knowledge. Finally commercialization of knowledge is a necessary and important competence.

Quinn distinguishes four carriers of knowledge in the organization; people, technical systems, management systems and culture (Kerkhof et al, 2003, p 79). However, in the model under discussion, only first three carriers have been incorporated as the researchers opine that culture is more of a condition for facilitating knowledge management than a carrier.

Three conditions for KM have been included in this model. Firstly, a *strategy* for KM needs to be formulated. KM has to be considered as an important issue in the totality of business activities. An environment conducive for learning has to be created by the management. Secondly, the nature of *organization* is important; it needs to support different phases in the knowledge cycle.

Fig 10: Model for Knowledge Management in the Professional Organization



Source: Kerkhof et al, 2003, p 79

Accessibility, unambiguity and pragmatism are the three conditions important for supporting a knowledge cycle. Thirdly, *structure* of the organization which also subsumes organizational culture should provide a favourable environment for KM and learning. All members of the organization need to be committed to KM activities. Involvement of all members also helps in reducing resistance to change.

4.4 Major KM Activities

The objective of KM within and across organizations is to ensure that the right knowledge is available in the right forms to the right processors at the right times for the right cost in order to secure the right level of organizational performance (Holsapple and Jones, 2005, p 4). In order to achieve this objective, workers in a knowledge-based organization perform various patterns of KM activities linked by knowledge flows. A number of methodologies can be adopted to perform these activities but the suitability of the activity depends on the type of that activity, available organizational resources and a host of environmental factors.

It is very important to identify, understand and carefully consider the KM activities in order to meet the objective of KM. Holsapple and Singh have

evolved Knowledge Chain Model on the analogy of Porter's Value Chain Model (Holsapple and Singh in Holsapple and Jones, 2005,p 4). Just as Porter's Value Chain Model identifies business activities that an organization can focus on as sources of competitive advantage, the KCM identifies KM activities that an organization can focus to improve its competitiveness. The KCM identifies nine distinct generic activities that an organization performs in the course of managing its knowledge resources. They include five classes of primary activities i.e. acquisition, selection, generation, assimilation and emission and four classes of secondary activities viz measurement, control, co-ordination and leadership (See Tables 2 and 3). Each kind of KM activity can yield a competitive advantage if designed and executed better than those of competitor organizations.

Table 2: Primary Activity Classes in the KCM

Activity Class	Description
Knowledge acquisition	Acquiring knowledge from external sources and making it suitable for subsequent use
Knowledge selection	Selecting needed knowledge from internal sources and making it suitable for subsequent use
Knowledge generation	Producing knowledge by either discovery or derivation from existing knowledge
Knowledge assimilation	Altering the state of an organization's knowledge resources by distributing and storing acquired, selected or generated knowledge
Knowledge emission	Embedding knowledge into organizational outputs for release into the environment

Table 3 : Secondary Activity Classes in the KCM

Activity Class	Description
Knowledge measurement	Assessing values of knowledge resources, knowledge processors and their deployment
Knowledge control	Ensuring that needed knowledge processors and resources are available in sufficient quality and quantity, subject to security requirements
Knowledge coordination	Managing dependencies among KM activities to ensure that proper processes and resources are brought to bear adequately at appropriate times
Knowledge leadership	Establishing conditions that enable and facilitate fruitful conduct of KM

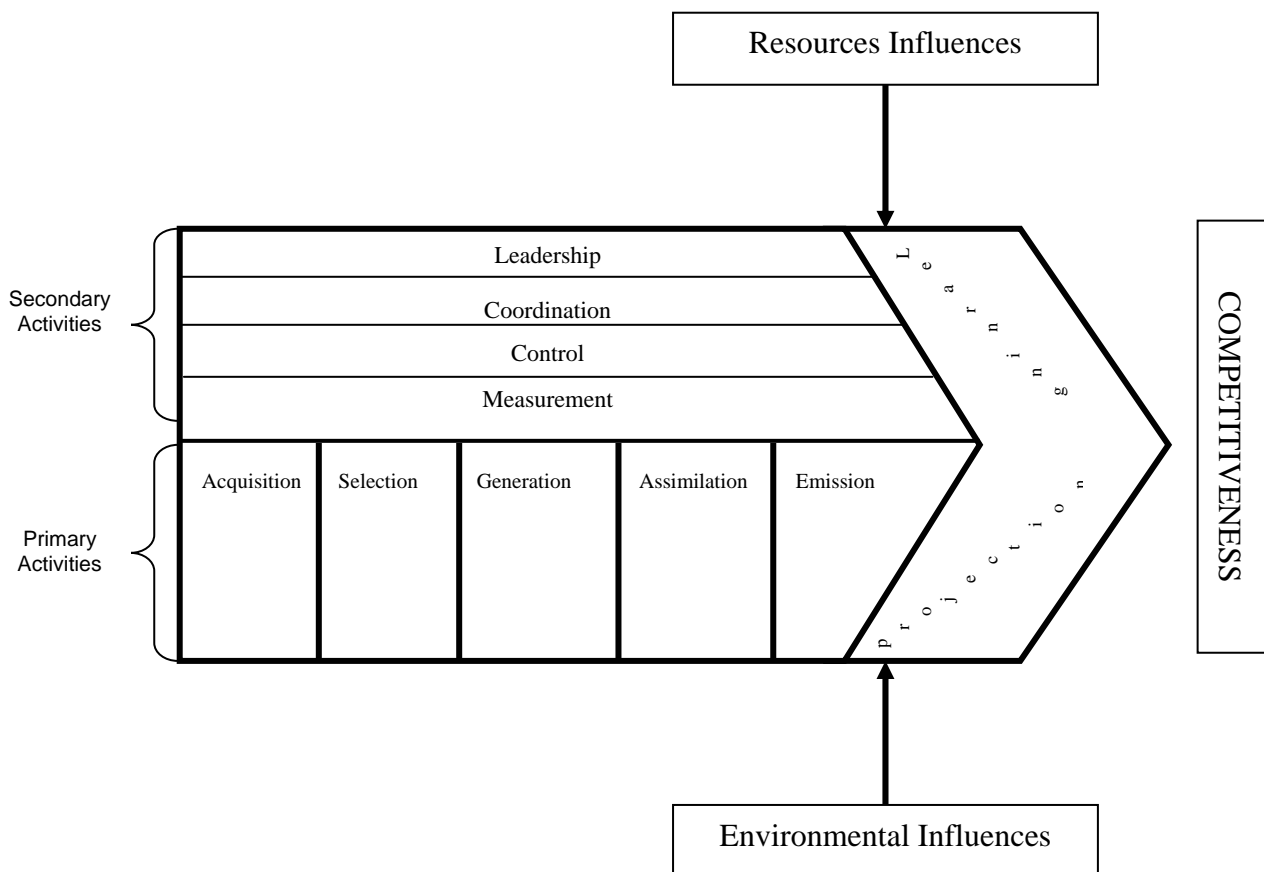
Source : Holsapple and Jones,2005, p 5

The various combinations and implementations of the primary and secondary activities can lead to organizational *learning* (i.e. changes in an organization's

state of knowledge) and *projections* (i.e. release of organizational resources into the environment) (Fig 11).

Organizational resources (e.g. knowledge, people, material, finances) and environmental factors may also shape organizational learning and projections. The KM's basic proposition is that an organization's ability to learn and project depends on how the nine classes of KM activity are designed and implemented. The learning and projection ability of an organization also largely contributes to its viability and success in a competitive environment, along one or more of the following PAIR dimensions: improving Productivity, enhancing Agility, fostering Innovation and enhancing Reputation (Holsapple and Jones, 2005, p 4-5).

Fig 11: The Knowledge Chain Model



Source: Holsapple and Singh as given in Holsapple and Jones, 2005, p 5

4.5 Knowledge Mapping

An important activity that enables an organization to structure what it knows is knowledge mapping. It connects corporate knowledge with its sources. Developing a knowledge map involves locating important knowledge in the organization and then preparing a sort of catalogue or picture that shows where to find it. Knowledge maps not only point to databases and documents

but also to people who are repository of knowledge. They are beneficial for the organization since the people in the organization know whom to consult or which document to see when they need expertise. The maps make knowledge easier to find and ensure that corporate knowledge belongs to the corporation as a whole and not to a particular group or an individual. With the advent of computers, knowledge mapping has become easier as it is much easier to revise an electronic map as compared to a printed map.

According to Eppler (2004,p 199), knowledge maps can serve the following purposes:

- (i) They increase the visibility of knowledge sources and hence facilitate and accelerate the process of locating relevant expertise or experience.
- (ii) They improve the evaluation of intellectual assets (and liabilities) in an organization.
- (iii) They assist employees in interpreting and evaluating knowledge domains.
- (iv) They connect processes with knowledge sources (and thus go beyond the mere documentation of a process as found out in most quality manuals).
- (v) They sketch the necessary steps for knowledge development in a certain area.

They not only make expertise accessible through visual interfaces but also provide a common framework or context to which the employee of a company can relate in his search for relevant knowledge (Eppler, 2004, p 190).

4.6 Knowledge Management and Communities of Practice

A great deal of knowledge is both produced and held collectively. Such knowledge is readily generated when people work together in the tightly held groups known as 'communities of practice'. As such work and such communities are a common feature of organizations, organizational knowledge is inevitably heavily social in character (Brown and Duguid, 2002,p 19). Communities of practice have also been termed as 'knowledge communities' (Smith and McKeen, 2004, p 399) and 'communities of knowing'(Magnusson, 2004,p 264).They are a network of people who create, disseminate and retain knowledge in a particular area, e.g., competitive intelligence, use of a certain technology, expertise in project management. In most of the companies, these communities exist informally. Most communities are designed around the core competencies of the organization.

These communities are not always company-specific but can also bring in people and ideas from other organizations thus creating possibilities of cross-fertilization of knowledge and avoidance of ingrained way of performing work tasks (Magnusson, 2004,p 264). In order to reap the benefits from such communities, organizations should identify communities with potential to enhance strategic capabilities and provide support to them.

To be effective, knowledge communities must serve two key strategic objectives for the organization. First, they must facilitate knowledge

development (i.e. the identification, creation, harvesting and organizing of knowledge). Second, they must be a mechanism for knowledge application (i.e. the sharing, adaptation and execution of knowledge to deliver business results) (Smith and McKeen, 2004, p 399).

4.7 Knowledge Management and Information Technology

The IT-based KM solutions have codification and storage of knowledge at their core. The rapid development of IT has afforded new opportunities for information sharing, through the use of groupware, intranets, internet and e-mail. However, IT-based solutions have certain drawbacks as they do not take into account certain aspects of knowledge, e.g. tacitness, social embeddedness and the creation of new knowledge (Magnusson, 2004, p 262). Firstly, there is too much focus put on knowledge by IT-based solutions whereas the focus should have been on continuous renewal of knowledge. Secondly, for transmission of tacit knowledge, interaction mechanisms are also required apart from information storing which are missing in IT-based solutions. Thirdly, social structures in which knowledge resides are also important but they are not addressed by IT.

For organizations seeking to better manage their knowledge, the use of ICTs should be focused on connectivity-providing communication systems that link humans together rather than concentrating on the capture and representation of human knowledge. There is therefore, significant potential in groupware and other innovative communication technologies but organizations must also create conditions of trust where individuals feel encouraged to share their ideas, opinions and knowledge (OECD, 2003, p 38).

4.8 Knowledge Measurement

One of the most challenging tasks is to measure and value knowledge. The present financial accounting systems present a distorted picture of a company's true value. The traditional financial and physical capital measures tend to present a picture of performance after it has occurred. This has been called "managing by looking in a rear view mirror" (Davis and Meyer as quoted in Smith and McKeen, 2004, p 355). Measures of intellectual capital, on the other hand, documenting such things as knowledge, processes, customers and innovations should be measuring the potential of a company to perform in future. Some companies have begun to provide supplementary reports to their regular financial statements which attempt to document how well companies are doing in these areas.

A committee of The Canadian Institute of Chartered Accountants has been actively exploring links between knowledge management and value. Their work emphasizes that a distinction must be made between value *creation* and *value realization*. Traditional forms of financial accounting measure value realization and not value creation (Smith and McKeen, 2004, p 400). The committee believes that a true picture of the value creation reality should reflect four related perspectives:

- Value creation capacity-how well is the company creating knowledge?
- The value realization formula-what are the company's plans for realizing value from the knowledge?
- The value stream model-what is the projected financial return on this knowledge based on the value realization formula?
- Value for key stakeholders-what financial and non-financial value for key stakeholders will result from this knowledge?

Laurence Prusak says that one cannot measure knowledge in any way so there is no way to develop ROI on knowledge itself. What many organizations do is develop relevant proxies or alternatives to knowledge measurement. For example, IBM boasts each year that it leads the world in technology patents. Internally that is seen as a valid proxy for in-depth knowledge about technology (Prusak interviewed by Allerton, 2003, p36). Rylatt has made an attempt to suggest some tools for measurement of knowledge (2003, p38-39):

1. Customer capital has to be measured by placing a value on the nature and quality of customer relationships, customer satisfaction rates, etc through contracts, market share, repeat orders, service awards, etc.
2. Human capital is the measure of the current know-how of the people in an organization. Jac Fitz-Enz in his book *The ROI of Human Capital* describes human capital as "that intellectual asset that goes home every night in the minds of employees." (As quoted in Rylatt, 2003, p 38). A high level of enthusiasm, desire and commitment in the workplace would be an indicator that the human capital or available talent is working in your favour. Human capital can be measured through average years of service, hiring cost, literacy levels, staff morale, profitability per employee, etc.
3. Intellectual capital constitutes listings and perceived values of trade marks, secrets, patents and branding and can be measured by industry awards, brand and internet domain names, rights (broadcasting and service agreements), secret formulas, etc.
4. Relationship capital involves important strategic alliances, collaborative relationships, business partnerships, joint ventures and industry associations that could help build reputation and industry standing. These could be measured through number of projects undertaken with others, cross functional teamwork, percentage of projects based on interdisciplinary collaboration, etc.
5. Systems performance explores how systems and processes directly or indirectly benefit or generate improved know-how which is indicated by productivity, reduced wastage, efficiency savings, etc. It could be measured through investment in digital technology, new product introductions, on-time delivery, research and development expenditure percentage, quarterly sales growth, etc.

However, the fact remains that it is not easy to measure knowledge and we have a long way to go before a universal solution or measurement is found out.

From the foregoing, a number of conclusions have emerged which have been very nicely articulated by OECD (2003, P 48-49). Firstly, knowledge has always been present in the organizations in an informal manner and the formally labeled KM compares unfavourably with these informal practices. Secondly, there is an abundance of information but very little knowledge implying that the organizations are weighed down by statistics and databases losing sight of the real knowledge involving insights and processes. Thirdly, technology is incapable of dealing with tacit knowledge nor can it create new knowledge and should not therefore drive any KM strategy, although it has a potential primarily as a communication medium. Fourthly, knowledge processes are social processes and it is organizational culture that determines knowledge practices. Lastly, tendency to focus on explicit knowledge and treat knowledge as a commodity leads to an impoverished approach. In fact knowledge is a dynamic process.

5. TRAINING AND DEVELOPMENT

5.1 Importance of Training

Training is vital for the growth and development of an organization. Generally, knowledge, skills and attitude are considered to be three main aspects of training and development. All these aspects are of equal importance and need to be addressed for optimum utilization of human resources in an organization. Henry Mintzberg stated, “Cognitive learning no more makes a manager than it does a swimmer. The latter will drown the first time he jumps into the water if his coach never takes him out of the lecture hall, gets him wet and gives him feedback on his performance.” (*Mintzberg in Greene, 2002, p 6*).

This quotation from Mintzberg obviously stressed the need for budding managers to practise their skills in real situations apart from seeking bookish knowledge. While the importance of the aspects of knowledge and skills has been emphasized above, Green addresses the equally important aspect of attitude by stating that unless Mintzberg’s swimmer has a positive attitude and wants to swim, he would not jump into the water at all.

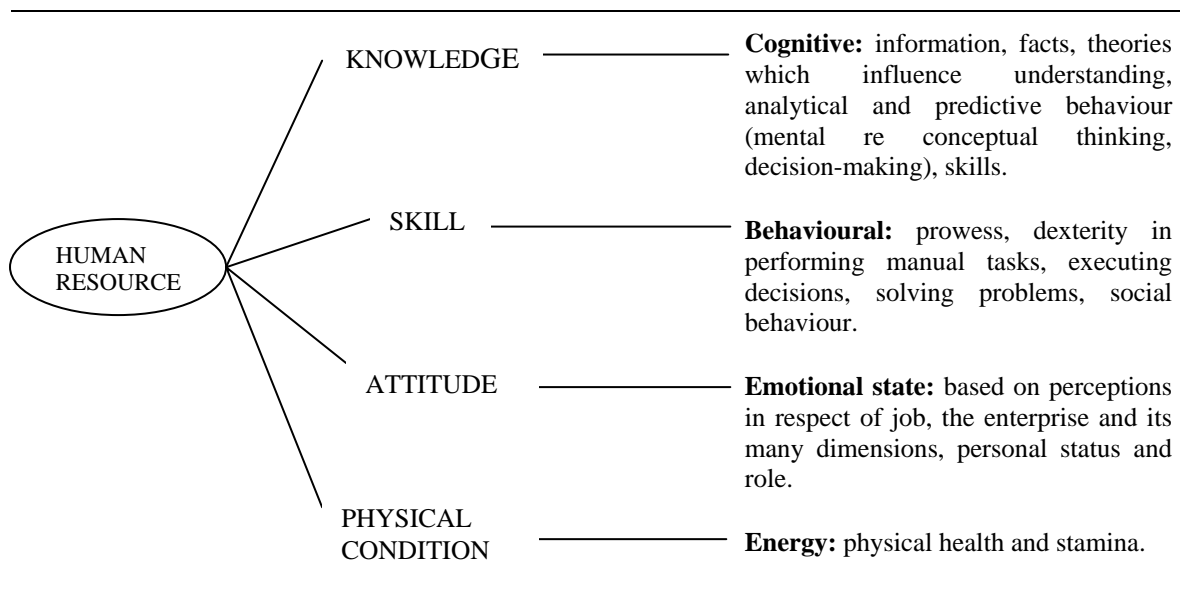
Training and Development are about letting people gain knowledge, hone their skills and improve their attitudes. These three aspects are together referred to as competence. It is this competence only which is valued by all the organisations in today’s competitive world. Mozina and Stanley are of the view that an enterprise is concerned with maintaining the human resource stock for at least two reasons: -

1. Employees whose potential is adequately developed will be able to work competently in pursuing the goals of the enterprise.
2. By their competence, employees will be in a position to realize personal goals, job satisfaction and self actualization. (*Mozina & Stanley, 1987, p 14*)

The human resource transforms material resources into goods and services and the quality of this transformation depends on a combination of knowledge, skills and attitude (Fig 12, p 49).

As it is not always possible to recruit the trained and highly competent manpower, it becomes absolutely necessary for an organization to develop its human resources by imparting training to them in order to establish operational links between the human resource and the organizational objectives.

Fig 12 :The Human Resource



Source: - Mozina and Stanley, 1987, p 15

5.2 Objectives of Training

There are a number of factors that impact on an organization's decision to train its employees. Some of the major objectives of training are as under:

- i) Improvement in employees' performance.
- ii) Improvement of the adaptability and flexibility of the work force.
- iii) Change in technology that necessitates training of work force for achieving competitive advantage.
- iv) Adoption of new work practices and moves towards the more sophisticated systems of Human Resource Management.
- v) Changes in Business Strategy.
- vi) Increasing employees' knowledge of foreign competitors and cultures which is critical for success in foreign markets.
- vii) Promotion of team work for effective contribution in Product and Service quality.
- viii) Ensuring employment security by providing new ways for employees to contribute to the company when their job changes, their interests change or their skills become obsolete.
- ix) Providing the organization with skills and expertise with needs to achieve its strategic objectives.
- x) Shortening learning time so that new recruits reach the performance level of the fully experienced and expert workers as quickly and economically as possible.
- xi) Helping people to develop their natural abilities so that the organization can meet its future human resource requirements in terms of both quality and quantity within the organization.

- xii) Improving operational flexibility by extending the range of skills possessed by employees (Multiskilling).
- xiii) Helping to develop a positive culture in the organization which is oriented towards performance improvement.
- xiv) Provision of higher level of service to customers.

Training is one of the most significant investments an organization can make in its Human Resources. It affects productivity, job satisfaction, creativity and commitment to the organization.

5.3 Types of Training

Different organizations adopt different types of training to increase the skills of their employees. Normally following types of training are used by various organizations: -

- a) *Induction Training* – It is meant to provide the newly recruited employees with the awareness of their new environment and role. The new recruits are imparted training through job rotation in different aspects of an organization’s functioning. They imbibe organization’s culture through this training.
- b) *Refresher training* – it is aimed at updating the knowledge and skills of existing employees. Short-term refresher courses are organized for them to cope with the rapidly changing technology and increasing global challenges.
- c) *Promotion Training* – It involves training of existing employees who are on the verge of promotion. It aims at equipping them with the expertise to handle higher level jobs and responsibilities.
- d) *Remedial Training* – Such training is designed to correct the mistakes and deficiencies in the behaviour and performance of the employees. Behavioural aspects are generally addressed by trainers qualified in industrial psychology.
- e) *Safety Training* – It is provided to minimize accidents and damage to machinery. It involves instructions in following the safety standards in handling the equipments. In a number of countries safety training is mandated by law.
- f) *Developmental Training* – It encourages the employees to update their knowledge and skills in the fields which may not be currently needed by them but which will help them in future to discharge higher responsibilities. Such training helps an organization to provide for its future requirements.

5.4 Training Process

The standard model of training process has the following steps: -

- 1) Identification and analysis of training needs.
- 2) Defining training objectives.
- 3) Design and development of training plans.
- 4) Implementation of training plans.

- 5) Review and evaluation of training programmes.
- 6) Feedback on the result of evaluation for further improvement in training.

5.4.1 Identification and analysis of training needs

A training needs assessment determines whether training is necessary. An assessment of this kind may reveal low level of productivity, inability to adapt to the new technology, a large number of accidents at work, bad management, job redesign, new legislation, changes in customer preferences, new products, or employees' lack of basic skills. It is important to determine whether above problems can be solved through training or require an administrative solution.

Training needs assessment helps an organization to clearly identify the performance problems and to design an effective training programme. The identification and assessment of training needs aims at defining the gap between what is happening and what should happen. It is also known as the training gap.

A training needs analysis is a 3 step process (Harris, 2000, p 343):

- i) An organizational analysis
- ii) A task/competency analysis
- iii) A person analysis

Organizational analysis involves determining the appropriateness of training, given an organization's business strategy, resources available for training and support by managers and peers for training activities. An organization may adopt the strategy of concentration, internal growth, external growth (acquisition) or disinvestment. The training implications for each of the strategies would be different. Apart from strategy, it is also necessary for an organization to identify whether it has the requisite funds, time and expertise for training. An organization may like to utilize its internal resources or outsource training activity. Even though an organization has a well-defined business strategy and training resources, if the management does not have a positive attitude towards training, there can be no meaningful training in an organization.

Task/Competency analysis involves obtaining information from the organizational analysis to evaluate the tasks performed in each job and then determining the competencies required to perform the tasks effectively. The following steps are generally recommended for a task/competency analysis (Harris, 2000, p 345): -

- (i) *Develop a list of task statements:* - using observation, interviews with workers and supervisors and other techniques, a list of tasks performed in the relevant jobs needs to be developed.
- (ii) *Develop a list of task clusters:* - This step involves categorization of tasks into task clusters. For example, a supervisory job might include 4 or 5 task statements which require interaction with other departments. Interacting with other departments, then, might constitute one task

cluster. Developing task clusters is particularly useful for organizing large number of tasks.

- (iii) *Develop a list of competencies:* - One of the most effective ways to develop a list of competencies is to conduct focus panels with groups of supervisors and knowledgeable workers. The panels should be shown the task clusters along with the task statements and asked to generate competencies that are required to perform each task cluster successfully.
- (iv) *Assess the importance of tasks and competencies:* - It is necessary to focus on the important tasks and competencies. Training priorities are established by this step. Both the task clusters and competencies are rated by structured format using a rating scale. The task/competency analysis is a critical step in determining the likely content of a training programme.

Person analysis is the final step of a training needs analysis. It addresses the question as to whether certain employees are deficient in the important tasks/competencies and whether training would remove these deficiencies. There are several ways to determine employees' deficiencies. One of the popular ways is to examine measure of job performance and shortlist an employee for removal of performance deficiency if he has received a less than satisfactory rating in any job dimension. Other alternatives are to have the employees complete self ratings to establish their need for training on each of the competencies or to use proficiency tests or simulations. This way the competencies could be measured in a much more objective fashion. However, none of the approaches for determining performance deficiencies is fool proof. Ideally, a combination of several approaches i.e. self ratings, supervisory ratings and wherever possible proficiency tests could be used to determine who needs training.

5.4.2 Defining Training Objectives

Training objectives should be carefully considered in any programme. These questions are useful for identifying training objectives: how are the customer requirements and business objectives transmitted through the organization; which areas require improved performance; what changes are planned for the future?

Training objectives should be able to satisfy what the trainee will be able to do when he/she goes back to work on completion of training. The objectives specified for the training programme should be less ambitious than actually intended. It is due to the reason that training programmes cannot always address all the problems.

5.4.3 Designing and Development of Training Plans

It is one of the most important stages of the training process since it establishes inter-relationship amongst all the key items in other phases of the training cycle. Each plan of training should comprise the objectives of the programme, its contents, length of the programme, its venue, training techniques to be used, particulars of the trainers and cost estimates along with

funding source necessary for the implementation of the programme. Line management should contribute to the creation of draft programmes and the final responsibility for the implementation of training programmes should be borne by them.

The content of the training programme should be determined entirely by the training needs analysis. It will be greatly influenced by the level of participants and training objectives. The length of the programme is determined by its content. However, training techniques used greatly influence the length of a training programme. Generally it is desirable not to have a very long training programme in order to sustain the interest of the participants.

Where should training take place also depends on the training objectives, contents and length of the programme. A training could be held in company on-the-job, in company off-the-job or externally. **In company on-the-job training** may consist of teaching or coaching by managers, supervisors or trainers. This type of training is practical and immediately relevant. It helps to reduce accidents, wastes and inefficiency in the performance of the job. It is also inexpensive as no extra expenditure is involved. The disadvantage of this method is that it cannot be imparted to a bigger group. Besides, the quality of instruction may be poor as the training programmes may not have been properly planned and the supervisors may not have the aptitude required for imparting training.

In company off-the-job training can be held in training areas or centres, which have been specially equipped and staffed for training. The advantages of this training are that training can be concentrated, planned, focused and imparted by expert and qualified instructors. The disadvantages include the problem of transferring learning to job and the possibility of training being impractical and hence irrelevant. Generally, off-the-job training is good for imparting knowledge and basic skills whilst on-the-job training is ideal for developing and honing skills and for application of knowledge to job. There has to be a judicious mix of off-the-job and on-the-job training.

External Training is useful for development of managerial, supervisory, technical and social knowledge and skills specially if the courses cover standard theory and practice which can be easily translated from the general to the particular. It includes HRD activities conducted by formal and informal education and training institutions.

There is a continuous debate as to whether internal training is better than external training or vice-versa. The answer to this question is not simple. There are many factors such as content and length, level and manner of treatment of subject matter, expected knowledge or the skill to be acquired, other likely participants and extra curricular benefits which might accrue. However, if external courses do not have any unique features that make them superior to internal training, the latter are invariably preferred by the training specialists and the enterprise. However, there is a word of caution: the risk of in company training becoming the breeding ground for inward looking,

dogmatic and insulated individuals without the benefit of external stimulus can be highly damaging for an organization.

5.4.3.1 Developing Training Techniques

Since there are numerous training techniques, it would be helpful to divide training techniques into 2 broad categories on-the-job and off-the-job techniques.

On the job training techniques: - There are 4 basic kinds of on-the-job training: -

- (i) one-on-one instruction
- (ii) coaching
- (iii) job rotation
- (iv) apprenticeship and internship

In **one-on-one instruction**, a trainer trains the employee at the work place though perhaps in a separate area. The training method consists of the description of the procedures and a visual demonstration by the trainer. Following this, the trainee practises under the supervision of the trainer. Books, videos and other materials are used to supplement the training method. This method is cost effective because workers learn while they produce and there is no need for expensive facilities or equipment. Moreover, training is directly job related because actual equipment is used to learn and practise. The trainees also get immediate feedback on performance thus enabling them to take corrective action as and when required. One-on-one instruction also has disadvantages. Firstly, in many organizations, it is not carefully designed or systematically delivered. Secondly, this instruction method generally works best for jobs or tasks that are simple, routine and repetitive in nature. Tasks which are complicated such as writing a computer programme or flying an aeroplane cannot be learnt through this method.

Coaching is an informal, unplanned training and development activity provided by supervisors and peers. Despite its usefulness, coaching at best is a supplement to formal training and development programmes rather than their substitute. According to Harris, coaching method can be usefully applied to the following situations (*Harris, 2000, p351*): -

- (i) When an employee demonstrates a new competency
- (ii) When an employee expresses interest in a different job within the organization.
- (iii) When an employee seeks feedback.
- (iv) When an employee is expressing low morale, violating company policies or practices or having performance problem.
- (v) When an employee needs help with a new skill following a formal training programme.

Used in isolation, coaching is inadequate but it can be an effective supplement to formal training methods.

Job Rotation is a formal, planned programme under which trainees are assigned to various jobs in different posts of the organization. Its purpose is to provide trainees with a larger organizational perspective and a greater understanding of functional areas as well as a better sense of their own career objective and interests. Job Rotation is generally resorted to in case of relatively new employees. It improves the trainee's job skills, increases job satisfaction and provides valuable opportunities for networking within the organization. On the other hand, job rotations may create an increased work load for the participants due to the constant job change.

An **apprenticeship** involves a combination of classroom instruction and hands-on practice and training primarily in the skilled crafts. It is thus more than just on-the-job training. An **internship** differs from apprenticeship to the extent that it provides work experience to students prior to graduation from an academic programme. While an apprenticeship constitutes a complete programme, an internship is merely a part of a larger educational programme.

Off the job training techniques: - These techniques include classroom training, videotape, distance learning, equipments, simulators, role-playing etc.

Classroom training is a popular training method in which a trainer lectures a group. This method is designed to impart knowledge though it is not helpful for developing skills. More often than not, it consists of a one way communication with little emphasis on interactive instruction. The advantage of this method is that it is the least expensive and the least time consuming way to provide information on a specific subject to a large number of trainees. Its main disadvantage is that it is primarily dependent upon the trainer and if the trainers are not effective lecturers, training can be monotonous and ineffective. Besides, no weightage is given to the abilities of different trainees to comprehend the subject as the lecture proceeds at the same pace for all the participants. Lastly, it is not successful in areas like inter-personal skills.

Videotape training is mainly used for improving communication skills, interviewing skills and customer service skills. It is also used for illustrating how procedures (e.g. – welding, surgery) should be followed. Videos are rarely used alone rather are used to supplement the lectures to give trainees the feel of real life experience. Videotapes have several advantages. Firstly, visually printed information is generally interesting and motivating to the viewers. Secondly, trainees can be exposed to equipments, problems and events that can't be easily demonstrated such as equipment malfunction, angry customer or extinguishing fires. Thirdly, videotapes offer the trainees capacity for self-pacing, as they can use them when they desire. The disadvantage of videotape training is the lack of opportunity to interact with the trainer.

Distance Learning refers to any training conducted in a physically remote site from the participants. It can be provided over through a satellite, video conferencing, radio, CD ROM, Internet or Intranet. Its advantages are that it saves on travel costs and gives employees in geographically dispersed sites the

opportunity to receive training from experts for whom it would not be otherwise possible to visit each location. However, lack of interaction between the trainer and the trainees is a major deficiency of teleconferencing. Therefore, video teleconferencing should always have a telephone link so that trainees can clarify their doubts by calling the trainer.

Internet/Intranet training provides an opportunity to the participants to use their keyboards to chat with each other or with the trainer. It consists of a wide variety of graphical, audio and visual components. There are many advantages of using Internet/Intranet training such as reduced travel expenses, easy access to training, reduced cost due to absence of print materials and CD-ROMs, control by the trainer of revision and updates, control of participants over the timing and pace of learning, potential for feed back through instantaneously administered and scored tests, use of many different resources by trainees including reference materials, databases, technical experts on-line and so forth. (*Harris, 2000, p 356*).

All the above advantages lead to potential large cost savings for an organization. The disadvantages of Internet/Intranet based training include the requirement of appropriate infrastructure including computer system requirements, network capacity and network access, proficiency of participants in using the technology, limitation in use for the behavioural training etc.

Role Playing requires trainees to assume an identity other than their own to cope with real and hypothetical problems in human relations and other areas. The basic advantage of a role playing is that it enables trainees to practise new behaviours in a safe environment. The primary disadvantage of this technique is that many trainees are uncomfortable doing role plays.

Business Games and Case Studies are primarily aimed at developing the analytical and decision making skills of the trainees. The types of decisions that participants make in games include all aspects of management practice such as labour relations, marketing or finance. Business games stimulate learning due to active involvement of participants and re-enactment of competitive nature of business.

The case study method is used with the belief that the trainee can best attain any knowledge and competence through the study, contemplation and discussion of actual situations. Trainees are required to analyze the information and make a decision as to what they would do in the situation. The advantage of this method is that it develops rational thinking, comprehensive analysis and communication skills.

Simulation represents a real life situation which is totally risk free. The responses of the trainees in the simulated situation are indicative of the response they would have given in actual situation. However, since training is imparted in a controlled environment, there is little risk of any injury or damage to the equipment. This technique is used to teach production and process skills on one hand and management and interpersonal skills on the

other to the trainees. Air Crews, Naval Officers, lorry drivers etc usually receive extensive training using this technique. The advantages of this method are safety, inter action with the equipment and immediate transferability of training to the workplace. The disadvantage of simulation is the high cost associated with it particularly in the development phase.

5.4.4 *Implementation of Training Programmes*

Implementation of training programmes is the most important stage of the training process. The stages prior to this stage are just preparatory in nature. An active role is required to be played by both the trainee and the trainer to optimize the benefits of training. In the implementation phase, the most suitable methods of training are selected taking into account the character of the programme and the size and composition of the training group. Some of the commonly used methods in implementing training programmes are: the method of lecturing, the method of discussion and debate, the method of working with written texts and drawings and the method of demonstration and observation.

5.4.5 *Evaluation of Training Programmes*

It is important to evaluate the success of training programmes in order to assess their effectiveness. The reasons for evaluating training programmes are as under: -

- 1) To determine whether the programme is meeting objectives, is boosting learning and resulting in transfer of training to the job.
- 2) To ascertain the feedback from the trainees regarding the content and administration of the programme. For example, schedule, accommodation, quality of reading materials and trainers etc.
- 3) To take stock of the financial benefits and cost of the programme.
- 4) To compare the costs and benefits of different training programmes in order to choose the best programme.

Evaluation is an integral part of training. It compares the objectives of training with the outcomes to answer the question about the degree of success of the training programme.

Harris suggests four levels at which evaluation can take place (*Harris, 2000,p 361*):

- 1) *Trainee Reaction*: - The reaction of trainees to the training experience itself. Trainees are asked to give a feedback at the conclusion of the programme regarding the quality of the programme, content, facilities and trainers. Reactions are useful for identifying what trainees thought was useful and what inhibited learning.
- 2) *Amount of Learning*: - It involves measurement of what trainees have learnt during training. Learning outcomes are used to determine the extent to which trainees are familiar with principles, facts, techniques, skills or process presented in training programme. Typically, tests are used to

assess learning. The extent to which the trainees are able to transfer learning to their job cannot be gauged at this stage.

- 3) *Behaviour Change*: - At this level, evaluation tries to measure the extent to which the trainee's behaviour changes on the job as a result of participation in the programme. The managers and peers provide ratings of job performance of the trainee where he exhibits the behaviours emphasized in the training programme.
- 4) *Concrete Results*: -They are a measure of training programme success in terms of increased productivity, reduced accidents or other training programme objectives.

Evaluation is a phase that provides a stable foundation on which further improvement of training can be built in the future.

5.5 Transfer of Training

One of the biggest problems encountered in training programmes is regarding transfer of training to job. The factors responsible for lack of transfer of training to job include absence of support from the line managers and supervisors for use of new competencies on the job, low comfort level in the use of new competencies and skills and perception of trainees about the training programmes to be irrelevant or impractical.

Transfer of training to job can be enhanced by taking the following steps:

- a) Participants should be actively involved in planning the training programme.
- b) The participants should be given the opportunity to set goals for using skills or behaviours on the job, identify conditions under which they might fail to use them, identify the positive and negative consequences of using them and closely monitor their use of them.
- c) The managers should be got involved in training through action planning. The trainees should complete the action plan with their managers that lists the steps the trainees will take to apply the newly acquired skills and knowledge on the job. Likewise, it should be clearly stipulated as to what the supervisors will do in return. (for example- minimizing interruptions or establishing a reward system)
- d) The managers and supervisors may be involved as trainers for which they must take a course before their employees. In case it is not possible to train the manager, special sessions could be held to explain the purpose of training and specify the role they can play in transferring training to the job.
- e) Transfer of training can also be enhanced by creating a support network among the trainees. The holding of monthly meetings of the trainees to discuss the problems and successes in using new skills on the job and publication of a newsletter could be of immense help.
- f) The use of realistic work related situations is critical for transfer of training to job. The trainer should choose films, exercises, role plays and other techniques keeping this thing in mind.
- g) It is quite common to forget the competencies learnt in a training programme. Therefore, there is a need to hold refresher courses a few

months after the end of training programme for consolidation of training efforts and transfer of training to job.

5.6 Cost of Training

Training is an investment and for any investment it is important to carry out a cost-benefit analysis. The assessment of training cost information is important to assess total expenditure on training including direct and indirect cost, to compare the cost of alternative training programmes, to evaluate the proportion of money spent for training development, administration and evaluation and also to compare expenditure incurred on training for different groups of employees and to control costs.

Training cost includes direct and indirect costs. While direct cost includes salaries and benefits for all employees including trainees, trainers, consultants and employees who design the programme, course material, equipment, classroom rentals and purchases, travel costs etc. indirect cost includes general office supply, facilities, equipment, administrative and support staff salaries and other overheads. The cost of a strategy must be reasonable when measured against its effectiveness in learning. If the expected gains in learning effectiveness of a particular strategy do not offset an additional cost incurred by the use of that strategy, a less costly, even if slightly less effective strategy needs to be followed.

Training and development are a vital part of an organization's strategy in today's competitive scenario. Most organizations strike a fine balance between training and development by ensuring that their manpower assets are capable of discharging the current functions efficiently and competently while preparing them for future challenges and new responsibilities. All the stages of training cycle are equally important and are required to be monitored and reviewed closely. Though line managers have an important role to play in training and development, the involvement of top management is called for to ensure effectiveness of training efforts.

6. THE ROLE OF MANAGERS AND EMPLOYEES IN KNOWLEDGE MANAGEMENT AND TRAINING

For implementation of any system, people are very important. The managers and the employees play a pivotal role in an organization whether it is knowledge management or training. The roles played by the people in an organization are interrelated. It is necessary for the success of the organization that both the managers and the employees are empowered and provided enough learning impetus.

6.1 The Role of Managers in Training

The objectives of an organization cannot be achieved unless managers imbibe the values, principles and practices identified with a learning organization. The role played by the managers in an organization's development is crucial as they are the decision makers. The major role of the managers can be defined as under: -

Fulfilment of own learning needs: It is incumbent upon the managers to identify their own learning needs and identify the learning roles for themselves. The managers have to seize learning opportunity on the job and try to be innovative. An organization committed to management development facilitates the use of training to the managers on the job and overlooks the mistakes committed by them provided they learn from them. Once the managers understand the characteristics of a learning organization and how they affect their learning, they can effectively play the role of facilitators for other employees.

Managers as leaders: The managers are required to assume the role of leaders for their subordinates and inspire and empower them. They are required to perform several roles. In the role of a doctor, they are required to diagnose the organizational problems as well as communicate the urgency about solving them (Maccoby, 1996, p 57). As instructors, coaches and mentors, they should encourage, motivate and help workers to learn, assist them in identifying learning resources and opportunities and be role models for all other learning activities. As architects of a whole system of a learning organization, they are required to put together technologies, structures, environments and resources. As designers, they are supposed to frame new policies, strategies and principles for the organization. The roles played by managers assume great significance when they deal with high level knowledge workers who are endowed with specialized expertise. Such people can be led only by intellectual power and conviction, persuasion, intellectual dialogue and continual learning. The managers as leaders have to attract the best workers who are committed to the vision of the organization. In short, the managers should excel at integration of all the learning disciplines with a view to achieving a complete synergy of the efforts of all.

Motivation of employees: The managers must ensure that the employees are motivated to learn. They can motivate the employees by ensuring

employees' self efficacy, understanding the benefits of training, being aware of training needs, career interest and goals, understanding work environment characteristics and ensuring employees' basic skill level.

Self-efficacy comprises the employees' belief in learning the content of the training programmes successfully. Self-efficacy enhances the performance of the participants in training programmes. The managers can increase employees' self-efficacy level by taking the following steps:

- (1) Impressing upon the employees that the objective of training is performance enhancement rather than identifying areas in which employees are deficient.
- (2) Providing comprehensive information to the employees about the training programme and the objectives thereof before the commencement of training.
- (3) Demonstrating to the employees the training success of their peers who are occupying similar positions.

The managers need to make the employees **understand the benefits of training** by communicating to them the potential job related, personal and career benefits that may accrue to them as a consequence of attending the training programme. These benefits could include learning in a more efficient way to perform a process/procedure, networking with other employees in the firm or creating opportunity to pursue different career paths.

The managers must assume the responsibility of **creating awareness of training needs, career interests and goals** amongst the employees. They should communicate effectively to the employees regarding the removal of performance deficiency and upgradation of skills by virtue of attending training programme. It is extremely important to share and discuss all the information about the performance and career prospects of an employee. There is a need to share performance appraisal information with the employees, to hold career development discussions with him or have the employee complete a self evaluation of his strengths and weaknesses and career goals.

The managers need to provide a **good working environment** to the employees. They need to provide materials, job related information and other work aids necessary for employees to use new skills or behaviour before they participate in the training programmes. They also need to reward the employees who use the content and skills learnt during training on their job. Adequate time and opportunity need to be provided to the employees to practise and employ new skills and behaviour to their work.

Another responsibility of the managers is to **determine the basic skill levels** of the employees before imparting training to them. The managers need to conduct a literacy audit to assess the basic skill levels of the employees for the jobs they are deployed on. The managers should ensure that basic skill instructions are integrated into the training programmes. Apart from written

material, alternative training techniques such as use of video or on-the-job training could be used for better comprehension by the trainees.

The managers need to give **continuous feedback to the employees** on their post training performance. The feedback should focus on specific behaviours and be provided immediately on observing the trainees' behaviour so that remedial action could be taken. It is not only important to point out the deficiencies but also to praise the behaviour that meets training objectives.

6.2 The Role of Employees in Training

All employees must recognize the need for **continuous learning**. They need to realize that their own performance as well as of the organization will improve only through continuous learning. There is a need to empower the employees and enable them to learn, to plan for their future competencies so that they give out their best to the organization.

The employees are to be treated as mature, capable workers and learners who can handle the problems on their own with full responsibility and competence. The employees need to justify the faith reposed in them by their organization. In a learning organization, **decentralization and delegation** are the key words. The employees need to be accountable for what they do. The role of employees has assumed greater significance in today's organization because of their contribution in developing strategies and planning for the organization. They have become an important source of information and knowledge and are invariably associated in the thinking process within the organization.

The employees not only have to acquire requisite skills through formal training but also have to learn on their own **by observing others**. They should follow the advice of their mentor and try to imbibe as much learning as possible.

6.3 The Role of Managers in Knowledge Management

In a knowledge based organization, knowledge management is a part of everyone's job. All individuals need to create, share, search out and use knowledge and thus manage knowledge for the good of the organization. The senior management as well as junior managers are responsible for managing the total organizational knowledge creation process at the corporate level. Many organizations have created the position of Chief Knowledge Officer (CKO) for knowledge management endeavours for their organization. The most important responsibility of Chief Knowledge Officer is to build a knowledge culture, create a knowledge management infrastructure and make it all pay off economically (Davenport, Prusak, 1998, p 14).

The Chief Knowledge Officer has to identify the tacit and explicit knowledge essence currently available within the organization and has to develop appropriate mechanism to create repositories, sharing mechanisms and maintenance process for this knowledge base. He is required to identify

knowledge gaps and evolve ways and means to fill them. The Chief Knowledge Officer has to align resources such as people, IT and funds. He should create environment for sharing and creating knowledge all across the organization. He has to have a multi-faceted personality. He should be technologist, entrepreneur, consultant and environmentalist all in one person. (Earl, Scott, 1999, p33). Preferably, the Chief Knowledge Officer role should be a stand alone role without combining it with any other role such as HR or information systems. However, where it is not feasible to create an independent post of Chief Knowledge Officer, it can be combined with other roles. It must, however, be ensured that the Chief Knowledge Officer is fully empowered to call for any information he requires from other departments.

Smith & McKeen have identified the role of knowledge managers as follows (Smith & McKeen, 2004, p 406-07): -

- 1) They need to motivate people for sharing knowledge. A recognition or a reward for creativity, inclusion of KM activities in performance reviews and award of bonuses for KM success could be some of the measures adopted by the managers.
- 2) They need to capture the success stories substantiating the effectiveness of KM. This would inspire the employees to emulate them.
- 3) They should encourage the employees to join a knowledge community and adequate recognition should be given for the same.
- 4) The managers should monitor questions and answers to experts and structure them meaningfully in their knowledge database as FAQs.
- 5) Knowledge Retention Standards need to be prescribed by the managers. The retention of knowledge for shorter/longer duration will depend upon the nature of business. For example, in pharmaceutical industry, there is a need to retain knowledge for years together.
- 6) The managers must provide enough time for learning to the people so that they can take advantage of organization's knowledge resources.
- 7) The managers must not ignore that connecting people with people is as important as connecting people with technology.
- 8) The managers need to align the personal goals of the staff with the larger corporate vision.
- 9) The knowledge collection process should be kept simple and straightforward. It will enable people to document whatever they know in the minimum possible time.
- 10) The managers need to encourage innovation. The innovative organization leads to greater value addition.
- 11) The managers should make the knowledge management exercise interesting and enjoyable by holding contests or inventing some knowledge games

The challenge faced by today's managers is to manage both technological and human aspects of knowledge. The knowledge managers not only process an organized data into information through IT tools but also oversee the work of knowledge workers. The major concern of the managers is coordinating the process of having the right knowledge person with right kind of information at the right time and at the right place. A critical part of knowledge management

activities is sharing explicit knowledge more freely than is customary. As such, communication occupies the centre stage in knowledge organizations. Good and effective communication builds up trust and provides information. The role of the top managers is to provide a sense of direction and vision where the organization should be headed whereas middle managers need to develop more concrete concepts that are easily understandable by front-line employees. They solve the contradiction between what top management hopes to create and what actually exists in the real world.

6.4 The Role of Employees in Knowledge Management

The workplace is the basic learning experience in a person's life. Employees in knowledge based organization are required to do knowledge work which is much more than just one task jobs. Their responsibilities include planning, implementation, acting and checking. Today's workers have assumed the role of knowledge workers and are most commonly organized in knowledge work teams to perform their jobs.

The role of knowledge workers involves doing work for which tasks are not prescribed in advance but are determined just in time in response to issues, and opportunities as they arise. A knowledge worker's job entails assembling relevant information, collaborating with others to provide expert knowledge to the domain and taking action or making decisions. A good knowledge worker at any level should have a combo of hard skills and softer traits. Hard skills include structured knowledge, technical abilities and professional experience whereas softer traits include sure sense of cultural, political and personal aspects of knowledge (Davenport, Prusak, 1998, p110). The knowledge workers are responsible for accumulating, generating and updating knowledge on a daily basis. They are in constant and direct contact with the outside world and access the latest information on developments in the market, technology and competition.

The role of knowledge work teams is equally important. They take up tasks that are difficult for a single knowledge worker to accomplish without the help of others. Teams have a shared responsibility for decision-making, problem solving and organizational design. They serve as a means of employee empowerment. If the level of empowerment is very high, knowledge work teams become self directed implying that instead of requiring any direct supervision, they manage themselves and discharge their day to day responsibilities successfully. The team members are adept in multitasking. It is important for the knowledge workers to be multiskilled as a team and not as individuals because the highly specialized knowledge which is ever changing with the new developments in science and technology has to be always kept updated.

The employees need to **use their own experience as a basis for learning**. They are more likely to learn when the training is linked to their current job experiences and tasks. Some of the traits that employees must possess are as under:

- Listening and oral communication

- Adaptability and creative responses to setbacks and obstacles
- Confidence and motivation to work towards goals, a sense of commitment to the organizational goals and professionalism
- Group and interpersonal effectiveness, co-operation and teamwork

Thus for any organization that takes pride in its learning and knowledge, the managers have to play the role of enablers, facilitators and motivators. On the other hand, the employees must take full advantage of the environment provided to them to learn new skills and teamwork. It is only the collective efforts of the management and the employees that can enable an organization to achieve a competitive edge.

7. TRAINING AND KNOWLEDGE MANAGEMENT IN PRASAR BHARATI

7.1 The Organizational Set up of Prasar Bharati

Prasar Bharati (Broadcasting Corporation of India) was conceived vide an Act of Indian Parliament in 1990 with a view to conferring autonomy on both radio and television which were under the control of the Government. However, Prasar Bharati actually came into being on 23rd November, 1997. All India Radio and Doordarshan (State Television) which were earlier two separate entities under the direct control of the Government are now placed under the control of Prasar Bharati.

Despite the formation of Prasar Bharati, both radio and television continue to be separate SBUs under it with separate Director Generals as well as independent substructures for each. Both the heads of radio and television report to Chief Executive Officer Prasar Bharati. A Board has been constituted at the apex level by the Government of India for governing Prasar Bharati.

7.2 Organizational Goals

As per the mandate given to Prasar Bharati by the Parliament, both radio and television which belong to two distinct cultures should be able to evolve and grow in terms of their own genius while at the same time ensuring a commonality in overall approach in order to meet the requirements of the people for information, education and entertainment. The responsibility of balanced development of radio and television in the country has also been entrusted to the Corporation. Prasar Bharati is to be guided by the specified objectives such as upholding the unity and integrity of the country, nurturing democratic and social values enshrined in the Constitution of India and projecting the varied cultural traditions of different regions of the country. Thus the strategic goal of Prasar Bharati is to fulfil the role of a public broadcaster in a multi-cultural, multi-religious and multi-linguistic society such as India.

7.3 The Challenges

The biggest challenge faced by Prasar Bharati is that of proliferation of private broadcasters. While there are more than 200 TV channels, which are already being telecast in India, now even radio has been thrown open to private enterprise. As a consequence of this in addition to 21 private FM radio stations already operating in the country, more than 300 private FM stations are likely to be added to this list very shortly. It is likely to affect the revenues of public broadcaster adversely as it will have to compete with private broadcasters for advertising and due to the limitations of a public broadcaster, it cannot go whole hog to court the advertisers. Since the private broadcasters only have profit motive at the core, they do not like to get involved in activities which are loss making and prefer cream skinning only.

The cable TV penetration in India today is about 50% of all TV households, which is likely to increase further. There is also a possibility of viewers subscribing to DTH services provided by private channels in future. This is likely to adversely affect the viewership of the public broadcaster.

The budgetary constraints also pose a serious problem to Prasar Bharati. Since its delinking from the government budgeting system, it is being perceived as a public enterprise like any other and the government wants it to raise its own resources in the long run to sustain itself. Since a public broadcaster has social obligations to fulfil, it is difficult to generate additional revenues.

The ever-changing technologies are also a great challenge for the public broadcaster. The shift from analogue to digital technology has left a gaping hole in the pocket of Prasar Bharati, as it had to digitalize its production and transmission facilities. With the possibility of convergence of telecommunications, broadband and broadcasting in near future, the public broadcaster has to have a relook at its strategies in order to remain effective.

It is important for Prasar Bharati to pay adequate attention to the training of manpower as well as knowledge management for coping with the above challenges. To-day it is not only the physical assets that matter rather human capital is of equal importance. It provides a unique advantage to an organization.

7.4 Training :Present Scenario

The training objectives identified in the National Training Policy notified by the Government of India in 1996 include enhancement of professional knowledge and skills, sensitization to professional, socio-economic and political environment in which work is done and right attitudinal orientation (<http://www.persmin.nic.in/otraining/tobjective.html>). The Policy also lays emphasis on building high standards of integrity, character and probity in professional life. A three-tier approach to training is envisaged with training to the cutting-edge level staff with focus on functional skills and attitudinal orientation, middle level staff with emphasis on enhancement of professional knowledge and widening of professional outlook and higher level with focus on policy analysis, strategic planning and policy formulation. The National Training Policy states that mismatch between organizational objectives and training objectives should be avoided. Prasar Bharati's training efforts are to be modeled on National Training Policy.

Prasar Bharati has got a formal training set-up with separate training facilities for both the Programme and Technical staff. While Staff Training Institute (Programme) is there for providing professional training to programme personnel, enhancing their performance level and preparing them for meeting the challenges in broadcasting field, Staff Training Institute (Technical) caters to the training requirements of technical staff.

7.4.1 Staff Training Institute (Programme)

STI (P) was set up first in Delhi in 1948. To-day apart from STI (P) Delhi; there is one STI (P) in Bhubaneswar and five RTIs (Regional Training Institutes) at Ahmedabad, Hyderabad, Lucknow, Shillong and Thiruvananthapuram. These RTIs at different places all across the country cater to the linguistic and socio-cultural diversity.

The **focus areas of STI(P)** are programme production, programme presentation, broadcast management, marketing management, selling airtime, personality development, voice culture and digital broadcasting. Apart from this, training is also imparted to the administrative staff on various topics. Every year on an average 60 courses are organized for about 1000 trainees.

STI(P) has designed and developed Voice Articulation and Nurturing Initiative (VANI) certificate for training announcers, presenters, anchors and radio jockeys. It is also running customized courses in voice culture for training cabin crew of Indian Airlines and new anchors for Doordarshan.

STI(P) also has **collaboration with outside agencies** in both India and abroad. It collaborates with Indira Gandhi National Open University (IGNOU) in running two of their media courses. It also has collaboration with DW Radio Training Centre Germany, Commonwealth Broadcasting Association, London, BBC London and Asia Pacific Institute for Broadcasting Development, Kuala Lumpur.

7.4.2 Staff Training Institute (Technical)

Established in 1948, STI (T) caters to the training needs of engineering personnel of both AIR and Doordarshan. It conducts induction courses for directly recruited officials at various levels, equipment-oriented courses, skill upgradation courses, courses on modern broadcasting techniques and management courses for senior technical personnel. It also arranges hands-on training on different types of professional broadcast equipments. There are Regional Training Institutes (RTIs) at Bhubaneswar, Shillong and Mumbai also. There is also a Doordarshan Training Institute at Lucknow. Every year about 120 courses are conducted for 1600 participants.

It also provides consultancy services for planning and conducting training programmes for other broadcasting organizations. Apart from training technical personnel, it also imparts training to programme personnel in various production techniques. The courses are also conducted in collaboration with international institutes and agencies such as AIBD and Deutsche Well Radio Training Centre (Germany).

7.4.3 Training Activities

Both STI(T) and STI(P) finalize their **annual training schedules** before the beginning of the year. The training schedule of STI(P) is finalized in a

meeting held under the chairmanship of DG AIR. Despite the fact that STI(P) also imparts training to the employees of Doordarshan, there is no representation from Doordarshan in the meeting. STI(T), however, associates the Chief Engineer incharge of Training in Doordarshan while finalizing the training calendar. Since there is no fresh recruitment of programme staff, no induction training is being held in STI(P) but STI(T) is organizing induction courses regularly for newly recruited Engineering Assistants. The refresher courses and orientation courses for newly promoted personnel are being held by both the institutes but still there are a good number of individuals who are not yet trained. In order to promote IT literacy, preliminary PC training is built into various technical courses held by STI(T). However, STI(P) needs to hold more courses of computer awareness for programme staff. The nominations for the courses are sent by the field offices and approved by both the STIs. The training schedules of RTIs are also approved by the respective STI. The offices are also required to nominate standby candidates for training.

Training is also imparted to the staff in outside institutes such as IIPA, FTII and NPC by STI(P) and through the equipment suppliers such as L&T, KOEL etc by STI(T). The training objectives are clearly defined in every course and course co-ordinator is apprised of thrust areas to be covered. The courses are also held for group 'D' employees such as helpers and motor drivers. The training methods used include lecture-cum-demonstration method, audio-visual aids and hands-on practice in laboratories. The case studies and assignments also form a part of training courses. Apart from holding courses for own staff, the **training is also imparted to outsiders** e.g. STI(P) holds training programme for Indian Airlines cabin crew on voice culture. Training is also imparted to broadcasting professionals from SAARC countries and Afghanistan. During last five years, 2 international courses have been held under the aegis of Asia Pacific Broadcasting Union (ABU) by STI(T). Two international courses were also held by STI(P) in collaboration with AIBD in 2004-05. Engineering students from colleges are also imparted training by STI(T).

The **training needs assessment** is carried out taking into account the inputs received from the corporate office as well as sub-offices. Adequate attention is paid for training the staff on latest technologies, marketing skills, administration, finance and behavioural skills. Training strategies are developed keeping in view the organizational objectives as a public broadcaster. The individuals are selected for training based on the recommendation of their supervisors as well as self ratings by the employees. In order to address the specific needs of the station, STI(P) also holds training programmes at various stations. Audit/Inspection reports also serve as an input for the training needs assessment.

Both the STIs have got adequate **training infrastructure** with 3 lecture halls, 1 computer lab, 3 other laboratories and hostel facility,. RTIs in the field also have got adequate training infrastructure. Separate libraries are maintained by both STI(T) and STI(P). However, the condition of libraries would have been better but for scarcity of funds. The professional journals are subscribed to by both STI(P) and STI(T). The latest professional developments in the field are

communicated through the quarterly training news published by STI(T). However, no news letter is being published by STI(P) at present though it was being published till a few years back.

The **trainers** are selected taking into account their qualifications, aptitude for training and communication skills. They are also imparted training in collaboration with reputed institutes, e.g. STI(P) has a collaboration with DW Germany for the purpose. Outside training faculty is also invited to supplement the efforts of in-house faculty. There is a system of exchange of faculty amongst STIs and RTIs. However, no Trainers' Manual is existing in STI(T) whereas STI(P) is following ABU's Trainers' Manual which needs to be updated.

The STI(T) has prepared a question bank which is very useful for the trainees and also for candidates appearing in departmental examinations. The model questions are also published in the quarterly news-letter along with their answers. The **training material** is constantly updated. It is available mainly in the form of hand-outs and sometimes in the form of CDs particularly in the case of STI(T). It is not available on intranet though STI(T) has taken initiative in this direction and training modules are likely to be put on STI(T)'s website.

For the purpose of **evaluation of training**, end of the course tests and quiz are held. STI(P) also gives some exercises to the trainees to gauge the effectiveness of training. However, there is no system of a follow-up course within a specified time for consolidation of learning. There is also no system to ensure transfer of training to job and no reporting system exists from the supervisors in the case of newly trained individuals.

7.4.4 Problem Areas in Training

The training efforts in Prasar Bharati have not been as successful as they should have been due to many reasons. The first and foremost problem is that of non allocation of adequate funds for training. Due to shortage of funds under 'domestic travel' head, a number of trainees cannot attend a training course rendering the training efforts infructuous. The dropout rate of trainees is very high due to shortage of funds and non relief of staff for training by various offices on the pretext of shortage of staff. In STI(T), the dropout rate of trainees in 2004-05 & 2005-06 was 27% and 38% respectively whereas in STI(P), it was 44% and 32% respectively. Another problem is allocation of combined budget to an RTI and the co-located station mainly on Programme side due to which RTIs sometimes do not get their due and it is not possible to work out the expenditure on training. Due to non-maintenance of computerized data bank of trainees centrally indicating number of courses attended etc. there is a possibility of nomination of the same people time and again for attending training. Though there are some Computer Based Training (CBT) packages available in STI(T), no distance learning packages(DLP) are there due to which individuals who are not nominated for training cannot take up self learning. All those problems need to be addressed for making training more effective in Prasar Bharati.

7.5 Knowledge Management : Present Scenario

Like any other organization, Prasar Bharati has been managing knowledge but there is no formal knowledge management policy in place. It has rich experience of public broadcasting behind it. The human capital of the organization is a great asset for it. The manpower is well-qualified, trained and experienced. Prasar Bharati possesses state-of-art technology and has undertaken a massive exercise to digitalize its network. However, with the emergence of private players on the broadcasting scene and the innovative techniques of presentation and programming adopted by them, there is a greater need for Prasar Bharati to utilize its knowledge resources to withstand the competition.

There is a **treasure of tacit knowledge** which is confined to the minds of the employees and has not been turned into organizational knowledge. Since knowledge is power, the confinement of knowledge to only a few people has the potential of creating power-centres in the organization which is not in its interest. The **codification of knowledge** is extremely important. In both AIR and Doordarshan, Manuals for day-to-day operations are existing though not all of them have been updated. The attempt at codification has been made through framing of guidelines for Commissioned Programmes, Sponsored Programmes, acquired programmes, etc which have also been put on the website but still much is to be done in this direction.

Innovative ideas are given due recognition in the organization and there is a system of consultation for taking decisions. There are **various Committees** such as Technical Evaluation Committee (for technical analysis of procurement of technical stores), Costing Committee (for costing various proposals for commissioned programmes, etc), Evaluation Committee (for evaluating the quality of various programme proposals), etc in the organization which are cross-functional in nature. The collective knowledge of the representatives coming from various fields within and sometimes from outside the organization is useful for taking decisions.

In view of the increasingly scarce resources, it has become important for Prasar Bharati to make **commercial use of its knowledge assets**. AIR Resources Centre has been set up which is a premier broadcast consultancy and technology solutions centre growing at a rapid pace. It specializes in providing consultancy and turnkey solutions in the field of broadcasting to Government as well as private sector organizations. After helping the private FM players to set up their transmitters in major cities, AIR Resources has successfully commissioned FM transmitters for Gyan Vani educational channel of IGNOU. Having commissioned them, AIR Resources has also been entrusted with the operation and maintenance of these transmitters thus contributing to the commercial revenue of the organization.

Archives Cell has also brought out CDs/VCDs/DVDs of archival material which has also helped in some revenue generation. DCD is also producing programmes and spots on various social themes which are being funded by

various Government Departments. Of late, realization that content acquisition and ownership is more beneficial than airing sponsored programmes, has paid rich dividends with the telecast of blockbuster films and self-financed commissioned programmes which have also helped in revenue earning.

As regards **intangible assets**, both SBUs of Prasar Bharati i.e. AIR and Doordarshan have their own logos and signature tunes which are very popular and easily recognizable by the audience. News broadcasts by Prasar Bharati are perceived to be the most reliable and authentic by the audience. There is a need to build on to this image. Prasar Bharati also possesses intangible assets in the form of broadcasting rights over programmes including sports and numerous vocal, instrumental and dance performances by various Indian maestros. It has commissioned the production of many programmes on news and current affairs, documentaries and fiction, etc. However, **IPR issues** have not been properly addressed in the past due to which there are some misgivings about the nature of ownership of contents by Prasar Bharati and also its rights of releasing the programmes on other media such as CDs/VCDs/DVDs and internet.

Another important issue is of **IPR of titles** of various programmes broadcast on AIR and Doordarshan. For instance, 'Aaj Tak'(Till Today) used to be a news and current affairs programme telecast on Doordarshan but thereafter it became a separate news channel. Likewise 'Khula Manch'(Open Forum) was another programme telecast on Doordarshan which is now being telecast on the channel NDTV. Since no action was taken by the organization for registration of these titles, they are now being commercially exploited by other TV channels.

7.5.1 Utilization of Knowledge Processes for Social Broadcasting

In the role of a public broadcaster, Prasar Bharati is supposed to utilize its knowledge processes to bring about social change in the country. AIR and Doordarshan use knowledge processes available in the organization to disseminate knowledge useful for the common man. One of the terms of reference of National Knowledge Commission set up in August 2005 is promotion of knowledge applications in the country in agriculture and industry. It emphasizes information and knowledge flow to farmers regarding inputs, technologies, output prices and channels, weather, water, power, livestock and extension services for these including access to credit and insurance. National Knowledge Commission also visualizes capture and dissemination of traditional knowledge in the fields of agriculture, medical and health care and art and culture (<http://www.knowledgcommission.org/downloadsPage.aspx>). Prasar Bharati has played a stellar role in knowledge dissemination to all the corners of the country in the above fields.

The **rural and agricultural programmes** of All India Radio have played a significant role in developing rural areas and imparting modern techniques in agriculture to the farming community. The Green Revolution that led to food

sufficiency in India in the 1970's was made possible only with the help of radio. The popularity of radio during that period was such that a high yielding paddy variety gained wide acceptance even in far flung areas, and its rice came to be known as "Radio rice". The programmes on agriculture are broadcast on both radio and television to impart knowledge to the farmers about better seeds, fertilizers, pesticides, animal husbandry, fisheries, sanitation, nutrition etc. AIR stepped up its activity of agriculture broadcast with the launch of exclusive agriculture programmes "Kisan Vani"(Voice of Farmers) in February 2004 in collaboration with Ministry of Agriculture. The locally conceived and produced programmes of Kisan Vani aim to inform local farmers daily market rates, weather report and day to day activities in their area. Kisan Vani is being broadcast from 96 AIR stations. Narrow casting experiment involving smaller area coverage with locations specific programmes was commenced by Doordarshan with the launch of Kisan Channel located in different parts of the country.

The role of Prasar Bharati in knowledge dissemination gets further reinforced through extensive programmes on land and water conservation, sustainable agriculture, biotechnology, integrated pest management in crops, crop insurance schemes, environment protection, etc. that are broadcast regularly.

DCD (Development Communication Division) of Prasar Bharati has undertaken many ambitious projects in the field of health and family welfare. For this purpose, it has constituted teams at different locations for production of programmes and held workshops for honing the skills of the producers as well as sharing of knowledge and best practices. DCD's health campaign 'Kalyani'(Goddess of Well-being) was launched in two phases. The first phase was devoted to Gastro-enteritis, Cholera, Malaria, Tuberculosis, Iodine Deficiency Disorders, Cancer and HIV/AIDS. The second phase of 'Kalyani' deals with reproductive and child health (RCH). 'Kalyani' has made a significant impact on the target audience as is evident from the reported attitudinal change and social activism. It has become a movement in rural areas and the viewers have set up "Doordarshan Kalyani Clubs". Children and women, who are among the members of these clubs, are taking the television messages further through inter-personal communication and social activism. Health Secretaries of the State Governments, doctors and other health workers, NGOs, academicians, opinion makers and public at large have recognized the impact made by this campaign. The Kalyani campaign bagged the prestigious "Gates Malaria Award" of the Commonwealth Broadcasting Association in 2004 (Annual Report Prasar Bharati,2004,p 49).

Educational broadcasts get due importance on both All India Radio and Doordarshan. While on Radio, a network of 40 FM community Radio Stations known as 'Gyan Vani'(Voice of Knowledge) is being run, on television a separate channel called 'Gyan Darshan'(View of Knowledge) is telecast for the benefit of college and University students. For both the programmes, Prasar Bharati receives collaboration from Indira Gandhi National Open University (IGNOU). The objective of the programme is to benefit the students with the lectures by established professors and experts in the field.

Some programmes are also interactive for which video conferencing is arranged at the study centres of IGNOU, which are networked to the studios.

From the foregoing, it may be seen that Prasar Bharati has taken initiatives both in the spheres of training and knowledge management. While a reasonably good training set up exists in the organization, there is no formal knowledge management set up in Prasar Bharati and no conscious effort made to establish the same. Accordingly, detailed recommendations have been made in the next Chapter to streamline the systems for overall growth of the organization.

8. RECOMMENDATIONS AND SUGGESTIONS

8.1 Analysis of Survey on Training

In order to collect empirical evidence about the perception of the employees towards training efforts in the organization, a questionnaire(See Appendix I) was prepared and circulated to them. The responses were invited from employees with a minimum job experience of 15 years manning mainly junior level positions in Prasar Bharati besides a few middle level officers. Response was received from 23 respondents out of 25 to whom questionnaire was sent. On analysis of the responses received(See Table 4,p 75-76 and Appendix III), it was observed that the majority of the staff was satisfied with training opportunities available in Prasar Bharati.

Table 4 : Analysis of Survey on Training

Sl No	Question	Totally disagree	Partially disagree	Can't say	Partially agree	Fully agree
1.	Sufficient opportunities exist for training and development in the organization.	1	5	0	9	8
2.	Training needs are appropriately identified in the organization.	0	6	0	9	8
3.	Nominations are made for training based on a fixed objective criterion such as employees' survey or recommendation by the immediate superior.	1	2	2	12	6
4.	Generally training is viewed as something sacrosanct in the organization.	1	3	7	9	3
5.	On-the-job training is given due importance.	1	3	1	11	7
6.	Training programmes conducted in the organization help in organizational development.	0	1	0	4	18
7.	I feel that I am	2	2	1	13	5

	sufficiently trained for my job.					
Sl No	Question	Totally disagree	Partially disagree	Can't say	Partially agree	Fully agree
8.	I think that I would have performed better in some other task within the organization.	5	2	6	3	7
9.	My immediate superior(line manager) always motivates me to learn.	2	1	0	11	9
10.	I get full co-operation and encouragement from my peers to learn and upgrade my skills.	2	2	0	9	10
11.	I always get opportunity to apply learning from training programmes to my job.	3	3	3	7	7
12.	I am always rewarded for learning and applying my knowledge and skills to my job.	4	3	1	7	8
13.	Training in the organization is always relevant to the job requirement.	2	0	2	6	13
14.	The trainers generally have enough practical and field experience.	0	2	2	8	11
15.	Training material provided during the training programmes is comprehensive and useful.	0	0	2	8	13
16.	There is enough opportunity available for classroom discussion and for clarifying doubts.	0	1	1	10	11
17.	Apart from lecturing, other methods of training such as case studies, group work and problem solving are used.	0	1	2	13	7
18.	Transfer of learning to job is carried out successfully in the	2	1	4	10	6

	organization.					
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Source : Empirical Study conducted at Prasar Bharati by Author ,2006

Despite a consensus amongst the respondents that training was very important for OD, only half the respondents felt that training was considered sacrosanct in the organization. This underlines the need for sensitizing everyone in Prasar Bharati about the importance of training and greater commitment of top management to training efforts. The respondents felt that an objective criterion was followed for nomination of staff for training and on-the-job training was getting due importance. There is an overwhelming feeling that the line managers motivate and encourage their sub-ordinates to learn and full co-operation is given by the peers in learning efforts.

The respondents were generally satisfied with training needs assessment, training methods used, quality of trainers, quality of training material and the opportunities of interaction during training. However, a very disturbing fact that came to light is that 50% of the respondents feel that they would have performed better in some other job in the organization. It amply bears out the need for job rotation, enrichment of job content and greater delegation at the lower level. As regards transfer of learning to job, about one third respondents feel that these aspects of training need greater attention. Another disturbing fact which came out is that about 74% of respondents did not attend any induction course at the time of recruitment or a Refresher course during last 5 years whereas 65% of respondents did not attend a foundation course at the time of promotion.

8.2 Recommendations on Training

The following suggestions are made to streamline training activities in Prasar Bharati:

8.2.1 Revamp of Training Structure in Prasar Bharati

Though AIR and DD both are a part of Prasar Bharati, there is not much synergy in training efforts. It has also been observed that Prasar Bharati at the corporate level, has very little involvement in training and development efforts. Therefore, a formal training structure needs to be evolved in Prasar Bharati. A three-tier system for training is recommended at Station level, at RTI level and at STI level. It is true that at Station level, it may not always be possible to hold high-level training programmes but at least major stations can do their bit to impart basic training to their staff. Annual training calendar may also be finalized by such stations on the lines of RTI and STI and got approved by the RTI in whose jurisdiction they fall.

At apex level, to review training and development activities, a Committee under the chairmanship of CEO Prasar Bharati with Member (Personnel), Member (Finance), DG AIR, DG Doordarshan, E-in-C AIR, E-in-C Doordarshan, the seniormost officers from Programme and Administration side of both AIR and Doordarshan and heads of both the STIs, may be constituted. More members may be co-opted if required. The Training

schedules for STIs as well as RTIs may be finalized in this meeting. This body must meet at least once in three months to take stock of training activities in the organization.

At RTI level also, a Regional Training Committee may be constituted under the chairmanship of the concerned Zonal DDG with the Chief Engineer of the Zone, Director of the RTI and Directors of major Kendras/Stations as members. The meeting of this Committee may also be held once a quarter with structured agenda. The minutes of this meeting may also be sent to Prasar Bharati and follow-up ensured. The Committee at apex level may also deliberate upon important issues raised by Regional Training Committees. All training activities at the corporate level may be dealt with by Member (Personnel).

8.2.2 Finalization of Training Policy

Training policy for the organization as a whole must be evolved and awareness about the same may be created in Prasar Bharati. Training must be imparted at periodical intervals to all employees at various levels. Induction training for new recruits may be made mandatory as a matter of policy. A short induction course could also be held whenever there is a change in responsibilities or an individual is transferred from AIR to Doordarshan or vice versa. Foundation courses for newly promoted employees may be provided for. Minimum of one Refresher programme must be attended by each individual in a span of 5 years. Nomination of employees to outside training and professional institutes may be made for highly specialized and new areas for which expertise is not available in-house. One of the suggestions made during the survey was that the employees may be allowed to specialize in a particular field and thereafter training efforts may also be concentrated in that area only. Prasar Bharati should fix a target of making every individual computer-literate in a time bound manner.

Staff may also be allowed to enrol for correspondence courses or training programmes organized by various institutes after office hours. On selective basis, tuition fee reimbursement may also be considered. For nomination of employees to professional training institutes for training, annual schedule with the names of institutes, courses identified, seats available, etc. may be notified before the start of the year to all offices and may also be put on the website.

8.2.3 Creation of a Centralized Databank of Trainees

In order to ensure the nomination of appropriate candidates for training, a computerized central data bank of trainees must be maintained. It will help the organization to keep a complete training record of the employees and greater attention can be paid to the training of those individuals who have not been trained even once. The databank may include name, date of joining, history of service, training courses attended indicating exact date/duration of course, outcome of training, recommendations about future training, etc

8.2.4 Allocation of More Resources for Training

Sufficient funds may be allotted to the Training Institutes. In terms of the guidelines in the National Training Policy, 1.5% of the salary budget of the organization has to be earmarked for training activities (DOPT OM, 1996). All RTIs may also be provided separate allotments. At present there is no separate account head for 'Training' which may be opened at the earliest. Training may be treated as a Plan activity and allocation needs to be made out of Plan funds. The Working Group on National Training Policy also recommended that since training is an investment in HRD, expenditure on it may be predominantly met out of Plan funds (<http://www.lbsnaa.ernet.in/lbsnaa/research/trdc/NTP/ntp04.htm#FUNDING>).

Travel expenses of the participants for training may also be met out of 'Training' head. It will not only ease pressure on the normal travel budget available with the stations but will also enable Prasar Bharati to accurately compute the cost of training.

8.2.5 Introduction of Distance Learning Programmes

The capacity of the training institutes to provide formal training is limited and if each individual in the organization is to be trained in the traditional manner, it would perhaps take 15 to 20 years. No organization affords to wait for so long in to-day's competitive world. The answer to this problem is Distance learning. IT based distance learning packages may be developed. DLPs should be well-structured, should have multi-media contents and case studies and should be application-oriented. All course contents of distance learning should be made available on intranet with suggested schemes of learning and timeframe. Each subject should have several courses with differing difficulty level and trainees may pick up the easiest course first and then move up the hierarchy. A forum for students should also be created for putting their queries and doubts which may be answered online. The end-of-the course quizzes and tests may also be provided which may be graded to see the absorption level of trainees. There should also be provision for downloading the training modules and running them on standalone PCs by the trainees.

8.2.6 Enrichment of Training content

Training material available with the Training Institutes need to be enriched by inclusion of more case studies and problem solving exercises. There is an urgent need to create a bank of case studies in the organization in different functional areas. Though there are case studies available on Administration, not many case studies are there on core areas of programming. The employees should be incentivised to prepare case studies. They may be rewarded in cash or/and given an appreciation letter for preparing good case studies. It is advisable to make use of various inspection and audit reports for preparing the Case Studies. They may also be put on the intranet. They can be a great source of self-learning. STI(P) should relaunch its quarterly newsletter and include in

it research articles, latest developments in the field and short questions on programming on the analogy of STI(T).

8.2.7 Other Measures for increasing effectiveness of training

Every year, a **Training week** should be observed by all the offices of Prasar Bharati. During the week, thrust may be laid on training activities such as Seminars/Workshops, computer courses, preparation of Case Studies, guest lectures on various topics, group discussion, etc. It will give impetus to training activities in the organization.

In order to create learning environment in the organization, an all-India **Quiz Contest** could be contemplated. The questions may be asked on various functional areas in the organization. There can be some general questions for all the candidates and they may be asked to choose a specific field e.g. sound recording, digital technology, graphics, etc from where specialized questions can be asked. The contest can at first be held at the RTI level for offices in their jurisdiction and the winner team from each RTI may contest at the national level for championship. The finals may be held in Delhi each year and a trophy along with cash prizes be instituted for the purpose.

The trainers need to be equipped adequately for enhancing effectiveness of training. There is a need to get a **Trainers' Manual** prepared on priority. All trainers must be compulsorily trained in Training for Trainers courses in the premier institutes in India and abroad. A **fixed tenure of at least 5 years** may be fixed for individuals posted to Training Institutes for providing greater stability to them.

Steps are required to be taken for **prevention of absenteeism**. Strict instructions need to be issued to all field offices that individuals nominated for training should be immediately relieved. In case they are not spared for training for whatever reasons, heads of the offices should be held responsible for the same and action taken against them.

On examination of ACR formats of various cadres in Prasar Bharati, it was observed that though there is a column in which recommendation can be made regarding the specialized areas in which an individual can be deployed, there is no column regarding **recommendation for training**. There is a need to include a column in the ACRs of all the cadres where specific recommendation of the reporting officer about training may be made.

8.2.8 Evaluation of Training

In most of the organizations, evaluation of training is the weakest link in training cycle. Prasar Bharati is no exception. There is a need to link evaluation of training to organizational performance as a whole in terms of increased productivity, better audience satisfaction, etc. During the survey, the respondents also felt that appropriate performance opportunities may be provided to the trainees. For proper evaluation of effectiveness of training, wherever possible, a control group (who has not received training) may be compared with the groups that received training. Post-training appraisal should

be carried out by the supervisor, after say, six months of training so that actual learning of trainees can be evaluated. Both qualitative and quantitative benefits accruing from training need to be taken into account for evaluation of training. For instance, one of the quantitative parameters for evaluation of training could be reduction in failure rate of equipment by better maintenance as a result of training. Likewise a qualitative parameter could be improvement in the quality of graphics or other production values.

8.2.9 Revenue Earning through Training

Apart from training Indian Airlines staff, other avenues for training outsiders may also be explored. For instance, there is ample scope of voice culture training in hotel and tourism industry, railways and private airlines. Voice modulation courses can also be organized for the Call Centre aspirants. It is also equally important to give publicity to VANI Course through print media, Doordarshan ,AIR and internet portals. Even National Training policy envisages revenue generation through training activities to ensure self-sufficiency of Training Institutes.

8.3 Analysis of Survey on Knowledge Management

In order to ascertain the perception of the employees about knowledge management scenario in Prasar Bharati, a questionnaire(See Appendix II) was circulated to them. The responses were invited mainly from officers at middle and senior management level as it was perceived that their contribution to the subject would be more useful. Out of 20 respondents whom the questionnaire was given, 15 respondents submitted their responses(See Table 5, p 82-84 and Appendix IV). The respondents acknowledged that there was ample scope of sharing the knowledge in the organization and people freely share it with one another. It was also felt that the line managers consult the employees for decision making and innovative ideas get due recognition. The majority of the respondents agreed that Prasar Bharati has a culture of learning and appropriate learning environment, openness and trust. There was almost a consensus that teamwork is crucial for perpetuation of core competencies and multiskilling needs to be encouraged. The respondents also seemed satisfied with the quality of programme production. As regards potential for exploitation of KM, everyone felt that Prasar Bharati had rich archival material which could be retrieved, packaged and marketed.

A startling revelation was that though the organization is able to communicate the goals to the employees, personal goals of individuals are not integrated into organizational goals. Though the respondents were in agreement that the organization learns from the best practices of other organizations, they strongly felt that there was no formalized system of transferring best practices throughout the organization. Moreover, there is no system of identifying knowledge gaps and closing them through well-defined processes. It was also felt that Prasar Bharati had not learnt lessons from the past and past mistakes were not documented. A majority of the respondents also were not satisfied with efforts for documentation of tacit knowledge. It is quite disconcerting to note that the core competence of the organization does not get adequate

consideration and resources. Though the majority of the respondents were of the view that the organizational Manuals were kept updated, use of IT was satisfactory and easy access to information was available, around one-third respondents held an opposite view which implies that these areas require more attention.

As regards commercial exploitation of knowledge, half the respondents are not satisfied with it though some measures have been taken for marketing of CDs/VCDs/DVDs by Archives Cell. The feeling in the organization is that customer value creation is not considered to be a major objective in the organization that is why Prasar Bharati is lagging behind in the commercial exploitation of knowledge.

Table 5 :Analysis of Survey on Knowledge Management

Sl No	Question	Totally disagree	Partially disagree	Can't say	Partially agree	Fully agree
1.	In my organization, people share knowledge with each other freely.	1	2	0	10	2
2.	I have enough scope to share my knowledge with others.	1	1	1	4	8
3.	Information Technology is used adequately in the organization for knowledge storage and dissemination.	3	3	0	8	1
4.	The past mistakes made by the organization have been documented so that lessons for future can be drawn from them.	8	0	1	5	1
5.	Adequate efforts are made to convert tacit knowledge(knowledge in people's heads)into explicit knowledge(knowledge accessible by everyone in the organization).	8	0	0	7	0
6.	The line manager consults me for taking decisions in important matters.	0	1	0	6	8
7.	Innovative ideas are given due recognition in the organization.	2	0	0	9	4
8.	The organization learns from best practices of other organizations in the field.	3	2	1	8	1
9.	The organization learns from best practices of other public funded organizations.	4	0	1	9	1
10.	I discuss work-related problems with my peers.	0	2	0	3	10
11.	The organization has a culture of	3	2	0	8	2

	learning and has appropriate environment for learning.					
Sl No	Question	Totally disagree	Partially disagree	Can't say	Partially agree	Fully agree
12.	The core competence of the organization is given adequate consideration and resources.	2	5	1	7	0
13.	The organization is able to communicate the organizational goals to the employees.	3	1	1	4	6
14.	Personal goals of individuals are well integrated into organizational goals.	5	3	3	3	1
15.	The items of works are clearly identified in the organization and drills for their execution are available with my Section.	3	0	1	7	4
16.	A system of identifying knowledge gaps and closing them through well-defined processes exists in the organization.	7	2	2	4	0
17.	The organization has formalized the process of transferring best practices throughout the organization.	8	1	1	5	0
18.	All organizational manuals and documents are kept updated.	4	2	0	9	0
19.	The management of organizational knowledge is the key to the organization's strategy.	1	0	1	6	7
20.	The commercial exploitation of knowledge is done satisfactorily by the organization.	4	1	2	7	1
21.	Teamwork is crucial to perpetuating the core competencies in the organization.	1	0	0	1	13
22.	A climate of openness and trust has been built up in the organization.	2	1	3	8	1
23.	Customer value creation is considered a major objective of knowledge management in the organization.	3	3	1	6	2
24.	The quality of programmes produced/acquired/commissioned by the organization is	0	3	1	9	2

SI No	Question	Totally disagree	Partially disagree	Can't say	Partially agree	Fully agree
25.	There is a plenty of archival material available within the organization which can be retrieved, packaged and marketed.	0	1	0	0	14
26.	It is easy to access any information in the organization.	1	5	0	9	0
27.	Multiskilling is required for making the organization more competitive and versatile.	0	0	0	2	13
28.	Regular Sectional meetings are held to discuss work.	1	3	0	5	6

Source : Empirical Study conducted at Prasar Bharati by Author,2006

8.4 Recommendations on Knowledge Management

Knowledge Category Model of Nonaka (Nonaka et al,2002,p 44-56) is very much appropriate for Prasar Bharati. There are a number of knowledgeable people in both AIR and Doordarshan who have got expertise in their field but their knowledge has not been tapped by the organization. Such knowledge can be shared with others through **socialization** and **externalization**. While the process of socialization involves interaction and sharing of experiences, externalization is a more formal process involving articulation of tacit knowledge into explicit knowledge. Externalization is akin to what Demarest terms as **embodiment** (Demarest,1997.p 380). Besides, the modes of **combination** and **internalization** are equally relevant for Prasar Bharati. The best practices observed within the organization and prevalent in other organizations need to be studied, processed and combined to form new knowledge for the members of the organization which should permeate throughout the organization (referred to as **dissemination** by Demarest,1997,p 380). Likewise, a great emphasis is required to be laid on learning by doing which is denoted by internalization.

The following suggestions are made for improving knowledge management in the organization:

8.4.1 Nomination of a CKO

There is a need to nominate a Chief Knowledge Officer for Prasar Bharati who may co-ordinate knowledge management functions in the organization at corporate level. However, at SBU level, independent Knowledge Officers may be nominated for both AIR and Doordarshan who may report to CKO at the corporate level. The Knowledge Officers need to be empowered to call for any information from any Department. They should co-ordinate with HRD Dept(Administration Section),Programme and Engineering Sections.

National Knowledge Commission in its recommendations on e-governance has advocated the creation of the post of a CITO (Chief Information Technology Officer) having expertise and skills in the IT usage in every major Central Government Department as well as States (<http://www.knowledgecommission.org/downloadsPage.aspx>). It is envisaged that all IT infrastructure will be put under the charge of CITOs once the recommendations are implemented. It may be submitted here that IT solutions are mainly aimed at bringing about administrative reforms whereas the scope of knowledge management is much larger including creation of new knowledge, conversion of tacit knowledge into explicit knowledge and transmission of tacit knowledge from one individual to another through socialization.

If CITO is appointed in Prasar Bharati in pursuance of the Government policy, it will be very important to ensure that CITO provides lateral support to the CKO in the organization. In case no CITO is appointed in Prasar Bharati in pursuance of the Government instructions, the duties of the CITO may be discharged by CKO.

8.4.2 Popularization and implementation of Information Technology

There is a pressing need to popularize the use of Information Technology in Prasar Bharati. The knowledge-base and data available in the organization needs to be put on the intranet to enable the employees to have access to it. FAQs may be finalized in different functional areas and put on intranet. All important orders and circulars be also compulsorily posted on intranet as well for the benefit of the employees. All the field offices be networked in order to transmit the information promptly. A suggestion has been made by one of the respondents that all information related to programmes, Fixed Point Charts(FPCs) of various stations and commercial rate cards may be posted on intranet. Periodically a review of the information posted on intranet may be carried out with reference to its usefulness for the employees and updation done.

Some other suggestions are as under :

- (i) The accounts and expenditure statements should be rendered electronically by all field offices to the corporate office.
- (ii) The payments at all the major stations be made through ECS. It would not only be prompt but would also be a safeguard against frauds.
- (iii) ID(Instructional Design) may be used for making the learning experience in the organization interesting. It may include audio and video segments, animations, pop-up pages, etc. In order to make e-learning more interesting, content design and writing of the matter may be carried out in close interaction with SMEs (Subject Matter Experts).
- (iv) It would be worthwhile to set up a computer lab in every office which should be open to all the staff members. The lab should have internet facility. The employees should be able to send e-mails and do internet surfing. This will take out the fear of technology from the minds of the

staff which will be in the interest of Prasar Bharati which is always coping with the challenge of changing technologies.

- (v) Personnel Information System should be computerized and put on the intranet. AIR has taken some initiative in the matter; Doordarshan may also take requisite steps. It will make the system more transparent and remove the grievances of the staff in various administrative matters.

8.4.3 Building a Knowledge Repository

An attempt has been made to structure the knowledge base available in the organization in the form of various Guidelines and Regulations. However, still there is a lot of scope to document the knowledge residing in the minds of the people, for example, in the field of sports rights and IPR matters. There is an urgent need to convert tacit knowledge into explicit knowledge in the form of drills, SOPs (Standard Operating Procedures), Reference Manuals, etc. It is not only important to build a knowledge repository but also to continuously update it. The Office Manuals of AIR and Doordarshan need to be updated and also supplemented in view of some new initiatives taken by Prasar Bharati, for example in-house marketing, self-financed commissioning, launching of CDs/VCDs/DVDs etc.

Some of the other measures that are suggested for building up a knowledge repository are:

- (i) Urgent attention may be paid to the building of the libraries in various offices of the organization. Due to scarcity of resources, it may not be possible to purchase books at all the places. Therefore, the concept of electronic library has to catch up. The lists of books available in major libraries in the organization. e.g. in Staff Training Institutes should be made available on intranet and there should also be external links to other reputed libraries. IT can play a major role in providing the books in an electronic form to the subscribers. It will definitely enthuse people in the organization to improve their knowledge.
- (ii) A thesaurus of technical terms used in the organization may be prepared and put on the intranet.
- (iii) There is a need to clearly identify various functional areas in the organization and issue operating instructions on them in the form of System Circulars. Such circulars may be consecutively numbered to rule out the possibility of any gaps and may be put on the intranet for the benefit of the employees.
- (iv) The knowledge of officers under transfer/retirement must be captured. For the purpose, not only handing/taking over should be a comprehensive exercise with briefing notes but efforts may also be made to position the new incumbent at least one or two months before the relief of old incumbent to ensure smooth transfer of knowledge.
- (v) The inventory of programmes available with various stations of AIR and Doordarshan may be prepared and put on the intranet for the benefit of all the stations. It will encourage programme exchange amongst them and save costs of producing new programmes.

8.4.4 Promotion of knowledge sharing efforts

In any organization, it is important to ensure that knowledge is not only created but also disseminated throughout the organization. **Knowledge mapping** and popularization of **communities of practice (CoP)** can help in knowledge sharing in Prasar Bharati in a big way.

Knowledge Mapping:

At present Knowledge Mapping is non-existent in the organization. The preparation of Knowledge Maps preferably in an electronic form is recommended. The knowledge maps may consist of the names and contact numbers of the individuals who have developed expertise in certain areas. They should also indicate various knowledge databases and documents available in the organization. The employees may be encouraged to contact the experts for replies to their doubts. There should be a provision of keeping the identity of such people confidential, if so desired by them. The Knowledge Maps should be available on the organization's intranet and the employees should be able to seek replies to their queries also online. Another alternative can be the introduction of a weekly electronic newsletter in which the queries raised by different individuals may be consolidated and their replies given. This will not only be helpful in satisfying the queries of the individuals who raised them but also benefit other employees in the organization.

AIR and Doordarshan are separate SBUs under Prasar Bharati. Due to a very limited interaction between the two units, very little knowledge sharing takes place. There is a need to remedy this situation. In order to give impetus to knowledge sharing efforts in the organization, knowledge sharing should be made a part of performance appraisal system. For this purpose, a column may be introduced in the Annual Confidential Report (ACR) where the reporting officer should be required to give his observation regarding knowledge sharing efforts of the employee reported upon.

The best practices and innovative ideas need to be shared across the organization. The experiential knowledge assets that give an organization a competitive advantage need to be properly documented and shared. It is not important only to share the success stories but the failures of the past may also be made an inseparable part of knowledge sharing exercise. Such a measure will give a deep insight to the employees about the correct processes and procedures apart from avoidance of 'reinventing the wheel'.

Popularisation of Communities of Practice:

Prasar Bharati should encourage the people with expertise in various fields to join hands and organize themselves in communities of practice freely exchanging knowledge, expertise, ideas and practices amongst themselves. The CoPs may comprise individuals working at various levels in the organization. Their seniority or rank in the organization should not matter. The

display of the names of members of various CoPs may be made on the intranet and membership should be open to all the employees who can contribute positively to knowledge creation and innovations. For example, there could be CoPs specializing in digital technology, sports coverages, marketing etc. Once a year, members of each CoP should meet and share their experiences. It will give boost to creativity and innovation in the organization. Efforts may, however, be made to ensure that these CoPs do not become power centres in the organization.

8.4.5 Review of Knowledge Processes

A knowledge management policy may be evolved and implemented by Prasar Bharati. The existing procedures and processes may be reviewed and unnecessary and redundant steps may be eliminated for increasing efficiency and quicker and better decision making. It may be pointed out that National Knowledge Commission in its recommendations on e-governance (<http://www.knowledgecommission.org/downloadsPage.aspx>) has also advocated the need for re-engineering the processes in the government before embarking on computerization. New ideas from other organizations may be absorbed and adapted to the requirement of Prasar Bharati with a view to rationalizing the processes in the organization.

8.4.6 Communication and Motivation

The line managers in Prasar Bharati must be able to communicate the organization's policies and objectives to the staff effectively. They should keep the communication channels open and be receptive to the suggestions and the ideas coming from the employees working under them. They should facilitate acquisition and sharing of knowledge by the staff. They should also motivate and support the staff to apply learning to work. One of the criteria for performance evaluation of a line manager should be the extent of upgradation and application of knowledge by the staff working under him. The knowledge requirements for each employee may be determined once a year in consultation with the line manager specifying what the employee is supposed to learn and also how learning will be put into practice. The employees should have full access to the knowledge network in the organization and clearance of some specified online courses should be made a part of their duty. Some financial incentives may also be contemplated for completion of online courses by the employees. The line managers also have a significant role in removing the fear of failure from the minds of the employees by assuring them that any failure or mistake will not be held against them if they learn from them.

An online discussion forum could be contemplated for promotion of sharing of innovative ideas. The ideas could be put across by anyone in the organization irrespective of his rank which could be examined at higher level and implemented, if found practical. Similar forum called 'Dreamers Club' was inaugurated last year by Indian Army.

8.4.7 Creation of Value from Intangible Assets

There is an urgent need to incorporate appropriate clauses regarding IPR in the contract agreements so that Prasar Bharati's exclusive rights over the content are recognized for transmission of programmes on any media whatsoever and full commercial exploitation of such rights is possible. The rights in the contract agreements could include, for instance, ownership rights in cinematography, music composition, lyrics, dramatic works, artistic works, sound recording, etc.

Prasar Bharati must take immediate steps for registration of the titles of programmes broadcast on AIR and Doordarshan to rule out the possibility of the same titles being used by other channels thus infringing the IPR of Prasar Bharati. Trademark registration of titles of such programmes as are either already doing well or are expected to have a continuous run is also suggested.

There are sometimes some instances where the programmes are initially commissioned by Prasar Bharati but later on switch over to the sponsored category. In such cases, it is very important to retain the IPR on the title of the programme to prevent re-run of the same programme with the same title on other channels.

Another issue is of submission of rough cuts. For all commissioned programmes, the producer is supposed to submit the rough cuts which are treated as the property of Prasar Bharati. This clause though, existing in various agreements needs to be strictly enforced. There have been instances in the past when the producers did not submit the rough cuts. Non-submission of rough cuts provides an opportunity to the producer to utilize the same material for producing some other programme, may be for some other client. This definitely is violative of the IPR of Prasar Bharati and merits immediate attention.

8.4.8 Strengthening of Knowledge Measurement Tools

Prasar Bharati, being a broadcaster, its intangible assets i.e. knowledge, processes, brand name, IPRs, etc. are more valuable than tangible assets such as land, buildings and equipments. The above cited intangible assets are a measure of intellectual capital and are reflective of the future potential of an organization. Since at present no universally accepted measure is available for the valuation of intangible assets, it is suggested that supplementary reports may be prepared about IPRs, software and content ownership, patents, etc which could be appended to the annual financial statements of Prasar Bharati.

Since Prasar Bharati is a public broadcaster, it cannot go whole hog for commercial revenue generation. Though one of its objectives is entertainment but information and education take precedence. Therefore, the measure of knowledge may not be essentially the creation of financial value for the stakeholders rather the impact created by it in the fields of health, agriculture,

rural development, education, etc. As stated in the previous Chapter, Development Communication Division (DCD) of Prasar Bharati has done a yeoman's service particularly in the field of health bringing down the incidence of certain diseases. The success of such campaigns launched by Prasar Bharati is the apt measure of the utilization of human and intellectual capital available within the organization. Despite making significant contributions in social and economic field the number of ARU (Audience Research Unit) impact studies is not adequate due to which many success stories never come to light. Therefore, there is a need to conduct more ARU impact studies either in-house or through an external agency to measure the outcome which will be a true measurement of organizational knowledge.

8.4.9 Commercial Exploitation of Knowledge

A lot of valuable archival material exists in the organization which requires to be commercially exploited. For instance, plenty of rare sports footage including cricket is available with Doordarshan which can be repackaged and telecast raking in the advertising revenue. The archival footage particularly with News Wing can also be commercially exploited. Even the development stories can fetch revenue if they are professionally produced by the use of graphics, multimedia and data. There is also a need to re-orient the organization by changing the mindset of the employees to make it more conducive to market requirements. The procedures need to be rationalized to make them more market-friendly and less onerous. Greater flexibility in determining the commercial terms is called for.

International Marketing Division (IMD) needs to be more proactive to exploit the overseas rights of various programmes available with Prasar Bharati. Priority may be accorded to production of programmes with longer shelf life and wider national and international acceptance and marketing potential.

The above recommendations may be examined by Prasar Bharati and an action plan may be prepared for their phased implementation.

9. CONCLUSION

Organizational development (OD) is of vital importance for meeting the challenges faced by Prasar Bharati such as growing competition, new technologies, increasing cable penetration and reducing government budgetary support. OD envisages more effective change management, better decision making, greater delegation, better co-ordination amongst various groups in the organization and more open communication. The two main objectives of OD i.e. individual development and organizational effectiveness can be adequately met through training and knowledge management. Training and KM not only empower the employees but also bring about attitudinal changes leading to a more harmonious working environment in the organization.

Prasar Bharati has got an excellent training infrastructure and training is imparted to about 2600 employees every year at various locations which constitutes about 6 % of the total strength of Prasar Bharati. Since it is not possible to train every person through formal training programmes, more emphasis needs to be placed on distance learning packages and on-the-job training. A training policy needs to be framed on top priority taking into account the guidelines given in the National Training Policy and unique requirements of the organization. A perspective Training Plan for next 5 years also needs to be prepared by Prasar Bharati. Training has to be handled with missionary zeal with full commitment of top management. It cannot be left to Training Institutes alone rather each sub unit of Prasar Bharati has to get involved closely with training efforts. AIR and Doordarshan need to synergise their resources to ensure creation of a learning environment in the organization. There is also a need for allocation of greater resources for training including funds and manpower.

In order to streamline the training functions in Prasar Bharati, a centralized databank of trainees needs to be created to ensure the nomination of employees for training in a more objective manner. The training material needs to be enriched by including case studies and problem solving exercises in it. Innovative steps such as holding of Quiz contest at all-India level will certainly enthuse the employees to learn more. Stringent steps must be taken to arrest the high dropout rate of trainees in various training programmes. The trainers must be allowed a minimum fixed tenure of 5 years to provide greater stability to training endeavours. Training for trainers may be organized at the leading training institutes in India and abroad. The services of trainers must be availed of even when they are transferred out to some other offices in keeping with the principle of 'once a trainer, always a trainer' envisaged in National Training Policy. Trainers' Manual must be got prepared with outside expertise if so required.

Training needs assessment may be made more objective. A criterion must be fixed for selecting the trainees for different courses which should be incorporated in the Training Policy of the organization. One Refresher course in 5 years may be made mandatory for each individual. The ACR form may be suitably changed to include recommendation regarding training in it. More

emphasis needs to be placed on evaluation of training and transfer of training to job. The feasibility of conducting a follow-up course or workshop of trainees within six months of the first course may be examined for consolidation of learning and appraisal system for trainees requiring the supervisor to submit a report on the post training performance and behaviour of trainees may be introduced. There is also a need to make training institutes self-sufficient which is possible only if they generate revenue by imparting training to outsiders. Training institutes of Prasar Bharati have already taken an initiative in this direction. However, more avenues for revenue generation must be explored to make learning a self-sustaining activity.

Like any other organization, Prasar Bharati has also been managing knowledge since its inception but there is no knowledge management strategy in place in the organization. Prasar Bharati has got a huge infrastructure of studios, transmitters, earth stations and various state-of-the-art audio and video equipments. It has embarked on a massive digitalization drive. It has also initiated steps for automation of transmitters. The launching of DTH by Prasar Bharati in the year 2004 was a landmark event as it reflected the intent of Prasar Bharati to use the latest technology to reach the uncovered areas.

A very well-qualified and experienced workforce exists in the organization. However, due to lack of commitment and motivation, personal objectives of many employees are not fully integrated to the organizational objectives. The efforts of workforce could be directed to achieve organizational objectives by using the MBO approach. There is a plenty of tacit and experiential knowledge available in the organization which has not been codified and hence cannot be disseminated across the organization. Steps have to be taken for codification and documentation of knowledge available in the organization. It will help in creation of such systems in Prasar Bharati that even if the knowledgeable and experienced people leave the organization, their knowledge will stay within the organization.

A CKO may be nominated in Prasar Bharati who may be made responsible for knowledge management in the organization. He needs to be adequately empowered to obtain information from various Departments. Information technology may be exploited fully for creating and sharing knowledge bases in the organization. The various functional areas in the organization need to be clearly identified and all the information available on them may be put on intranet alongwith FAQs. For encouraging innovative ideas, an online discussion forum may be introduced. Instructional Design can be of great help in making learning interesting. All the employees in the organization must be made computer literate. The field offices may be networked to ensure smooth and prompt flow of information. The electronic versions of books in the libraries may be made available to the employees with links to outside libraries. The inventory of programmes may be shared online by various units within the organization.

The procedures and processes in the organization need to be re-engineered. Redundant and obsolete procedures may be discarded. The Manuals available in the organization need to be updated. The drills and SOPs on various

functional areas need to be prepared. The knowledge mapping may be introduced immediately. The communities of practices may be encouraged for creation of expertise in various fields. Besides the COPs will also lead to a sense of co-operation instead of conflicts as it will result in team building which is so important for OD. The communication channels have to be open and top management must be receptive to the ideas of the people lower down the rung.

Steps need to be taken by Prasar Bharati to guard its IPR over the content owned by it. Suitable provisions need to be made in the contract agreements for the purpose. The IPR of the titles of various programmes may also be safeguarded by registering the titles. In its role as a public broadcaster, Prasar Bharati also needs to excel in empowering the masses with various knowledge processes. It has to commission more impact studies to highlight its contribution in the field of health, education, agriculture, rural development, women empowerment, etc. It should also lay more emphasis on commercial exploitation of knowledge by undertaking consultancy work, repackaging of archival footage available with it and changing the mindset of employees to make them more market-oriented.

To sum up, Prasar Bharati has indubitably got a vast reservoir of knowledge and talent but the need is to channelise it properly. The various wings of the organization possess requisite expertise in their respective field but for overall organizational development, it is necessary to remove functional barriers and improve interaction and co-ordination. Training and KM efforts can succeed only if the people in the organization do not work at cross purposes. The collective training of individuals from various departments as well as Mutual Expectations approach of OD can be useful in reconciliation of conflicts. The proper management of training and knowledge in the organization with full commitment of top management can turn around Prasar Bharati.

BIBLIOGRAPHY

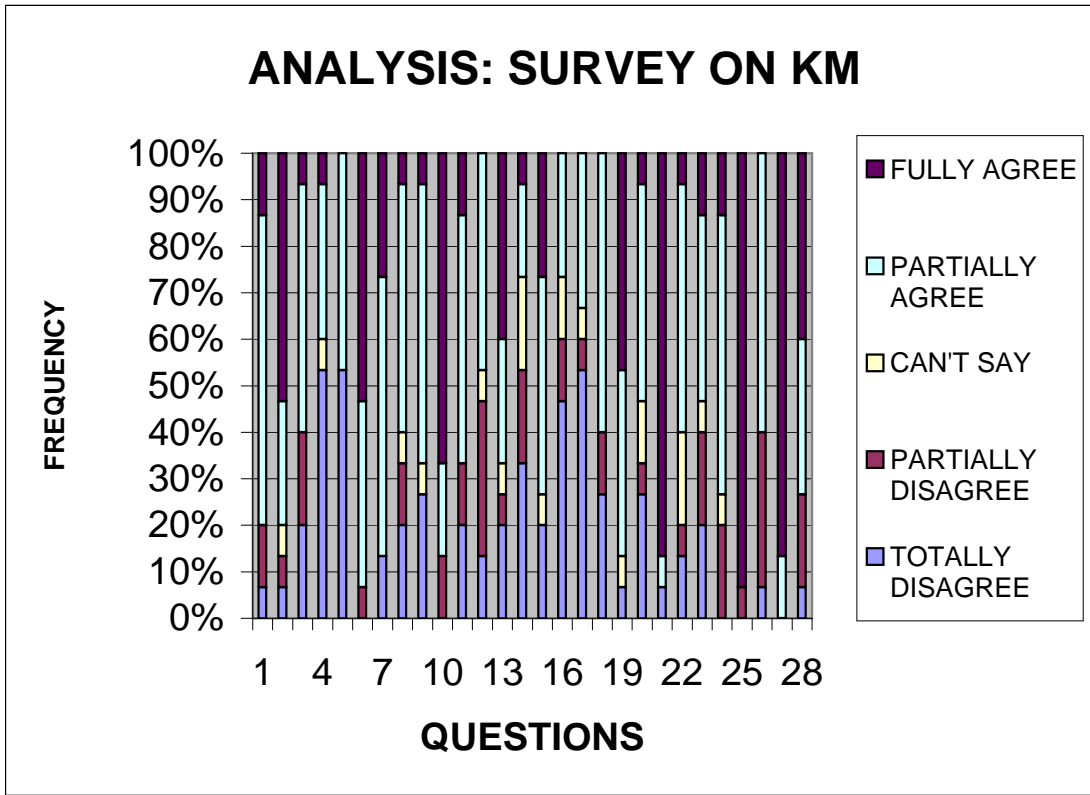
1. Alle Verna: The Future of Knowledge: Increasing Prosperity through Value Networks, Butterworth-Heinmann, Amsterdam, 2003,p 294
2. Beckman Thomas J : The Current State of Knowledge Management, Liebowitz Jay(ed) : *Knowledge Management Handbook*, CRC Press New York, Washington DC,1999, pp1-1 to 1-22
3. Brown JS,Duguid Paul : Organizing Knowledge, Little Stephen,Quintas Paul and Ray Tim(ed) *Managing Knowledge : An Essential Reader*,Sage Publications,London,2002, pp 19-40
4. Buchanan David, Huczynski Andrzej: Organizational Behaviour: An Introductory Text, Prentice Hall, London, 1997, p 744
5. Chiva-Gomez Ricardo: The Facilitating Factors for Organizational Learning: Bringing Ideas from Complex Adaptive Systems, *Knowledge and Process Management Journal*,2003, Vol 10, No 2, pp 99-114
6. Davenport Thomas H,Prusak Lawrence : Working Knowledge : How Organizations Manage What They Know,Boston(Masachusetts),Harvard Business School Press,1998, p 199
7. Demarest, Marc : Understanding Knowledge Management, *Long RangePlanning*, 1997,Vol 30,No 3,pp 374-384
8. Earl Michael J,Scott Ian A : Opinion What is a Chief Knowledge Officer? *Sloan Management Review*,Winter 1999,Vol 40, No 2,pp 29-38
9. Edvinsson L: Developing Intellectual Capital in Skandia, *Long Range Planning*,1997,30(3),pp 366-373
10. Ellis Steve, Dick Penny: Introduction to Organizational Behaviour, McGraw Hill, Berkshire, 2003, p 313
11. Eppler, Martin J: Making Knowledge Visible through Knowledge Maps: Concepts, Elements, Cases, Holsapple Clyde W(ed): *Handbook on Knowledge Management 1*,Springer,Berlin,2004,pp 189-205
12. Ford Dianne P : Trust and Knowledge Management: The Seeds of Success, Holsapple, Clyde W ,ed, *Handbook on Knowledge Management 1*,Berlin : Springer, 2004.p-553-576
13. Garvin David A: Building a Learning Organization, *Harvard Business Review on Knowledge Management*, 1998, pp 47-80
14. Greene George : Training and Development,Capstone Publishing, Oxford,2002, p 130
15. Guns,Bob : The Faster Learning Organization-Gain and Sustain the Competitive Advantage, Jossey-Bass Publishers, San Francisco,1998,p 129
16. Harris Michael : Human Resource Management: A Practical Approach, The Dryden Press, 2000(2nd edition),p 528
17. Holsapple Clyde, Jones Kuku : Exploring Secondary Activities of the Knowledge Chain, *Knowledge and Process Managemen Journal*, 2005, Vol 12,No 1, pp 3-31
18. Huber, George P: Organizational Learning: The Contributing Processes and the Literatures, *Organizational Learning*, Sage Publications, London, 1996, pp 124-162
19. Jensen Povl Erik: A Contextual Theory of Learning and the Learning Organization, *Knowledge and Process Management Journal*, 2005,Vol 12,No 1, pp 53-64

20. Kerkhof Cesanne, Ende Jan van den, Bogenrieder Irma : Knowledge Management in the Professional Organization : A Model with Application to CMG Software Testing, *Knowledge and Process Management Journal* ,2003,Vol 10,No 2,pp 77-84
21. Maccoby,Michael : Resolving the Leadership Paradox : The Doctor's Dialogue,*Research Technology Management*, May 1996,Vol 39,No 3, pp 57-59
22. Magnusson M G: Managing the Knowledge Landscape of an MNC: Knowledge Networking at Ericsson,*Knowledge and Process Management Journal* ,2004,Vol 11,No 4,pp 261-272
23. Mozina Stane,Stanley Lloyd A : Planning for Human Resource Development,ICPE,1987,P 84
24. Nonaka I: The Knowledge-creating Company, Harvard Business Review, Nov-Dec 1991, pp 96-104
25. Nonaka I, Toyama R, Konno N : SECI, Ba and Leadership : A Unified Model of Dynamic Knowledge Creation, Little Stephen, Quintas Paul and Ray Tim(ed) *Managing Knowledge : An Essential Reader*, Sage Publications,London,2002, pp 41-67
26. Odiorne George S : Management by Objectives, Craig Robert L(ed) *Training and Development Handbook*, McGraw Hill, New York,1976, pp 13-1 to 13-7
27. Patten, Jr T H, Vaille P B : Organizational Development, Craig Robert L(ed) *Training and Development Handbook*, McGraw Hill, New York,1976, pp 20-1-20-22
28. Porras J, Hoffer S: Common Behaviour Changes in Successful Organizational Development, *Journal of Applied Behavioural Science*, 22, pp 477-494
29. Quintas Paul : Managing Knowledge in a New Century,Little Stephen, Quintas Paul and Ray Tim(ed) *Managing Knowledge : An Essential Reader*, Sage Publications,London,2002, pp 1-14
30. Reay, David G: Understanding How People Learn, Kogan Page, London, 1997, p 93
31. Rylatt Alastair: Measuring Know-how, *Training and Development*, July 2003,pp 37-39
32. Senge, Peter M et al: The Fifth Discipline Fieldbook, Currency Doubleday, New York,1994,p 593
33. Shankar Ravi, Gupta Amol : Towards Framework for Knowledge Management Implementation, *Knowledge and Process Management Journal*, 2005,Vol 12,No 4, pp 259-277
34. Skyrme D J, Amidon D M: The Learning Organization, Little Stephen, Quintas Paul, Ray Tim(ed): *Managing Knowledge: An Essential Reader*, Open University & Sage Publications, London, 2002, pp 264-271
35. Smith H A, McKeen J D : Knowledge Management in Organizations : The State of Current Practice, Holsapple Clyde W(ed) : *Handbook on Knowledge Management 2*,Springer,Berlin,2004, pp 395-410
36. Smith H A, McKeen J D : Valuing the Knowledge Management Function, Holsapple Clyde W(ed) : *Handbook on Knowledge Management 2*,Springer,Berlin,2004, pp 353-368
37. Swieringa Joop, Wierdsma Andre: Becoming A Learning Organization: Beyond the Learning Curve, Addison-Wesley Publishing Co,1994, p 154

38. Thomason, George F : A Textbook of Human Resource Management, Institute of Personnel Management, London, 1991, p 578
39. Watson Ian Duncan: Applying Knowledge Management: Techniques for Building Corporate Memories, Morgan Kaufman, Amsterdam, 2003, p 252
40. Wiig K: Integrating Intellectual Capital and Knowledge Management, *Long Range Planning*, 1997, 30(3), pp 399-405

SOURCES

1. Annual Report Prasar Bharati,2004
2. Haidlee E Allerton: KM Today: Interview with Laurence Prusak, *Training and Development*, July 2003,p 35-36
3. National Knowledge Commission terms of reference (downloaded from <http://www.knowledgecommission.org/downloadsPage.aspx> on 09-08-06)
4. National Training Policy 1996 notified by Govt of India(DOPT Office Memorandum No.11014/17/93-Trg dated 15-06-96 (downloaded from website <http://www.persmin.nic.in/otraining/funding.html> and <http://www.persmin.nic.in/otraining/tobjective.html> on 09-08-06).
5. OECD: Measuring Knowledge Management in the Business Sector: First Steps, OECD Paris & Ministry of Industry Canada, 2003,p 219
6. Prasar Bharati Act 1990
7. Report of the Working Group on National Training Policy (downloaded from website <http://www.lbsnaa.ernet.in/lbsnaa/research/trdc/NTP/ntp04.htm#FUNDING> on 09-08-06).
8. Skyrme D J: Knowledge Management: Making Sense of an Oxymoron ([http://www.Skyrme.com/insights/22 km.htm](http://www.Skyrme.com/insights/22km.htm)) retrieved on 31.05.2006



Source : Empirical Study conducted by Author at Prasar Bharati,2006