Executive Summary

The First Chapter "Organisational Learning and Information Technology" deals about the earlier researches in the areas of Organizational Learning, Organizational Development. It defines Organizational Learning, emphasis on the need for learning in the competitive environment, challenges in organizational learning and barriers to individual and Organizational Learning, the process involved in acquiring and distribution of knowledge.

The cultural pre-requisites for facilitation of Organizational Learning are explored along with media influences on the individual learning and action learning. The inter-relationship between various sub-aspects such as information systems & knowledge engineering, knowledge management & Organizational Learning.

Subsequently, the factors to be understood in understanding the organizational IT requirements elucidated along with the inter-relationship between the technology and workplace transformation. Exploring the impact of technology the chapter also examines other aspects such as virtual organizations, impact of technology on employees, customers and technology based learning/training. Further, the various stages in technology based training along with a model on the Training System” by Anderson Associates have been explained in detail.

The chapter correlates the recent topics with the core aspects i.e. learning, the various approaches i.e. KSA Approach, Long’s Spectrum, CRAMP Approach, Blooms Taxonomy, Gagne's Hierarchy have been explained in brief.

The various types of learning technologies and advantages along with the role of technology in transformation of training to learning have been covered. The improvement in performance through learning and knowledge along with inter-relationship between Electronic Performance Support System and Organizational Learning has been explored. The cognitive change facilitated by E-Learning, the emerging trends, the pedagogical approaches for optimizing E-Learning have been discussed. Further, the various models i.e. Scientific Experimental Model, Management-Oriented System Model, Qualitative/Anthropological Model along with the Participant Oriented Models have been compared for the evaluation of technology enhanced teaching vs. learning.
In the next stage, the emerging technological future, as a result of managing the processes of knowledge and knowledge engineering have been explained in detail along with the paradigm shift in knowledge perspective. The quality considerations in training and the impact of organizational culture & values on technology & training have been debated. The contrast between western cultural values and non-western cultural values and the resultant impact on adopting technology in learning context has been analyzed.

The Second Chapter "Banking Technology & Trends Overview" begins with a brief overview of the current competitive scenario. It maps the transition and evolutionary phenomena through the various phases i.e. the Foundation Phase, Rapid Expansion Phase, Consolidation Phase and Reforms Phase. The chapter also explores deregulation of banking system and the changing structural dynamics between the various segments of players, the traditional vs. new generation banks and the measures by the central bank in terms of the stringent prudential norms, which made an impact on the banking industry. In the entire process, qualitative human resources have emerged as competitive differentiators, which provide a cutting edge to the bank.

In addition to the facilities and conveniences, the IT environment in the banks, brings along a wide gamut of risk such as the Regulatory Risk, Strategic Risk, Organizational Risk, Location Risk, Outsourcing Risk, Error Risk, Computerized Fraud Risk and Disclosure Risk.

For the purpose of focused analysis, the place in the Indian banking sector has been categorized into the new generation banks and traditional banks. The salient features of the new generation banks have been discussed briefly along with the status of IT adoption by the public sector banks and the old private sector banks.

Subsequently, a comparative analysis of the performance has been made over a period of a decade i.e. from 1991 - 92 to 2000 - 01, based on the data published by the Reserve Bank of India in its Annual Reports titled "Trends and Progress of Banking in India". The parameters used for the analysis are

- Internal Research
- Profitability (Operating Profits to Total Assets, Spread as Proportion of Total Assets)
- Productivity (Business Per Staff Cost, Ratio of Establishment Expenses to Net Income)
Based on the analysis, it is observed that the public sector banks have incurred losses during the years 1992 to 1996, as against the new generation banks. As regards Profitability, public sector banks have improved their performance in terms of spread as percentage to total assets. The Staff Cost to Net Income of State Bank Group was lower than that of Nationalized Banks, while it was found to be substantially lower in case of private and foreign banks.

The trends and perspectives in banking technology present the computerization status of the banks in general and public sector banks in particular. The background of technology upgradation presents a brief synopsis of the recommendations of the various Committees such as Rangarajan Committee, Saraf Committee, Vasudevan Committee etc., which have set the tone for the technology upgradation in the Banking and Financial Sector. The technology path presents an exhaustive continuum on the Delivery Channels available to the banks. It discusses about the aspects to be considered by the banks before embarking upon the technology path and deciding upon the option of delivery channels to provide convenience banking to the customers.

The various initiatives of the Reserve Bank of India has taken-up several initiatives to facilitate technology adoption in the country. A few of the major initiatives include the National Clearing System, setting-up of INdian Financial NETwork (INFINET), Structured Financial Messaging System (SFMS), Centralised Funds Management System (CFMS), Public Debt Office -Negotiated Dealing System (PDO-NDS), Real Time Gross Settlement (RTGS) etc.

The evolution of Internet Banking in the country and the emerging scenario along with the virtual banking has been discussed. An attempt has been made to understand the inter-relatedness between the IT and the Competitive Strategy. For the purpose, the model on Business and IT Strategy Formulation by Regie Thomas.

The process of building an enabling technological base is one the most demanding aspects of the building and maintaining successful MIS strategy. The various steps involved are

- Develop long-term estimate of capacity requirements, along with manpower planning and their learning requirements
- Develop short-term MIS activities for the entire planning horizon
- Developing a Learning Climate for developers as well as users
- Plan for implementation of a communication network
- Plan and manager support services and more importantly new technology
The other steps include planning of organizational information systems, developing of an INTRANET that would serve as "Information Hub" for the entire organization. It is essential to set up an Information Centre that can assimilate and provide Organizational Intelligence. However, the efficacy of IT in the organization would be dependent upon re-engineering the existing processes. The steps involved in BPR are:

- Development of Business Vision and Process Objectives
- Identification of Processes to be re-engineered
- Understanding and evaluating existing processes
- Identification of the levels of IT
- Designing and preparing a prototype of new processes
- Implementation of the prototype, reviewing the modifications and finally rolling out the final product across the organization.

The banks in India are conscious of the security concerns and to address the needs, they have deployed a wide gamut of security tools such as Intrusion Detection System, Network Security Standards, Firewalls etc. In fact, majority of the banks have drawn a comprehensive IT Security strategy and are in the process of implementing it. The Reserve Bank of India has also given the detailed guidelines to the banks in this regard.

A review of the status of computerization in the banks in India in general and public sector banks in particular indicates that these banks have achieved the 70% target set by the Chief Vigilance Commission and are in the process of 100% computerization of the business.

As per the views expressed by the Chief Technology Officers (CTOs) during the BANKNET India 2000 Conference, the following priorities for the banks in the near future are emphasized:

- Establishing Wide Area Network (WAN) for implementing Core Banking Solutions (CBS)
- Connectivity of Branches as a mandatory pre-requisite for implementing various RBI initiatives such as PDO-NDS, SFMS, RTGS etc.
- Standards for inter-operability of Smart Cards to facilitate multi-application
- Secure messaging for launching of funds transfer project and
- Asset Liability Management and Risk Management
Further, the CTOs have laid down a concrete roadmap for strengthening the technology infrastructure in the Banking Sector as below:-

- Introduction of Core Banking Solution within the next 12 — 14 months
- As an interim measure, networking of identified and commercially important branches to roll-out funds transfer product
- Establishment of RA Office for issuance of Digital Certificates to facilitate online and secure funds transfer
- Establishment of integrated treasury for effective intra-day liquidity management
- Integration of existing application to facilitate end-to-end Straight Through Processing (STP)
- Aggressive HRD policy for competence building and retraining in the area of IT skills for the employees
- Restructuring of the bank to make it lean and responsive

The evolution of learning infrastructure in the banks could be traced to establishment of STCs in the country during the 1960s and 1970s. The training infrastructure includes setting-up of exclusive Banking Technology Research & Development Institutions such as Institute for Development and Research in Banking Technology (IDRBT) at Hyderabad.

The technology centers are working complimentarily with other industry level apex training centers such as National Institute of Bank Management (NIBM), Pune, National Institute of Banking Studies and Corporate Management (NIBSCOM), Noida, Bankers' Training College (BTC), Mumbai etc.

In addition to these national level training centers, each of the public sector banks and the old private sector banks have their own STCs at the corporate offices, which supplement with that of the various regional/zonal STCs of the banks. Some of the banks are also leveraging by networking with the IT training solution providers such as APTECH, NUT etc.

**Problem, Definition & Scope of the Study**

After a review of the contemporary literature on the Organizational Learning, Organizational Change, Technology Based Learning, Inter-relationship between Information Technology and Organizational Learning. It is found that IT supported organizations does not have long history but the recent literature and research on Knowledge Management has also to certain extent precluded the IT supported Organization Learning.
The definitions by Goodman & Darr (1998), which defines Organizational Learning as "Organisational learning is conceptualised here as the process by which one unit acquires knowledge from another unit in the same organisation. Organisational-level Learning occurs when (1) the problem — solution exchanges and consequences are communicated and known by other organisational members (broadcasting), (2) there is some form of organisational memory that stores problem — solution exchanges and consequences (memory), and (3) there is a mechanism for organisations to share their interpretations about the problem — solution exchanges and to update the organisational memory about their experiences (updating)."

The scope of the research included the following:

- Role of IT in Indian Banking Sector
- Role of IT in Training & learning Processes
- The role of Training Systems in Indian Banks
- Inter-linkage between the Training system and Learning Process

The specific objectives of the research are:

- Role and utility of Information Technology in facilitating learning process
- Effect of Organizational Learning on the profitability and productivity Indian Banks

The Research Methodology was based on the secondary data collected from the review of the books on relevant areas such as Change Management, Information Technology, Organizational Learning, Technology Based Learning, Proceedings of National Seminars such as BECON, Annual Results of the Banks, Publications of the Reserve Bank of India, Websites of the Sample Banks.

The sample banks were selected based on Stratified Random Sampling Method and the Primary Data from the sample banks was collected through a questionnaire aimed at IT and HR Chiefs with the objective of eliciting information on the following aspects:

- What is the role of IT in the Strategic Planning Process in the bank?
- Does the bank have an Institutionalized Process/Planning approach towards identifying futuristic competencies and skills for building them at the bank level?
- Is the bank adopting a planned approach towards creating learning environment with the facilitation of IT at organizational, group/team and individual employee level?
- Role played by the line Managers and Training Managers in Learning Process of these banks?
What are the IT tools used by banks for facilitation of Learning Process i.e., Technology Tolls for collection and dissemination of information to employees (e-learning etc.)?

The Sample Banks were divided basically into two strata i.e. Traditional Banks consisting of public sector banks, old private sector banks and the Other Strata consisting of new generation banks.

Data Analysis & Interpretation

A. Analysis of IT Chiefs Responses: The data collected from the IT Chiefs was analyzed on the following parameters:

- **Budgetary Outlay for IT Upgradation:** The budgetary outlay of the new generation banks was lower during the fiscal year 2002 - 2003 as compared to that of the preceding years i.e. 1999 to 2002. Since, most of these banks have started up with full-fledge IT integration into the business processes. In contrast, the budgetary outlay of the public sector banks is on the increase since most of them are in the process of implementing several new IT applications.

- **Purpose of IT Deployment:** The new generation banks i.e. private sector banks have accorded IT deployment for providing support to the business processes as a high priority for utilizing IT for supporting the innovative processes. As regards the public sector banks, it is observed that they have accorded high priority for providing operational support.

- **Information Behaviour and Values Defining IT Use:** Based on the analysis of the data, it is observed that both the strata have accorded high priority to the value such as integrity, formality. The main purpose of IT has been found to control, which serves the banks to comply with the statutory and regulatory requirements laid down by the Reserve Bank of India as also that of transparency and disclosure norms. Culturally, it is found that sharing for a learning and performing together is yet to gain momentum in both the strata. Another significant indicator is that both the strata have accorded priority to improving the proactive behaviour of the employee.

- **IT Initiatives of the Banks:** Based on the analysis of data, it is found that the new generation banks have implemented several IT initiatives such as Net Banking, Anywhere Banking, ATM Network, E-CRM, Business Intelligence Solutions, Core Banking Solutions, Integration with INFINET. However, the public sector banks are in various stages of implementing these initiatives.

- **Methods/Steps before Implementing IT Initiatives:** It is observed that the new generation banks fundamentally believe in awareness creation among employees before rolling
of new IT initiatives, apart from training of the employees in the required competency areas. In case of public sector banks, it is observed that apart from the measures taken by the new generation banks, they are also discussing with the employee unions/association for effective implementation.

- **Envisaged Rolefor IT in Employee Empowerment through Information Dissemination:** The new generation banks believe in employee empowerment with IT and for the purpose E-mail and IT newsletter apart from using the Intranet and bulletin boards. The traditional banks are initiated steps for usage of e-mail and are in the process of setting up of Intranets and bulletin boards.

- **Coordination between IT and HR Departments for Identification of Employee Learning Requirements:** The success of IT implementation in any bank can be possible only with the close coordination between IT and HR Departments. Based on the analysis of the responses of IT chief, it is evident that the areas of coordination for identification of learning needs of employees are Performance Feedback, Feedback from Employees, and Interaction with Branch & Regional Managers, Post Training Deployment & Assessment. In case of traditional banks, the learning requirement of employees are identified based on the performance evaluation, feedback from employees, CEO/ED meetings with the employees etc.

- **Coordination between IT and HR Departments in Management Areas:** In case of new generation banks, the areas of coordination are performance evaluation, career progression, recruitment and training. In case of traditional banks, the areas of coordination priority-wise are recruitment, training and promotion.

- **IT Learning Initiatives and Competency Building:** The questionnaire focused on three levels i.e. Top, Middle and Junior Management. For the new generation banks, in case of top management, it is observed that Information Security, Business Continuity & Disaster Recovery Plan and Information Audit. For the middle management, the areas of focus for Competence Building are IT Initiatives of the Bank, Systems Integration and Security Administration. While for the junior management, the areas identified for Competency Building are LAN Administration, Systems & Database Administration.

The IT Chiefs of traditional banks have identified that the areas of competency building for the top management are Information Security Management, Business Continuity & Disaster Recovery Plan, Management Concerns of Information Audit. For the middle management, the areas are IT Initiatives in the Bank, Network Management, Systems Integration, Security Administration. While for the junior
management, the areas are IT Operational Aspects, LAN/Systems/Database Administration.

**Communication of Top Management:** For facilitating the learning process in any organization, the drive and motivation of the top management is essential. The IT Chiefs of new generation banks have confirmed that the top management uses various IT tools such as e-mails, intranet for communication with the employees. In case of the traditional banks, the usage of e-mails is comparatively lower and intranet are rarely preferred.

**B. Analysis of HR Chiefs Responses:** The data collected from the HR Chiefs was analyzed on the following parameters:-

- **Retention Strategy to Prevent IT Professional Attrition:** Culturally, the banking sector is different from the IT sector, and due to the cultural difference, there is frequent mobility of IT professionals within the banking/financial sector and also between the banking and IT sectors. The HR Chiefs are grappling to fight the attrition phenomenon through various initiatives. The new generation banks are reducing the attrition rates through providing of avenues for knowledge/skills upgradation, challenging assignments, flexible/autonomous work environment along with fast track careers and tailored compensation packages. The traditional banks due to the rigidity in wage policies and compensation structures, are trying to overcome the problem through learning opportunities with challenging assignments.

- **Strategies/Plans to narrow Competency Gap between IT Professionals and Other Employees:** To address the problem of cultural dissimilarity between IT professionals and other employees of the bank, the banks are initiated several steps. The new generation banks have been recruiting general banker with advanced IT skills, while simultaneously training the existing employees. In case of the traditional banks, they are using three pronged strategies i.e. IT Competency building of general bankers, recruitment of general banker with advanced IT skills, shredding the old work force through VRS schemes.

- **Organisational Restructuring Exercises of Banks:** In the competitive scenario, the banks are finding it increasingly imperative to organize themselves to enable customer convenience and also improve profitability of banks. The new generation banks are attempting to restructure through creation of SBUs, profit centers, flat hierarchy. The traditional banks are restructuring through flattening the hierarchy, merger of zones/regions.
• **Reasons for Restructuring:** The new generation banks have indicated Flexibility of Operations, Improved Customer Service, Profitability and more importantly Technology Adaptation and better Resource Allocation. The reasons for restructuring of traditional banks in the order of priority include better customer service, increasing profitability and flexibility of operations.

• **Predominant Ethics and Values:** Both the segments share the three values i.e. Commitment & Dedication, Honesty & Integrity and Ethical Performance.

• **Recent/Proposed HR Initiatives:** The new generation banks have implemented the Performance Management System, Competence Mapping/Management, Assessment Centres, Organizational Climate Surveys etc. The traditional banks are modifying the Performance Management System and are attempting to implement the Assessment Centres and Competence Mapping.

• **Envisaged IT Role in Employee Empowerment:** The new generation banks are extensively using e-mails and intranets while the traditional banks are in the process of catching up with them.

• **Learning Needs Identification (LNI):** The methods adopted by the new generation banks for LNI at bank level are Strategic Vision, Competence Mapping through Organizational Survey and Needs Analysis for Corporate Goals. At the employee level, they are depending upon Annual Performance Evaluation, Consultation of IT/HR Departments with Branch Managers etc. In case of traditional banks, the focus is dissipated both at bank and employee levels, due to lack of systematic approach.

• **Performance Assessment in Post Learning Scenario:** To assess the contribution of training systems and learning infrastructure to the bottom line of the bank, the new generation banks are depending upon Competency Assessment, Performance Evaluation and Skills Rating. While, the traditional banks are depending upon skills rating.

•** Learning Outlook of Employees:** The learning outlook is dependent upon organizational culture of the bank. The employees of the new generation banks pre-dominantly operate from the self-learning mode and secondarily through assisted learning. In case of the traditional banks, the equation is reverse and in addition, there are sizeable number of employees, who have to be prodded for compulsory learning.

•** Interaction of IT with Training System:** The cost prohibitive nature of traditional training approaches of training the employees through STCs is becoming cost prohibitive. The new generation banks are relying upon Web Based Training and Delivery of Learning Content through Intranet apart from tying up with external organizations.
The traditional banks are supplementing the additional training infrastructure with Web Based Training.

Focus of Training System: The new generation banks are predominantly focusing upon Retail and Corporate Banking along with Information Technology and Treasury Areas while, the traditional banks are focusing upon Retail Banking and Credit coupled with Information Technology.

Sources of Training: The new generation banks optimally internally train and outsource the training needs of employees, while the traditional banks are primarily depending upon internal training infrastructure apart from outsourcing through external organizations.

To fine tune the findings, an analysis of select six traditional banks i.e. Andhra Bank, Bank of Maharashtra, Canara Bank, Corporation Bank, Oriental Bank of Commerce and Punjab National Bank was made for select parameters. The findings are in conformity with the broad results found at the strata level.

To substantiate the finding and also correlate, a Correlator Analysis of the responses of IT & HR Chiefs was made and the findings indicate that most of the views of the IT as well as HR Chiefs are in sync with each other.

For the purpose of Cross Validation, a correlatory analysis of the data for the financial year 2000 - 2001 and 2001 - 2002, was made and the findings are as under:

2000 - 2001

The correlation between average business per employee and percentage of branches computerized is 0.605 and for other public sector banks it is 0.514. In case of all the public sector banks, the coefficient is 0.548.

2001-2002

The coorrelation between the average business per employee and percentage of branches computerized among the State Bank and Associates the Co-Efficient of Correlation is 0.502 while in case of other traditional banks, it is 0.515 and for all the public sector banks, it is 0.474.

The correlation analysis along with the cluster analysis clearly indicates that there is positive correlation between the computerization of the banks and increase in average business per employee. Hence it is imperative for banks to embark upon IT adoption/upgradation, both from the perspectives of commercial profit and competitive reasons. But to sustain the IT
adoption process, the banks have to imperatively build upon the learning processes by leveraging around the IT infrastructure.

The Findings of the Research and the Suggestions are as under:-

1. Culturally, though both the segments to place importance, value cultural aspects such as formality, control and transparency. However, in case of sharing of learning and knowledge, both the segments are yet to accord priority as in case of other values. This holds the key to creating and sustaining Technology enabled Learning Processes in banks.

2. The public sector banks have to improve in the areas of training their employees, before implementing new IT initiatives as compared to their private sector counter parts. This would not only engender support for better integration of IT into their business environment, but would also help in facilitating learning processes.

3. The usage of IT in employee empowerment through information dissemination is being implemented through multi-pronged approaches, to ensure better diffusion of learning content, across the length and breadth of organization. However, the public sector banks have to look beyond the introductory e-mail level, to advanced concepts such as intranets for EPSS, web based learning etc.,

4. The coordination between HR and IT departments in Learning Needs Identification (LNI) and Learning Delivery Channels (LDCs), in correlation with Service Delivery Channels.

5. The competency building plans, though in place, at all levels, but more emphasis is required at top management level, for ensuring strategic direction and better IT integration, especially in Public sector Banks.

6. There is need for competency building of general bankers in public sector bankers, both for narrowing the competency gaps and building techno savvy culture.

7. There is need for improving synergy between the performance management and learning systems in banks.

8. The Technology based Learning (INTRANET, E-learning etc.) has to be customized to the Learning Levels - Introductory, Advanced and Expert Levels. A self-assessment test can be made mandatory, based on which the level of Learning Access can be permitted.

9. The IT adoption/upgradation initiatives of the banks have positive correlation on the business performance and profitability of the banks. This emphasizes the need for facilitating learning environment through the IT infrastructure built by the banks.

10. Based on the Analysis and Findings of the Research Study, the following model is being suggested for Banks. The Banks use the model, both as a check list for self-analysis of
the IT Implementation and modernization as well an indicator for the evolution of IT enabled Learning Processes in the bank.

**Strategic Model for IT Enabled Organizational Learning processes**

![Diagram of the Strategic Model](image)

**Details of the Model**

The proposed strategic model is integrated and holistic.

The model is both descriptive as well normative and it can be used for assessment of the banks' procession in integrating the IT with Organizational Learning Processes in the following three stages:
**Stage I:** Formulation/Existence of Strategic Vision/Road map for the Bank. It is imperative for the banks to draw up a Strategic Vision, after competitive analysis, taking into cognizance the existing resources and constraints.

**Stage II:** At the stage the bank can evaluate the presence of well defined IT Strategies, HR Strategies and information dissemination exercises for motivation of employees and awareness building. There are three components in this stage:

a) **IT Strategy** : In this, the bank can evaluate the existence or plan for preparation of IT Vision/Architecture, Networking Architecture VSAT/LLN), Existence of Security Plan and awareness, periodical IT Audit to assess the robustness of the systems and procedures and their adherence by the employees.

The next step in this stage is building up of Corporate Messaging system, which can effectively handle the intra-bank communication requirements.

At the Applications Level, the bank examine in term of implementation of various levels of IT enabled banking services for its customers:

1. Customized Banking
2. Core/Cluster Banking
3. Mobile Banking
4. Net Banking
5. Any Branch Banking
6. ATMs/Cards
7. E-Payment

b) **HR Strategies:** Traditionally the HR Approach of bank in the country has been that of reactive and more of personnel management and IR Approach. In the competitive scenario, when Human Resources are going to be the Co-key differentiates along with IT strategies, the banks have to adopt proactive HR Strategies of **Culture Building** along with reorienting their **Recruitment** to attract qualitative human resources, their **Placement, Retraining** the existing manpower through **Competency Building/Management** efforts and **Performance Management** for organizational excellence. More importantly, it is high time that HR departments in banks train themselves to treat the employees as internal customers and for assessment of satisfaction levels, they should periodically undertake climatic surveys for feed back on their performance and also reorienting their HR strategies.
c) **Information Dissemination:** The key aspect in the model at stage II is information dissemination efforts of the top management with twin objectives of creating awareness to the IT and learning initiatives of the bank and also to motivate the employees at large.

**Stage HI:**

a) **Organizational Competencies:** In this level, the primary task is mapping the competencies of the organizations, in terms of existing and envisioned. Any learning process per se, has to goal oriented to be effective, more so in the organizational context. Indian Banks have to immediately map the competencies, keeping in view their banks focus areas and strategies. The competency mapping exercise helps in identification of the Learning Needs (LNI).

b) **Organizational/Individual Learning Process Enablers:** Learning Process needs continues support and sustenance, which can effectively be provided by IT Applications such as E-Mail, Intranet, Web-based Learning, Computer Based Training (CBT), Digital Video Conferencing etc. The usage of technology helps in provided the Learning Content to the employees in work place and provides scope for employee empowerment and also enables work place learning.

c) **Training Infrastructure:** Traditionally the training system in banks has been relegated to offline position and the systems was supposed to achieve Training targets, in term so the number of employees, as per the decision of the top management. The line management too, end up sending sparable employees to the training programmes. This process over the years has made the training infrastructure more as expenditure. In the IT enabled learning scenarios, the training infrastructure should assume proactive stance and handle the following aspects:

- Involvement in IT & HR Strategy formulation Networking (Intra & Extra)
- Need Based Training through scientific training needs analysis and competency gaps.
- Personalized Training
- Learning at Work Place
- Resource Development & Management
- Development of EPSS
- Learning Management
Stage IV

**Performance Analysis:** The learning efforts will have relevance and credibility only if they translate into better productivity and profitability for the banks should undertake an annual performance analysis to identify the gaps and accordingly initiate remedial measure to improve the IT and Learning Integration.