CHAPTER 2
Literature Review

2.1 Training in the workplace and workplace learning
The workplace is enormously significant as a site of learning, both for accessing formal learning opportunities and for many informal learning opportunities which result from the nature of work and from social interaction with work groups (Helen Rainbird). But it is also highly problematic: its primary purpose is not learning, but the production of goods and services, involving the creation of profit. Most of the times it is assumed that employees and employers have a mutual interest in the investment of training and in development of workforce skills. The relatively low levels of investment by employers in workforce development compared to their economic competitors are well known. Within organizations, the weak role of training and development with corporate structures, the absence of a ‘champion’ at board level, the tendency for training and development to be seen as an operational rather than strategic issue and conflicts between corporate Human Resource strategy and operational management contribute to the difficulties of workforce learning strategies. Individuals are located within occupational hierarchies which provide different access to learning and career progression.

Moreover training and development of staff has symbolical dimension: It may be regarded as a reward, giving status where there was previously little, it may serve as recognition for effort and a signal of value to the organization, and it may indicate suitability for promotion. Equally, it may be perceived as a threat, an indicator of poor performance the signal of work intensification.

Therefore analyzing of training in workplace is confronted with many challenges, some of which are stated below:
The first of these challenges lies in the need to ‘deconstruct the consensus’ on the relationship between training, skills and the competitiveness of national economics that Jackson and Jordan have identified (1999).

The context is that of globalization of production, the increasing intensity of competition, the social dislocations caused by these processes on regions and local communities and the nature of insertion of national economies in the international division of labour. Training system should be made more responsive to the needs of the industry. The concept of responsiveness to the needs of the industry assumes that employers have a common understanding of their needs with respect to education and training and are able to articulate them clearly to policy-makers. As Keep and Huddleston’s work has shown, in practice they either do not know what their needs are, or they have a range of differing needs which varies according the sector, levels of technology or types of production process (1998). There is strong stand emphasizing the need for individuals to take responsibility for their own training and development in concepts such as ‘employability’ and ‘lifelong learning’ but study done by Mc Givney (1997) shows that although an emphasis on individual responsibility may be appropriate for successful learners, it is inappropriate for those whose experiences of formal education have been unsuccessful. They have least access to formal training in the workplace and least likely to engage in education outside work on their own initiative. Also there a number of underlying assumptions about the trend towards job security, its desirability and the extent to which it creates incentives to invest in training and development. Again, it is not self-evident that job insecurity creates incentives to employers or the individuals to invest in training for employability. On the contrary, Arulampalam and Booths analysis of the British Household Panel Survey data suggests that workers in more flexible forms of employment are significantly less likely to be involved in work related training to improve or increase their skills (1998).
The second challenge is to examine critically what is happening within organizations and to probe beneath the rhetoric of management gurus and HR managers. Managers often cited claim that ‘our people are our most important resources’ the ways in which training strategy is formulated and delivered, the support it receives from corporate management, and the resources allocated to it are significant indicators of the extent to which these claims are reflected in practice (Rainbird, 1994). Although the concept of the learning organization has been promoted as a blueprint for organizational strategies (Peter Senge, 1990), the underlying assumptions relating to the relationship between learning and business competition are problematic. Evidence of the existence of such organizations and the adoption of product market strategies which would warrant such development is weak (Keep and Rainbird, 2000).

The third challenge is the critical examination of some of the assumptions underlying this discourse about the nature of work modernization, its effect on employers’ demand for skills and new forms of management. Through this approach, workforce will be affected in different ways: Increased levels of skills in the core workforce may be accompanied by the actualization of those on the periphery (1988). The skills survey, conducted in Britain in 1997, examines the skills people use in work and provides an indication of the extent to which employees’ training and qualification match their responsibilities and tasks at work (Ashton 1999). It compares the level and distribution of skills with those reported in the Social Change and Economic Life Initiative (SCELI) survey, which was conducted in 1986. Using three measures of skill (the required qualification, the learning time and the training time needed for the job) - it found that there had been an increase in skills over this period. There has been a decrease in work requiring a short period (three months) of training, an increase in the proportion of workers whose jobs required more than two year’s training and a fall in the number of jobs which it took less than a month to learn to do well.
2.2 Training Effectiveness and employees

Training effectiveness refers to the benefits that the company and the trainees receive from training. Benefits for trainees may include learning new skills or behavior. Benefits for the company may include increased sales and more satisfied customers. A training evaluation includes measuring specific outcomes or criteria to determine the benefits of the program. Training evaluation refers to the process of collecting the outcomes needed to determine if training is effective.

According to Sahinidis, Alexandras G. Bouris, John (2008) there is a significant correlation between the employee perceived training effectiveness and their commitment, job satisfaction and motivation. Additionally, high correlations were found between the latter three variables. Not only does it appear to be important, offering training programs to one's employees but, the training program content must be perceived as effective and of value to those participating in it. This will have a positive effect, according to the findings of this study, on key employee attitudes, which appear to be related to a greater or a lesser extent, in the pertinent literature, to organizational performance outcomes including, productivity, turnover and absenteeism.

Another study on banking industry in Cambodia which is poor as compared to other developing countries showed that in spite of quality of education being poor, the working performance of commercial banks was high because of the effective training to its employees. (Ching-Yaw Chen Sok, Phyra Sok, Keomony 2007). There is a relationship between continuous-learning culture and supervisor support and training motivation. Although training motivation was directly related only to training maintenance, it interacted with performance goal orientation in affecting training transfer (Chiaburu, Dan S. Tekleab, Amanuel 2005).
With regard to training perception it was seen that perceived training usefulness and trainees' effort to gain skills and knowledge were significant variables in explaining training effectiveness, after controlling for the effects of demographic variables (Ibrahim, Mohamed E Dec2004).

Thus training is not be taken as a formality for exhausting the annual budget allocated for training purpose but should be looked as an activity which adds value to the employees knowledge, skill and behavior and puts some additional revenue in the hands of the employer.

2.3 Importance of Effective training

In most organizations, teaching managers how to manage has been a difficult, haphazard and often unsuccessful exercise. After years of observing corporations, business and industry still struggle with a variety of approaches to management training. Some researchers suggest that management training has failed because it has no connection to real life in the company. Ask a manager six months after completing a program how it changed his or her behavior, and you will probably get a vague answer.

Each year, companies spend millions of dollars on programs to help supervisors, managers, and executives become more competent. How many such programs really affect the organization’s ability to compete? Not too many, according to one leader, who claims that training programs fail to add value to corporate strategy.

The five most common reasons for failure include:

1. Programs are not linked specifically to strategies, challenges or problems in the organization.
2. Programs are designed to create awareness and understanding, but not competence.
3. Programs focus on individuals rather than operating units.
4. Participants attend programs for reasons other than personal or organizational need.

5. Training programs fail to help participants confront reality.

For years many HRD observers have suspected a direct correlation between a lack of effective training and suffering of cutbacks during recessions. One large defense contractor with an education and training staff of almost 300 instructors, specialists, coordinators, artist, supervisors and managers faced a severe reduction employment suffered reductions of the magnitude and frequency of the education and training department. The staff was cut from 300 to 30 within two years, with most of the reductions taking place in the first few months. Only, essential, required training was retained. The primary reason: Among hundreds of courses and programs, not one could be tied to a direct bottom-line contribution. There were few attempts to evaluate any of the programs, and although they may have been effective, there was no evidence to prove it.

It is understandable that management, when faced with severe reductions will chop away those functions that can be eliminated with the least amount of disruption in the operation. Had the training department’s programs shown a strong contribution, it would have been more difficult to cancel them. The timing and number of the reductions probably would have been vastly different had data been available to substantiate the positive effect the training curricula had on the profits.

Unfortunately, this situation has occurred in many organizations. HRD departments are placed in the same category as public relations and government affairs-nice to have, but trimmed when times are tough. Sometimes the cutback of staff is not precipitated by a reduction in business. For example, in a major Midwestern city, the local chapter of the American Society for Training and Development gave its annual employer award to an
organization that appeared to support training in an exceptional way. The award was designed to recognize employers that provided positive support and commitment to the training process. Soon after the award was given, the entire training function was abolished. The primary reason, according to internal sources, was that top executives could not see any measurable contribution from the training function.

Such actions have devastating effect on the individuals in the organization. Another example is of a training manager terminated from a large motel chain offered little explanation as to why he left, saying ‘things just didn’t work out.’ Later, in a conversation with his former boss, some of the specifics on the termination were uncovered. More than any other reason, he was terminated because he could not justify the existence of his department. To quote his former boss,

‘He had some good ideas, some popular programs, and he seemed to enjoy what he was doing. But, he could not show us how effective his programs were and what they were doing for the company. We need someone who can make a contribution and let us know about it.’

Such painful lessons appear across all types of industries.

Within an HRM model, training is a high-profile activity but arguably remains a low-status function because of its historical associations and the lack of investment in the development of trainers. New production methods may necessitate a broader range of competencies, or a change in skill requirements, but not necessarily at a higher level than before. As Hyman comments, ‘an expanded portfolio of competences does not necessarily equal enhanced skill, although the individuals will be of greater value to the employer’ (1987).

The trainee is a largely passive recipient of instruction, regulated by the demands of the production schedule, customer requirements for increased and
consistently quality, or legislation. Often groups of workers receive very little formal training and that is usually tied to some specific occasion or event, or to instruction regarding the use of new machinery. The employees who are most likely to need training are the least likely to get it: for example, young adults for whom training might be a powerful motivator. In Stone's US study (1991), for example, two-thirds of the total corporate training budget was spent on ‘college-educated’ men and women.

Unless, the training specialist can avail him of a completed analysis of a company’s mechanics, training functions will only revolve around mechanistic techniques and fail in the objective of developing human resources in line with a company’s corporate policy (Jaap and Watson, 1970).

Evidently, changes to production technologies and working practices will have education and training implications. There is an emerging consensus that changes in production processes and in the nature of product markets require a more highly trained workforce, and continuing training is increasingly recognized as contributing to productivity and to the management of change through the adaptation and extension of skills on the one hand and in facilitating new patterns of work on the other (Rainbird 1994). Dunlop (1992) has argued that effective training policies are fundamental to economic growth and productivity, and in a major survey of Western European nations (Hilb, 1992), ‘human resource development’ was found to be most important personnel function in all the countries concerned. The more recent EPOC study (European Foundation, 1997) also stressed the importance of training, finding that the higher the qualification of employees and the more substantial the training for direct participation, the greater were the effects of direct participation.
2.4 The Training Needs Assessment Model

The trigger for doing a need analysis occurs when actual organizational performance (AOP) is less than expected organizational performance (EOP). This is referred to as organizational performance gap (OPG). This leads to a Model of Process when Performance Gap is identified.

The organizational analysis is an examination of an organization’s strategy, its goals and objectives, and the systems and practices in place determine how they affect employee performance.

An operational analysis is the examination of specific jobs to determine the requirement, in terms of the tasks required to be done, and the KSAs (Knowledge, Skills and Attitude) required to get the job done and gives information on Expected Performance.

A person analysis is the examination of the employees in the jobs to determine whether they have the required KSAs to perform at the expected level and gives information on Actual Performance.

Fig: 2.1 Model of Training Needs Assessment
As noted in the model, this specific Performance Gap is the difference between expected performance and the employee’s actual performance.

A **reactive TNA** focuses on current performance problems whereas a **proactive TNA** focuses on anticipated or probable performance problems in the future.

**2.5 Training and Learning**

The main purpose of training is learning. Learning indicates a permanent change in human capabilities which are related to specific learning outcomes.
Table 2.1: Types of Learning Outcomes and Description of Capability

<table>
<thead>
<tr>
<th>Type of learning Outcome</th>
<th>Description of Capability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal information</td>
<td>State, tell, or describe previously stored information</td>
</tr>
<tr>
<td>Intellectual skills</td>
<td>Apply generalized concepts and rules to solve problems and generate novel products.</td>
</tr>
<tr>
<td>Motor skills</td>
<td>Execute a physical action with precision and timing</td>
</tr>
<tr>
<td>Attitudes</td>
<td>Choose a personal course of action</td>
</tr>
<tr>
<td>Cognitive strategies</td>
<td>Manage one’s own thinking and learning processes</td>
</tr>
</tbody>
</table>


Learning Theories

Several theories relate to how we learn. Some of them are as follows:

- Reinforcement Theory
- Social Learning Theory
- Goal Setting Theory
- Need Theory
- Expectancy Theory
- Adult Learning Theory
- Information Processing Theory

**Reinforcement Theory:** This theory emphasizes that people are motivated to perform or avoid certain behaviours because of past outcomes that have resulted from those behaviors.
From a training perspective, reinforcement theory suggest that for learners to acquire knowledge, change behavior, or modify skills, the trainer needs to identify what outcomes the learner find most positive and negative. Trainers then need to link these outcomes to learners acquired knowledge, skills or changing behaviors.

Behavior modification is a training program that is primarily based on reinforcement theory.

**Social Learning Theory:** This theory emphasizes that people learn by observing other persons (models) whom they believe are credible and knowledgeable. According to social learning theory, learning also is influenced by a person’s self-efficacy. A person’s self-efficacy can be increased using several methods: verbal persuasion, logical verification, observation of others and past accomplishments.

Social learning theory suggests four processes involved in learning which are as follows:

**Table 2.2: Stages of Social Learning Theory**

<table>
<thead>
<tr>
<th>Stages</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attention</td>
<td></td>
<td>Retention</td>
<td>Motor Reproduction</td>
<td>Motivational Processes</td>
</tr>
<tr>
<td>Model stimuli</td>
<td></td>
<td>Coding</td>
<td>Physical capability</td>
<td>Reinforcement Performance</td>
</tr>
<tr>
<td>Trainee characteristics</td>
<td></td>
<td>Organization</td>
<td>Accuracy Feedback</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rehearsal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Goal Setting Theory: This assumes behavior results from a person’s conscious goals and intentions. Goals influence behavior by directing energy and attention, sustaining effort over time and motivating the person to develop strategies for goal attainment. Research suggests that specific challenging goals result in better performance than vague, unchallenging goals.

This theory is also used in training program design. Goal setting theory suggests that learning can be facilitated by providing trainees with specific challenging goals and objectives. Specifically, the influence of goal setting theory can be seen in the development of training lesson plans.

Need Theory: Need theory helps to explain the value that a person places on certain outcome. A need is a deficiency that a person is experiencing at any point in time. A need motivates a person to behave in a manner to satisfy the deficiency.

Need theories suggest that to motivate learning, trainers should identify trainees’ needs and communicate how training program content relates to fulfilling these needs? Also, if certain basic needs of trainees are not met, they are unlikely to be motivated to learn. Another implication of need theory relates to providing employees with a choice of training programme to attend. Giving employees a choice of which training course to attend can increase their motivation to learn. This occurs because trainees are able to choose programs that best match their needs.

Expectancy Theory: This theory suggests that a person’s behavior is based on three factors: Expectancy, Instrumentality and valence. This can be depicted as follows:

<table>
<thead>
<tr>
<th>Expectancy</th>
<th>Instrumentality</th>
<th>Valence</th>
<th>Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effort --- performance</td>
<td>X</td>
<td>Performance --- outcome</td>
<td>X</td>
</tr>
</tbody>
</table>

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From a training perspective, expectancy theory suggests that learning is most likely to occur when employees believe they can learn the content of the program, learning is linked to outcomes such as better job performance, a salary increase, or peer recognition and employees value these outcomes.

**Adult Learning Theory:** Adult learning theory was developed out of a need for a specific theory of how adults learn. This theory is especially important to consider in developing training programs because the audience for many such programs tend to be adults, most of whom have not spent a majority of their time in a formal education setting.

**Table 2.3: Implications of Adult Learning Theory for Training**

<table>
<thead>
<tr>
<th>Design Issue</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self concept</td>
<td>Mutual planning and collaboration in instruction</td>
</tr>
<tr>
<td>Experience</td>
<td>Use learner experience as basis for examples and application</td>
</tr>
<tr>
<td>Readiness</td>
<td>Develop instruction based on the learner’s interests and competencies</td>
</tr>
<tr>
<td>Time perspective</td>
<td>Immediate application of content</td>
</tr>
<tr>
<td>Orientation to learning</td>
<td>Problem-centered instead of subject centered</td>
</tr>
</tbody>
</table>

Source: Based on M. Knowles, the Adult Learner, 4h ed. (Houston, TX, Gulf Publishing, 1990)

**Information Processing Theory:** This theory gives more emphasis to the internal processes that occur when training content is learned and retained. Besides emphasizing the internal processes needed to capture, store, retrieve and respond to messages, the information processing model highlights how external events influence learning: These events include:

- Changes in the intensity or frequency of the stimulus that affect attention.
• Informing the learner of the objectives to establish an expectation.
• Enhancing perceptual features of the material draws the attention of the learner to certain features.
• Verbal instructions, pictures, diagrams, and maps suggest ways to code the training content so that it can be stored in memory.
• Meaningful learning context creates clues that facilitate coding.
• Demonstration or verbal instructions help organize the learner’s response as well as facilitate the selection of the correct response.

Describing fourteen schools of learning, Burgoyne (2002) provides a map of the alternative theoretical perspectives on management learning. The following table shows these fourteen different theories in management learning and the different essence of how learning may be facilitated, what type of learning is likely to take place and a simple example of a learning situation that fits within the theory.

Table 2.4: Fourteen schools of thought about learning- Essence and use

<table>
<thead>
<tr>
<th>Learning Theory</th>
<th>View of Self</th>
<th>Essence to facilitate learning</th>
<th>Learning of: Example use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Conditioning and the connectionist approach</td>
<td>Mechanical</td>
<td>Clarity about desired behaviors, repetitive practice</td>
<td>Simple or repetitive skills. Dog training</td>
</tr>
<tr>
<td>2. The trait modification view</td>
<td>Specification</td>
<td>Profile of knowledge and behaviors identifying those capable of being</td>
<td>Complex knowledge and behaviors Competency</td>
</tr>
<tr>
<td>3. The information transfer approach</td>
<td>Recorder</td>
<td>Effective communication of information in an organized fashion</td>
<td>Knowledge and procedures Legal</td>
</tr>
<tr>
<td>Learning Theory</td>
<td>View of Self</td>
<td>Essence to facilitate learning</td>
<td>Learning of: Example use</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>---------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>4. The cognitive school</td>
<td>Knowing</td>
<td>Help learners hone own mental models</td>
<td>Personalized learning in complexity Research</td>
</tr>
<tr>
<td>5. The systems theory approach</td>
<td>Discovery</td>
<td>Learning is contextual adapting to environment</td>
<td>Contextual or situational learning</td>
</tr>
<tr>
<td>6. The humanistic and existential approach</td>
<td>Essential</td>
<td>Recognize individual complexity, wholeness and own mental models</td>
<td>Individual learning of complex real-life existence NLP training</td>
</tr>
<tr>
<td>7. Social learning theory</td>
<td>Identity</td>
<td>Creation of the process by which learners develop identity in doing or being in own eyes and others in</td>
<td>Learning is about developing identity Leadership development</td>
</tr>
<tr>
<td>8. Psychodynamics and related approaches</td>
<td>Mystical</td>
<td>Realigning dynamic balance of the unconscious and conscious mind</td>
<td>Learning through interactions between conscious and unconscious Psycho-</td>
</tr>
<tr>
<td>9. Post-modernism</td>
<td>Decentered and fragmented</td>
<td>Help learners become comfortable with natural multiple identities, directions and lack of</td>
<td>Complex and accepting of self. Life coaching</td>
</tr>
<tr>
<td>10. Situated learning theory</td>
<td>Communal</td>
<td>Collective and informal learning in situations</td>
<td>Learning takes place in the situation Apprenticeship</td>
</tr>
<tr>
<td>11. Post-structuralism</td>
<td>'Vacant'</td>
<td>learners are not fixed beings, learning can happen in many ways</td>
<td>Myriad ways of learning Self-motivated learning</td>
</tr>
<tr>
<td>Learning Theory</td>
<td>View of Self</td>
<td>Essence to facilitate learning</td>
<td>Learning of: <em>Example use</em></td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------------</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>12. Activity theory</td>
<td>Contextualized</td>
<td>Activity or task based learning in context with personal and available resources</td>
<td>Learning of particular tasks or activities Pilot training</td>
</tr>
<tr>
<td>13. Actor network theory</td>
<td>Co-evolving</td>
<td>Learners are part of an integrated system wide context including tools and materials</td>
<td>Learning evolves as the whole system All encompassing</td>
</tr>
<tr>
<td>14. Critical realism</td>
<td>Hermeneutic</td>
<td>Help learners become action researchers continuously learning and adapting in context</td>
<td>Learning is reflection in context and adapting to new situations</td>
</tr>
</tbody>
</table>

*Sources- Fourteen schools of thought about learning: Essence and use - Adapted from Burgoyne (2002)*
2.6 Transfer of Training

For training programs to be successful, trainees must effectively and continually apply the learned capabilities gained in training to their jobs. This is known as transfer of training. Factors like trainee characteristics, training design and the work environment influence transfer of training.

<table>
<thead>
<tr>
<th>Trainee Characteristics</th>
<th>Training Design</th>
<th>Work Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Motivation</td>
<td>• Create a learning environment</td>
<td>• Climate for transfer</td>
</tr>
<tr>
<td>• Ability</td>
<td>• Apply theories of transfer</td>
<td>• Management and peer support</td>
</tr>
<tr>
<td></td>
<td>• Use self-management strategies</td>
<td>• Opportunity to perform</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Technological support</td>
</tr>
</tbody>
</table>

![Fig 2.3: Model of the transfer process](image)


Transfer of training is an important issue to companies that consider them to be learning organizations. Many companies are attempting to become learning organizations to ensure that individual, team and organizational structures create, nurture and share knowledge.
2.7 Training and Career Management

It is important to recognize that employees motivation to attend training programs, the outcomes they expect to gain from attendance, their choice of programs, and how and what they need to know has been affected by changes in the concept of a ‘career’. Changing expectations that employers and employees have for one another (referred to as psychological contract) have caused more emphasis to be placed on using job experiences and relationships for learning rather than formal training courses and seminars. Also, trainers may be responsible for designing programs to help managers play an effective role in career management systems.

Careers have been described as a sequence of positions held within an occupation and career development is a process by which employees’ progress through a series of stages, each characterized by a different set of developmental tasks, activities and relationships.

Following table shows the roles of Employees, Managers, Company and Human Resource Managers in Career Management.

**Table 2.5: Roles of Employees, Managers, Company and Human Resource Managers in Career Management.**

<table>
<thead>
<tr>
<th>Employees</th>
<th>Managers</th>
<th>Company</th>
<th>Human Resource Managers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Performance</td>
<td>Coaching</td>
<td>Develop systems to support career management</td>
<td>Information and advice</td>
</tr>
<tr>
<td>Meet with manager</td>
<td>Counseling</td>
<td>Develop culture that supports career management</td>
<td>Specialized services (testing, counseling or workshops)</td>
</tr>
</tbody>
</table>

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The career management process consists of assessment, reality check, goal setting, and action learning. For career management to be successful, employees, managers and the company along with the HR manager must be actively involved.

2.8 Evaluation of Training

Organizations place an increasing requirement to demonstrate the worth of training and development, particularly in terms of the impact on the business and often associated but rarely measured, Return on Investment (Phillips, 1991) as has been seen above. Training professionals and academics have emphasized other, non-monetary aspects of the value of training and in particular, why there is a need to evaluate training and development. Easterby-Smith (1994) notes four general purposes of evaluation

Four general purposes of evaluation:
1. **Proving the worth and impact of training**: Designed to demonstrate conclusively that something has happened as a result of training or development activities.
2. **Improving**: A formative process to explicitly discover improvements to a training programme.
3. **Learning**: Where the evaluation itself is, or becomes, and integral part of the learning on a training programme.
4. **Controlling**: Quality aspects in the broadest sense, both in terms of quality of content and delivery to established standards.

Sources- Four general purposes of evaluation (Easterby-Smith, 1994)
Anderson and Ball proposed the following major needs for evaluation:

- To contribute to decisions about programme installation.
- To contribute to decisions about programme continuation, expansion or certification.
- To contribute to decisions about programme modification.
- To obtain evidence to really support a programme.
- To contribute to the understanding of basic psychological, social and other processes.

Models of Training Evaluation

Model 1

Table 2.6: Kirkpatrick’s Four Level Framework of Evaluation Criteria

<table>
<thead>
<tr>
<th>Level</th>
<th>Criteria</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Reactions</td>
<td>Trainee satisfaction</td>
</tr>
<tr>
<td>2</td>
<td>Learning</td>
<td>Acquisition of knowledge, skills, attitudes and behavior</td>
</tr>
<tr>
<td>3</td>
<td>Behavior</td>
<td>Improvement of behavior on the job</td>
</tr>
<tr>
<td>4</td>
<td>Results</td>
<td>Business results achieved by trainees</td>
</tr>
</tbody>
</table>

In D.L. Kirkpatrick’s four-level framework, both level 1 and level 2 criteria (reactions and learning) are collected before trainees return to their job. Level 3 and level 4 criteria (behavior and results) measure the degree to which trainees are using training content on the job. These two levels are used to measure transfer of training.
**Model 2**

**Kaufman’s Five Levels of Evaluation**

Some researchers, recognizing some shortcomings of Kirkpatrick’s four level approach, have attempted to modify and add to this basic framework. Kaufman offers one such presentation which is as follows:

**Table 2.7: Kaufman’s Five Levels of Evaluation**

<table>
<thead>
<tr>
<th>Level</th>
<th>Evaluation</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Societal Outcomes</td>
<td>Societal and client responsiveness, consequences and payoffs.</td>
</tr>
<tr>
<td>4</td>
<td>Organizational</td>
<td>Organizational contributions and payoffs.</td>
</tr>
<tr>
<td></td>
<td>Output</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Application</td>
<td>Individual and small group utilization within the organization.</td>
</tr>
<tr>
<td>2</td>
<td>Acquisition</td>
<td>Individual and small group mastery and competency.</td>
</tr>
<tr>
<td>1b</td>
<td>Reaction</td>
<td>Methods, means and processes acceptability and efficiency.</td>
</tr>
<tr>
<td>1a</td>
<td>Enabling</td>
<td>Availability and quality of human, financial and physical resources input.</td>
</tr>
</tbody>
</table>

**Model 3**

Another four-level approach, originally developed by Warr, Bird and Rackham, is a rather unique way to classify evaluation processes.
This model has four general categories of evaluation described as C I R O

1. Context Evaluation
2. Input Evaluation
3. Reaction Evaluation
4. Outcome Evaluation

Context Evaluation involves obtaining and using information about the current operational situation (context) to determine training needs and objectives.

Input evaluation involves obtaining and using information about possible training resources to choose between alternative inputs to HRD.

Reaction evaluation involves obtaining and using information about participants’ reactions to improve the HRD process.

Outcome evaluation involves obtaining and using information about the results or outcomes of HRD and is usually regarded as the most important part of evaluation.

Model 4

Another evaluation framework, similar to CIRO, is the CIPP Model, an acronym for the four basis types of evaluation in the model. CIPP stands for

1. Context
2. Input
3. Process
4. Product

A needs analysis is a common example of context evaluation.
Common results of **input evaluation** are policies, budgets, schedules, proposal and procedures.

**Process evaluation** includes reaction sheets, rating scales and analysis of existing records.

**Product evaluation** measures and interprets the results of objectives, including both intended and unintended outcomes.

**Model 5**

**The Phillips Five-Level ROI Framework**

This model adds a fifth level to the four levels of evaluation developed by Kirkpatrick. This is shown in the following table:

**Table 2.8: Phillips Five-Level ROI Framework**

<table>
<thead>
<tr>
<th>Level</th>
<th>Brief Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Reactions and Planned Action</td>
<td>Measures participant’s reaction to the program and outlines specific plans for implementation</td>
</tr>
<tr>
<td>2 Learning</td>
<td>Measures skills, knowledge or attitude changes.</td>
</tr>
<tr>
<td>3 Job Applications</td>
<td>Measures change in behavior on the job and specific application of the training material.</td>
</tr>
<tr>
<td>4 Business Results</td>
<td>Measures business impact of the programs</td>
</tr>
<tr>
<td>5 Return on Investment</td>
<td>Measures the monetary value of the results and costs for the program, usually expressed as a percentage.</td>
</tr>
</tbody>
</table>
2.9 Manufacturing Industries covered in Data Collection

A careful study was carried out in regard to each of the following different Manufacturing Companies. A brief introduction of the companies is as follows:

2.9.1 Bajaj Auto Ltd
The Bajaj Group is amongst the top 10 business houses in India. Its footprint stretches over a wide range of industries, spanning automobiles (two-wheelers and three-wheelers), home appliances, lighting, iron and steel, insurance, travel and finance. The group's flagship company, Bajaj Auto, is ranked as the world's fourth largest two- and three- wheeler manufacturer and the Bajaj brand is well-known across several countries in Latin America, Africa, Middle East, South and South East Asia. Founded in 1926, at the height of India's movement for independence from the British, the group has an illustrious history. The present Chairman of the group, Rahul Bajaj, took charge of the business in 1965. Under his leadership, the turnover of the Bajaj Auto the flagship company has gone up from INR.72 million to INR. 120 billion, its product portfolio has expanded and the brand has found a global market.

2.9.2 Carraro India Ltd
Carraro is an international group that leads the world in highly efficient, eco-compatible power transmission systems, with production plants in Italy, India, Argentina, China, Germany, Poland and the United States. Founded in the 1930s as a manufacturing business focused on the production of sowing machines and equipment for agricultural works, over the years, the company has expanded and enjoyed increasing fame, becoming - as from midway through last
century - one of Italy's most important tractor manufacturers. From the 1970s onwards, Carraro concentrated its core business elsewhere, specializing in parts and becoming a key player in the world's manufacturers of drive systems for agricultural and earth-moving machinery.

Today, axles and transmissions continue to account for most of the Group's turnover, however a gradual move has been underway for some time now, with the focus changing to evolved product types and new sectors.

2.9.3 Cummins India Ltd
Cummins Inc., a global power leader, is a corporation of complementary business units that design, manufacture, distribute and service engines and related technologies, including fuel systems, controls, air handling, filtration, emission solutions and electrical power generation systems. Headquartered in Columbus, Indiana, (USA) Cummins serves customers in approximately 190 countries and territories through a network of more than 500 company-owned and independent distributor locations and approximately 5,200 dealer locations.

2.9.4 Forbes Marshall
For over half a century, Forbes Marshall has been building steam engineering and control instrumentation solutions that work for process industry. Forbes Marshall's goal is to provide solutions in Energy, Efficiency and Process Automation, using the best technology the world has to offer. 50 years ago they started out with steam generation solutions. Today they are comprised of twelve business divisions; most of them partnering with the world technology leaders in respective fields, manufacturing products that cover the entire spectrum of energy
generation, energy efficiency, control and instrumentation for the process and power industry.

In the last five decades Forbes Marshall has grown from a modest, Mumbai based trading company to a multi-divisional, ISO 9001 certified global company manufacturing advanced engineering products for process and power industries across the World. Forbes Marshall is probably the only company in the world to have extensive expertise in both steam and control instrumentation. The dual expertise has allowed them to engineer industry specific systems that focus on energy efficiency and utilities management for sectors as diverse as textiles, food processing, paper, power, chemicals etc.

2.9.5 Greaves Cotton
Greaves Cotton Limited, established in 1859, is one of India's leading and well-diversified engineering companies. It manufactures a wide range of industrial products to meet the requirement of core sectors in India and abroad. The company's core competencies are in Diesel/Petrol engines, Gensets, Agro Equipment and Construction Equipment. Greaves manufactures lightweight petrol, diesel / kerosene engines in the 1-4 HP range and portable eco-friendly silent Gensets in the 1.4 KVA range at its ISO 9001 certified Petrol Engines Unit, in Chennai.

The engines are most popular for agriculture applications like power sprayer, pumpsets and power reapers. Greaves is the trusted name across rural India for lightweight, portable pumpsets. Greaves has stepped up its contribution to Indian agriculture with the launch of Greaves Power Tiller, manufactured by a leading manufacturer in China and customized to suit Indian conditions.
2.9.6 JCB India Ltd

In every corner of the world you'll find a JCB machine. JCB is one of the world's top three manufacturers of construction equipment. They employ around 7000 people on 4 continents and sell their products in 150 countries through 1,500 dealer depot locations.

Throughout their 64 year history, they have always invested heavily in research and development, keeping JCB at the cutting edge of innovation.

Today, JCB has some of the finest engineering facilities across the globe, produces a range of over 300 machines and maintains a reputation for unrivalled customer service.

“Their mission is to grow their company by providing innovative, strong and high performance products and solutions to meet global customers' needs.”

2.9.7 Kalyani Forge Ltd

KALYANI FORGE was established in 1979 as a sole hot forgings company. KALYANI FORGE is a leader in manufacturing of close tolerance precision forgings. They have constantly innovated in Hot, Warm and Cold forging technology over 30 years. They have developed an in-house die designing facility to manufacture Dies and Tooling to high levels of accuracy. The company has, through years of in-house research activities, achieved marked improvements in design and production technology to specialize in manufacture of a variety of intricate profile forgings such as connecting rods, crank shafts, shifter forks, under brackets, valve rocker arms, rotor claws, tulips, shafts, and kidney gears which find application in several industries.
2.9.8  **Kirloskar Brothers Ltd**

They are a 1.20 billion US Dollars engineering conglomerate driving critical industries. They are century old pioneers in areas of specialization like power, construction and mining, agriculture, industry and transport, oil and gas and environment protection with a range of world-class industrial products and turnkey services. They are made up of 8 major groups of companies, each led by the best engineering and managerial talent in India. In addition to engineering, they have interests in civic utility systems and in Information Technology and communication.

Their multi-unit, multi-product, multi-location conglomerate is built on the plinths of Experience, Expertise, Quality, Innovation and Values in the business. Their best play is successful work and creation of a new industrial order where they can provide tailor made solutions to the customers.

2.9.9  **Kirloskar Pneumatic Co.Ltd**

Kirloskar Pneumatic Co.Ltd was established in the year 1958. They have a product range of Air Compressors, Refrigeration & Air-Conditioning, Gas Compressor Packages Transmission

2.9.10 **Mahindra & Mahindra**

Founded in 1945 as a steel trading company, they entered automotive manufacturing in 1947 to bring the iconic Willys Jeep onto Indian roads. Over the years, they have diversified into many new businesses in order to better meet the needs of their customers. They follow a unique business model of creating empowered companies that enjoy the best of entrepreneurial independence and Group-wide synergies. This principle has led their growth into a US $11.1 billion multinational group with more than 117,000 employees in over
100 countries across the globe. Today, their operations span 17 key industries that form the foundation of every modern economy: aerospace, aftermarket, agribusiness, automotive, components, consulting services, defense, energy, farm equipment, finance and insurance, industrial equipment, information technology, leisure and hospitality, logistics, real estate, retail and two wheelers.

### 2.9.11 Premium Energy Transmission Ltd

Premium Transmission Limited is a part of a large industrial conglomerate - The Thapars. The major companies in the group include Greaves Cotton Ltd., English Indian Clays Ltd. and Premium Transmission Ltd.

Premium has been the leader in mechanical power transmission products for over four decades. The first unit under the name David Brown Greaves (India) was commissioned in the year 1961 at Pune (Near Mumbai) to manufacture gearboxes in India. It was a joint venture company between Greaves Cotton & Co Limited and M/s David Brown UK. M/s Greaves Cotton & Co bought over this manufacturing facility (India) in the year 1993. This unit also manufactures lift machines with technical knowhow. The second unit started its operation in the year 1993 at Falta - near Kolkata (India) manufactures standard worm/helical and application specific gear units. The third unit at Aurangabad started manufacturing PEMBRIL brand fluid couplings in the year 1978 under a joint venture between M/s Fluidrive UK and Greaves Cotton & Co which was then bought over by Greaves Cotton & Co in the year 2003. This unit also manufactures Geared Motors. The fourth unit at Aurangabad manufactures auto transmission case carburized and profile ground gears for industrial applications.
2.9.12 Tata Motors

Tata Motors Limited is India's largest automobile company, with consolidated revenues of Rs. 92,519 crores (USD 20 billion) in 2009-10. It is the leader in commercial vehicles in each segment, and among the top three in passenger vehicles with winning products in the compact, midsize car and utility vehicle segments. The Company is the world's fourth largest truck manufacturer, and the world's second largest bus manufacturer.

Tata Motors is also expanding its international footprint, established through exports since 1961. The Company's commercial and passenger vehicles are already being marketed in several countries in Europe, Africa, the Middle East, South East Asia, South Asia and South America. It has franchisee/joint venture assembly operations in Kenya, Bangladesh, Ukraine, Russia, Senegal and South Africa.

Through its subsidiaries, the Company is engaged in engineering and automotive solutions, construction equipment manufacturing, automotive vehicle components manufacturing and supply chain activities, machine tools and factory automation solutions, high-precision tooling and plastic and electronic components for automotive and computer applications, and automotive retailing and service operations.

2.9.13 Tata Yazaki

Tata AutoComp Systems Limited, promoted by the Tata Group, provides products and services in the automotive industry to Indian and global customers, including Ashok Leyland, BMW India, Mercedes-Benz India, Eicher Motors, Fiat, Force Motors, Ford India, General Motors India, Hero Honda, Hindustan Motors, Honda Scooters, Honda Siel Cars India Ltd, International Tractors John Deere India, Mahindra

Its **Vision** is to be the preferred destination for sourcing auto components and systems, creating benchmark value for investors.

### 2.10 Information Technology Industries covered in Data Collection

#### 2.10.1 BMC Software India Pvt Ltd

BMC Software India Private Limited engages in the design, development, maintenance, and support of enterprise software products and solutions. It provides enterprise management solutions, including enterprise systems, applications, and databases and service management. The company was founded in 2001 and is based in Pune, India. BMC Software India Private Limited operates as a subsidiary of BMC Software, Inc.

#### 2.10.2 Capgemini India

Capgemini India is a division of Capgemini which is a premier consulting, technology, and outsourcing company, headquartered in Paris. Capgemini India is well known for conceptualizing and integrating technological solutions to cater to clients’ need for technological innovation in infrastructure and systems architecture. Towards this end, Capgemini has strategic partners such as Microsoft, Cisco, Dell, Oracle, HP, IBM, and SAP in order to deliver the best quality technological support to its clients. Capgemini has earned the reputation of being a world leader in business consultancy services.
2.10.3 Cognizant Technology Solutions
Cognizant is a leading provider of information technology, consulting and business-process outsourcing services. They were the first IT services company to organize around vertical industries. From the front office through back office, and across the technology stack, they leverage the latest tools and techniques to deliver services faster, better and cheaper. Their single-minded passion is to dedicate their global technology and innovation know-how, their industry expertise and worldwide resources to working together with clients to make their businesses stronger.

2.10.4 Cybage Software Pvt Ltd
Cybage is a leading name in the global IT industry with a proven track record of over 16 years. They have been consistently adding value to the business bottom line of a crème-de-la-crème global clientele. Leveraging their unique ExcelShore model of operational excellence, they not only help their clients to substantially bring down their costs, but also improve their business processes to get the most out of the flat world dynamics. Cybage provides a wide array of software services within the models of offshore, onsite and combinations of the two.

2.10.5 IBM
IBM is a global technology and innovation company that stands for progress. With operations in over 170 countries, IBMers around the world invent and integrate hardware, software and services to help forward-thinking enterprises, institutions and people everywhere succeed in building a smarter planet.

IBM has been present in India since 1992. The diversity and breadth of the entire IBM portfolio of research, consulting, solutions, services, systems and software, uniquely distinguishes IBM India from other
companies in the industry. IBM India's solutions and services span all major industries including financial services, healthcare, government, automotive, telecommunications and education, among others. As a trusted partner with wide-ranging service capabilities, IBM helps clients transform and succeed in challenging circumstances.

IBM has been expanding its footprint in India - and has a presence in over 200 cities and towns across the country - either directly or through its strong business partner network. IBM India has clearly established itself as one of the leaders in the Indian Information Technology (IT) Industry - and continues to transform itself to align with global markets and geographies to grow this leadership position.

2.10.6 Information Systems Resource Centre Pvt Ltd (ISRC)

Information Systems Resource Centre Pvt Ltd (ISRC) is a wholly owned subsidiary of the Otis Elevator Company - The largest elevator manufacturer in the world. ISRC was established in 1995 as a Management Information System (MIS) department for Otis Elevator Company (India) Ltd. This department thereafter addressed some small application development needs from Otis companies in the Asia Pacific Area (APAC). This MIS department was converted into a separate company in 1996.

From an entity focused on providing limited software solutions to smaller entities, today ISRC has become a significant IT enabler of the many core business functions within Otis.

ISRC offers a secure IT environment by having dedicated network access to UTC companies only and in ensuring its security by adhering to all IT security policies. ISRC is the largest software development organizations within Otis/UTC umbrella of companies.
2.10.7 Infosys
Infosys Technologies Ltd. (NASDAQ: INFY) was started in 1981 by seven people with US$ 250. Infosys defines designs and delivers technology-enabled business solutions for Global 2000 companies. Infosys also provides a complete range of services by leveraging their domain and business expertise and strategic alliances with leading technology providers.

Their offerings span business and technology consulting, application services, systems integration, product engineering, custom software development, maintenance, re-engineering, independent testing and validation services, IT infrastructure services and business process outsourcing.

2.10.8 KPIT Cummins
Their vision is to be a global partner of first choice for their customers with leadership in select areas. They partner with global automotive and semiconductor corporations in bringing products faster to their target markets and endeavor to be Number 1 in IP led Advanced Technology solutions for the automotive Industry. Leading Manufacturing corporations today trust them for efficient globalization of their processes & systems. They have been recognized for their Corporate Governance and have been rewarded by their investors with their confidence.

2.10.9 MphasiS
MphasiS has been helping leading names in the industry through their well balanced portfolio of Applications, Business Process Outsourcing, Infrastructure services, and Consulting solutions. They help customers manage change to drive their business performance and help derive maximum value from IT investments.
2.10.10 Parametric Technology Corporation (PTC)

PTC is all about helping discrete manufacturers succeed by meeting their globalization, time-to-market, and operational efficiency objectives in product development. As one of the worlds largest and fastest-growing software companies, they deliver a complete portfolio of integral Product Lifecycle Management solutions to over 25,000 customers in the Industrial, High Tech, Aerospace & Defense, Automotive, Consumer, and Medical Device industries.

Their people and technology enable teams to collaborate across departments—and across continents—helping clients create innovative products that meet their customer needs and comply with industry regulations.

2.10.11 Persistent Systems Ltd:

Persistent has been contributing to local and regional Health and Education institutions since 1995. Persistent is a global company specializing in software product and technology innovation. For more than two decades, they have partnered closely with pioneering start-ups, innovative enterprises and the world’s largest technology brands. They have utilized their fine-tuned product engineering processes to develop best-in-class solutions for customers in technology, telecommunication, life science, healthcare, banking, and consumer products sectors across North America, Europe, and Asia.

2.10.12 SAS Institute India (Pvt) Ltd

SAS Institute India (Pvt.) Ltd. is a wholly owned subsidiary of SAS. SAS India operations are headquartered in Mumbai with regional offices in Bangalore, New Delhi and Pune. SAS has been in India since 1997 and consists of a strong team of over 500 highly-qualified
technology and domain experts helping customers address their business challenges through effective use of Business Intelligence.

SAS Research & Development, India (Pvt.) Ltd., a wholly owned subsidiary of SAS, headquartered in Pune, India, has been established as a key development center for research and development of products and solutions of SAS. The R&D centre in India is a key resource arm for the global SAS community and focuses on research and development and industry intelligence solutions development.

2.10.13 Symantec
Symantec was founded in 1982 by visionary computer scientists. The company has evolved to become one of the world’s largest software companies. They provide security, storage and systems management solutions to help their customers – from consumers and small businesses to the largest global organizations – secure and manage their information-driven world against more risks at more points, more completely and efficiently than any other company.

2.10.14 Tata Consultancy Services
At TCS, they achieve real business results that allow one to transform, and not just maintain, operations. Their IT services, business solutions and outsourcing bring a level of certainty that no other competitor can match. One will experience requirements being met on time, within budget and with high quality; greater efficiency and responsiveness to business; and the ability to shift investment to strategic initiatives rather than tactical functions.

2.10.15 Tata Technologies Ltd
Tata Technologies Limited is a company in the Tata Group that provides services in Engineering and Design (E&D), Product Lifecycle Management (PLM), Enterprise Solutions, manufacturing and product
development IT services to Tier 1 automotive and aerospace OEMs and their suppliers. The company is active in North America, Europe, the Middle East and the Asia Pacific region.

The company was founded in 1989 and acquired INCAT, a European-based company, in 2005. Tata Technologies is internationally headquartered in Singapore, with regional headquarters in the United States (Novi, Michigan), India (Rajiv Gandhi Infotech Park in Hinjewadi - outside Pune) and the UK (Luton). The company operates in 14 countries and has a combined global work force.

2.10.16 Wipro Technologies

Wipro Limited formerly Western India Products Limited (BSE: 507685, NSE: WIPRO, NYSE: WIT) is a global IT services and consulting company headquartered in Bangalore, India. As of 2011, Wipro is the second largest IT services company by turnover in India and employs more than 120,000 people worldwide as of March 2011. It provides outsourced research and development, infrastructure outsourcing, business process outsourcing (BPO) and business consulting services. The company operates in three segments: IT Services, IT Products, Consumer Care and Lighting. It is 9th most valuable brand in India according to an annual survey conducted by Brand Finance and The Economic Times in 2010.

2.10.17 Zensar Technologies

Zensar Technologies is a leading provider of information technology and business process outsourcing services, with a sharp focus on delivering solutions that generate business value for their clients. They view each client relationship as a true partnership - their unique 'transformative' value propositions, focuses on benefits well beyond cost and process improvement efforts. They strive to achieve a shared
vision of performance that yields tangible returns in terms of innovation, growth and increased efficiencies for their customers. Zensar is seen today as a valuable change partner for enterprises to drive transformation by providing innovative technology solutions that improve business outcomes.