CHAPTER 4 – EVALUATION AND EFFECTIVENESS OF TRAINING
4.1 INTRODUCTION

Training is essential because technology is developing at a fast rate. The objective of the organizational policies process and programmes for the delivery of training is to achieve its HRD strategies by ensuring the availability of skilled and competent employees to meet its present and future requirements. Training & Development is essential to remove performance deficiencies. There are two ways in which T&D influences performance. First, they improve the skills of the people for specific job requirement and secondly they add to the job satisfaction. According to Burke J M and Day R R\textsuperscript{40} training positively influences the performance of the managers. As per Bartel\textsuperscript{41} the investment in training increases the productivity. McIvor\textsuperscript{42} says that it influences organizational commitment, participant knowledge and organizational based self esteem.

From the standpoint of employee training serves as an important means for the development of effective and productive work habits, methods of work, and in consequence it improves job performance, it prepares individual for modified jobs, avoids unnecessary absenteeism reduces turnover arising out of faulty selection and placements, it reduces chances of accidents. It also, increases employees’ loyalty to the organization and enables them to develop and rise within the organization with full confidence.

4.2 EVALUATION OF TRAINING

Evaluation literally means the assessment of value or worth. It would simply mean the act of judging whether or not the activity to be evaluated is worthwhile in terms of set Criteria.

Hamblin\textsuperscript{43} defined evaluation of training as-

“Any attempt to obtain information (feedback) on the effects of training programme and to assess the value of training in the light of that information for improving further
Training‖.

Validation, as against evaluation, applies directly to the programme and its, immediate results. Validation is defined in terms of internal and external validation. It deals with a series of tests and assessments designed to ascertain whether training met with its objective. In internal validation the focus is on the immediacy of the training and learning resulting in the improvement of the trainee.

External Validation involves a series of tests designed to ascertain whether the objectives of an internally valid programme are based on an accurate identification of training needs relation to the criteria of effectiveness adopted by the organization. This is to ensure that:

a) Training is carried out in the most efficient and effective manner,

b) At the lowest cost;

c) With the high implementation value.

**Formative Evaluation:**

Evaluators often talk about two different types of evaluations: "formative" and "summative." A formative evaluation is usually conducted in the early stages of a programme and addresses questions about implementation and ongoing planning. This is used in the classroom with some planning. Formative evaluations are useful for various purposes. For example:

a) They may help find problems early, while they can still be corrected.

b) They provide an opportunity to collect basic data for future summative (or "impact") evaluations.

**Summative Evaluation:**

Summative evaluations assess programme outcomes or impacts. To determine the relationship of different factors to outcomes, similar to formative evaluations, some information used in summative evaluations is collected early in the programme (e.g., basic data, test scores).

Some advantages of summative evaluations include:
a) They can, if designed properly, provide evidence for a cause-and-effect relationship.

b) They assess long-term effects.

c) They provide data on impacts.

d) They can provide data on change across time.

4.2.1 OBJECTIVES OF THE EVALUATION OF TRAINING

Reasons why training should be evaluated:

✓ To find out where the desired expectations (goal) are and are not being met.

✓ To make the training environment more supportive of learning.

✓ To revise and redefine the course to make it more effective.

✓ To identify and reduce workplace constraints that inhibits transfer of training.

✓ To prove that training is investment and not cost.

✓ To get commitment and support of training by management.

✓ To give instructors and course developers feed back to help them improve.

✓ To justify and perhaps increase the training budget.

✓ To influence future decisions like on what kind of programmes to be included.

✓ To manage the training function more professionally

4.2.2 VARIOUS THEORIES OF EVALUATION OF TRAINING.

Goldstein\textsuperscript{44} defines evaluation as …..The systematic collection of descriptive and judgemental information necessary to make effective training decisions related to the selection, adoption, value and modification of various instructional activities.

Hamblin\textsuperscript{45} defined evaluation of training as any attempt to obtain information on the effects of training programme and to assess the value of the training in the light of that information. He described evaluation as a training aid and identified FIVE levels of evaluation. They are-
1) Reaction level
2) Learning level
3) Job behaviour level
4) Organization and
5) Ultimate value

**Reaction level** – The trainees’ reaction to training are important, particularly to the trainees. However from the training managers perspective they are not as important as whether learning and job behavior effects have taken place. Each trainee’s reactions, attitudes etc. are complex and are a result of many factors such as training content and methods, the training context, location etc. and the trainee’s perceived success at achieving some of the goals of training. These reactions will vary throughout the training, some of which are transitory in the nature. Therefore it has to be given special consideration as what aspects of reactions are important. A questionnaire, using rating scales is preferable method and is supplemented by interview and informal discussion.

**Learning level** – The most important aspect is whether the trainees learned the required skill sets through the training for which it was intended. If trainees have failed to learn the required skill sets and knowledge, then it can be inferred that the training system has failed rather than the trainees. Thus the modification in the training system is required.

Any evaluation of learning has to be done very carefully as it has to assess the skills and knowledge that should have been acquired. Evaluation of skill acquisition must ensure that assessment is both reliable and valid. It is important to be aware of the distinction between learning and the performance. Only the performance can be measured and learning can be inferred through the observable performance. That is why the care has to be taken to find out that the performance is a true reflection of the learning and not due to some unrelated reason. The important question here crops up is that when this evaluation should take place. Hamblin says that it should be immediately after the training programme is over, using some post test scores. The training itself should be designed in such a way that the retention of knowledge and skill is for a fairly long period. The training objectives should specify this as to when these skills are to assessed or reassessed and in that case whether the trainees require refresher training .Some skills and knowledge can deteriorate rapidly as compared to
some other skills and knowledge and therefore the factors responsible for such skill loss also must be accounted for.

**Job Behaviour** - For training in the organization, it is critical that skill and knowledge acquisition has to be translated into appropriate changes in the job behavior. This transfer of training on the job must be exhibition of the skill acquired after learning. At this level three, it should be now without the support of trainer. The objective of level three is maximum transfer of training and ability to perform task and largely depends on the task analysis which is basis for designing of training programme. Training policy should be such that sufficient opportunity is given to the trainee to exhibit the transfer of training received. Practical difficulty which may arise at level three is trainee may disappear after training received. May be transfer at a remote location, or may go on long leave and under such circumstances, it becomes difficult to locate trainees and proper assessment is done. Therefore, an evaluator must ensure that sufficient opportunity is available for trainees to demonstrate the skill and knowledge acquired.

**Organization** - It is believed that the training effects on job behavior will be translated into beneficial effects upon the organization within which the trainee works. Hamblin at this level (4) distinguishes the immediate effect on the organization to the Ultimate (level 5) effect on the organization. The objective of ultimate level could be overall profit of the organization. The immediate effect includes improvement in-

- Quality and quantity of production
- Safety
- Damage to equipments
- Absenteeism
- Labour turnover
- Attitude to work
- Job satisfaction
- Improvement to work methods, etc.
The ultimate value of training to the organization is judged mainly in terms of financial improvement. This may be the cost effectiveness study but gathering all the data for cost and the effectiveness is difficult because of different assumptions made to collect data. But the overall improvement in the financial condition of the organization could be attributed to the training effectively transferred on the job.

Williams defines evaluation as the assessment of value or worth. He observes, value is a rather vague concept, and this has contributed to the different interpretations of the term evaluation.

Rackham offers perhaps the most amusing and least academic definition of evaluation, referring to it as a form of training archaeology where one is obsessively digging up the past in a manner unrelated to the future.

Stufflebeam defined evaluation as a study designed and conducted to assist some audience to assess an object’s merit and worth. He came out with a method of evaluation known as CIPP which is Context, Input, Process, and Product Evaluation, which he presented at the 2003 Annual Conference of the Oregon Program Evaluators Network (OPEN).

He says, “The model’s core concepts are denoted by the acronym CIPP, which stands for evaluations of an entity’s context, inputs, processes, and products. Context evaluations assess needs, problems assets, and opportunities to help decision makers define goals and priorities and help the broader group of users judge goals, priorities, and outcomes. Input evaluations assess alternative approaches, competing action plans, staffing plans, and budgets for their feasibility and potential cost-effectiveness to meet targeted needs and achieve goals. Decision makers use input evaluations in choosing among competing plans, writing funding proposals, allocating resources, assigning staff, scheduling work, and ultimately in helping others judge an effort’s plans and budget. (I see input evaluation as the most neglected, yet critically important type of evaluation.) Process evaluation assess the implementation of plans to help staff carry out activities and later help the broad group of users judge programme performance and interpret outcomes. Product evaluations identify and assess outcomes—intended and unintended, short term and long term—both to help a staff keep an enterprise focused on achieving important outcomes and
ultimately to help the broader group of users gauge the effort’s success in meeting targeted needs.”

Holli and Calabrese defined evaluation as comparisons of an observed value or quality to a standard or criteria of comparison. Evaluation is the process of forming value judgments about the quality of programmes, products, and goals.

Boulmetis and Dutwin defined evaluation as the systematic process of collecting and analyzing data in order to determine whether and to what degree objectives were or are being achieved.

Saks studied the relationship between training and outcomes for newcomers. A sample of 152 newly recruited entry level professionals completed a questionnaire after the 6th six months of socialization. Supervisor rating of job performance were obtained four months later. The result indicated that the amount of training received by newcomers was positively related to job satisfaction, commitment, ability to cope and several measures of the job performance, Newcomers perceptions of training were positively related to job satisfaction.

Burke in an attempt to determine the impact of 33 hours of human relations training on the managerial attitudes and beliefs of 57 students of School of Business Administration (Midwestern State University), used social reaction inventory, Machiavellian scale and semantic differential scale. The concepts covered in semantic differential scale were listening, creativity, openness, conflict, trust etc.

Thorley published a report on using microscopic measurement when he evaluated in-company management training programme in Britain. He gathered responses from 234 managers by asking a question, In what way do you expect the course to improve your job performance? The areas of application answered were, new techniques, financial control, cooperation, decision making, staff development, attitude towards job etc. To assess the usefulness of the course, the managers were interviewed after six months to find out their subordinates’ (who had attended the training course) reflected changes in job behavior. Fifty percent replied that there were positive changes and none reported any adverse effect of the training course on the job.
Huselid studied the impact of high performance work practice by using survey data on 968 firms. The survey was completed in 1992 by senior human resource executive in the firm and solicited information about the firm’s 1991 human resource policies, including the average number of hours of training received by the typical employee for the last 12 months. Huselid grouped the companies HR policies in two categories, the employee skills and organizational structure with employee motivation. It was found that organizational structure and employee skills were important for the rate of return on capital. High performance of work practices increased cash flow and raised the company’s market value.  

Fast worked out an evaluation form for quantitatively measuring the programme effectiveness. The form contained a list of objectives defined by a participant in the beginning of course. At the end of the programme, degree of importance was attached by the participant on each objective by spreading 100 points between them. Likewise degree of fulfillment of these objectives was to be indicated by considering the numerical scale – 0-satisfactory, 1-2=poor, 3-4=below average, 5-average, 6-above average, 7-good, 8-very good, 9-10=excellent. By multiplying both the indices the indicator of objective fulfilled is derived. Sum total of these indices would reveal overall programme effectiveness. It was found out that using such procedure in combination with written evaluation worked very well. This measurement was done in about 19 training programmes participating around 300 people in the industry.

Swanson & Sleezer developed and pilot tested a practical Training effectiveness evaluation (TEE) system that could be applied to any training programme in industry. TEE consisted of three major elements – (1) An effective evaluation plan to assess whether the training programme produced the desired results. (2) Tools for measuring training effectiveness in terms of satisfaction, learning and performance. (3) Evaluation report containing organization performance need, performance goals, narrative summarizing effectiveness of training, an evaluation summary and an improvement proposal.

TEE provided tools for planning evaluations, gathering the effectiveness information and reporting the information. Through systematic analysis and reporting of effective evaluations, training managers can ensure that their programmes contribute to their organizations bottom line.
Colligan & Cohen have reported the benefits of the training showing how training objectives are met such as increased hazard awareness among the worker who are at risk of health hazards. Knowledge of safe working practices reduces the work related accidents and improves workplace safety. Lack of safety training may result into workplace hazards which may cost the company even more in terms of lost man-hours. In their reports the authors conclude how training resulted into reduced injury, reduced time for work, and reduction in the medical costs. Training outcomes were successful which were supported by management decision in supporting the safety training, whatever may be the job site. The issue is not so much whether training is worthwhile but the factors beyond the training process which can make great impact.  

Ray & Dolke attempted a study to evaluate a supervisory training programme in textile technology conducted in Ahmedabad to progress and revive the technical knowledge and problem solving skills of supervisors. Open ended interview schedules were used. At the same time structured interviews were held to evaluate the effect of training. The subject matter tests were conducted. Post test experimental design was also used. First the experience of the trainees was gathered and then secondly when they actually started performing the job, after the training. This was to know the retention of the training. It was concluded that he experimental trainee group performed better in all the aspects.  

Veermani and Premila Seth defined evaluation as an attempt to obtain information on the planning of training, the conduct of the training and feedback on the application of learning after the training so as to assess the value of the training. This evaluation finding may be used for a variety of purposes.  

Eitington advocated that the participants’ reaction might be obtained by various group in action devices including self appraisal, circular whip, fish bowl. Movement, individual critique and group critique. Observation, review of proposed action plans, and attitude surveys may be employed for judging learning. Transfer of learning can be found out by observing implemented action plans and supervisory reports. Reports on productivity, sales, costs, and turnover are indications of impact of learning on organizational effectiveness.
Sullivan et al. \(^6^1\) believes the use of performance tests for either process or product or both type of assessments. In the process assessment the evaluation will be based on –

- Whether the correct steps were followed?
- Were the steps performed in right order?
- Whether the learner completed the task in-time?
- Was the learner conscious of safety norms?

In case of product measurement, the evaluator can check the final outcomes.

Erikson \(^6^2\) has developed certain criteria for evaluating the training results-

- Whether trainees retain information given in the course,
- Whether course objectives are achieved,
- Whether trainees’ level of knowledge has increased,
- Whether trainees’ retention of knowledge taught in the course varies, depending on the ability of the instructor.

Peter Bramley defines evaluation as process of establishing the worth of something. The worth which means the value, merit or excellence of the thing, is actually someone’s opinion. Evaluation of training is a process of gathering information with which to make decisions about training activities. It is important that it is done carefully so that decisions can be based upon sound evidence. Good decisions to introduce, retain or discard particular training activities can make a major contribution to the well being of the organization. He suggested the following methods of evaluation. \(^6^3\)

I) Impact analysis – At the pre-training stage the stakeholders conduct a workshop to arrive at the ultimate outcome of training intervention. Evaluation after a year showed the results such as, positive movement in the profitability, reduction in the recruitment of technical staff, introduction of new training programmes.

II) For organizational effectiveness, Peter Bramley uses following criteria-

(a) Achieving organizational targets,
(b) Attracting resources,
(c) Satisfying interested parties
(d) Streamlining internal processes.
Researches by American Society of Training & Development (ASTD) disclosed that the actual practice of evaluation did not often follow the strict recommendations of evaluation literature. Most of the training managers who participated in ASTD research efforts believed that the concerned efforts should be made to increase the practice of employee training evaluation.

Other theorists have also suggested models which are similar to Donald Kirkpatrick’s but rather different approach was suggested by Warr, Bird & Rackham. They also suggested four levels the first letter of each level forms an acronym CIRO= that is

1) Context evaluation, 2) Input evaluation, 3) Reaction evaluation, 4) Outcome evaluation.

Reaction evaluation has the same meaning in both Kirkpatrick and CIRO. Outcome evaluation is further subdivided into 3 levels, corresponding to Kirkpatrick’s last three levels. Context evaluation is obtaining information on the operational aspects. This will be used to decide training needs and objectives. Objectives are set at three levels i.e. immediate, intermediate and ultimate. Immediate is concerned with Knowledge, Skill and Attitude (KSA) desired at the end of training; intermediate is related to changes in job performance, and ultimate are the desired changes in the organization.

This view of evaluation is much broader than Kirkpatrick. It sees evaluation as a continuous process, starting with identifying training needs and closely interlaced with training process. Based on the various literature reviews on training evaluation and definition of evaluation, the Kirkpatrick Model was the most frequently reported model of evaluation.

In 1952, Donald Kirkpatrick conducted doctoral research to evaluate as supervisory training programme. Kirkpatrick’s goal was to measure the participants’ reaction to the programme, the amount of learning that took place, the extent of behavior change after participants returned to their jobs, and any final results from a change in behavior achieved by participants after they returned to work. From Kirkpatrick’s doctoral research, the concept of the four Kirkpatrick measurement levels of evaluation emerged. While writing an article about training in 1959, Kirkpatrick referred to these four measurement levels as the four steps of a training evaluation. It is unclear even to Kirkpatrick how these four steps became known as the Kirkpatrick Model, but this description persists today (Kirkpatrick, 1998). As reported
in the literature, this model is most frequently applied to either educational or technical training. Donald L Kirkpatrick, Professor Emeritus, University Of Wisconsin (where he achieved his BBA, MBA and PhD), first published his ideas in 1959, in a series of articles in the US Training and Development Journal. The articles were subsequently included in Kirkpatrick's book Evaluating Training Programs (1975 and since revised), published by the American Society for Training and Development (ASTD), for whom Kirkpatrick previously served as president and with whom he maintained strong connections. Donald Kirkpatrick has written several other significant books about training and evaluation.

Donald Kirkpatrick's 1975 book Evaluating Training Programs defined his originally published ideas of 1959, thereby further increasing awareness of them, so that his theory has now become the most widely used and popular model for the evaluation of training and learning. Kirkpatrick's four-level model is now considered an industry standard across the HR and training communities. The four levels of training evaluation model was later redefined and updated in Kirkpatrick's 1998 book, called 'Evaluating Training Programs: The Four Levels'.

The four levels of Kirkpatrick's evaluation model essentially measure:

- Reaction of trainees - what they thought and felt about the training
- Learning - the resulting increase in knowledge or capability
- Behavior - extent of behavior and capability improvement and implementation/application
- Results - the effects on the business or environment resulting from the trainee's performance

All these measures are recommended for full and meaningful evaluation of learning in organizations, although their application broadly increases in complexity, and usually cost, through the levels from level 1-4. In his 1994 book “Evaluating Training Programs: the Four Levels”, Kirkpatrick suggests that the effort and overheads required to evaluate at successively higher levels requires a growing amount of effort and resource, so it is perhaps easier and cheaper to evaluate at Level 1 but this is unlikely to be the case at Level 4. This is the argument (made by Kirkpatrick himself) for evaluating some 95% of training at Level 1 but perhaps only 5-10% of training at Level 4.
Phillips stated the Kirkpatrick Model was probably the most well known framework for classification of areas of evaluation. This was confirmed in 1997 when the American Society for Training and Development (ASTD) assessed the nationwide prevalence of the importance of measurement and evaluation to human resources department (HRD) executives by surveying a panel of 300 HRD executives from a variety of types of U.S. organizations. Survey results indicated the majority (81%) of HRD executives attached some level of importance to evaluation and over half (67%) used the Kirkpatrick Model. The most frequently reported challenge was determining the impact of the training (ASTD, 1997). Lookatch and ASTD reported that only one in ten organizations attempted to gather any results-based evaluation.

**Percentage of the Kirkpatrick Model Used**

Bassi et al. discovered that 96% of companies surveyed used some form of the Kirkpatrick framework to evaluate training and development programmes. McMurrer et al. surveyed the American Society for Training and Development Benchmarking Forum to determine what percentage each of Kirkpatrick's four levels is used in organizations:

- Level 1: 95%  
- Level 2: 37%  
- Level 3: 13%  
- Level 4: 3%

They performed a meta-analysis of studies performed in the last 40 years. Their research indicates the following ranges for the use of Kirkpatrick's four levels:

- Level 1: 86-100%  
- Level 2: 71-90%  
- Level 3: 43-83%  
- Level 4: 21-49%

Kirkpatrick’s first level of measurement, reaction, is defined as how well the trainees liked the training programme. The second measurement level, learning, is designated as the determination of what knowledge, attitudes, and skills were learned in the training.

The third measurement level is defined as behavior. Behavior outlines a relationship of learning (the previous measurement level) to the actualization of doing. Kirkpatrick recognized a big difference between knowing principles and techniques and using those principles and techniques on the job. The fourth measurement level, results, is the expected outcomes of most educational training programmes such as reduced costs, reduced turnover.
and absenteeism, reduced grievances, improved profits or morale, and increased quality and quantity of production.

Numerous studies reported use of components of the Kirkpatrick Model; however, no study was found that applied all four levels of the model. Although level one is the least complex of the measures of evaluation developed by Kirkpatrick, no studies were found that reported use of level one as a sole measure of training.

One application of the second level of evaluation, knowledge, was reported by Alliger and Horowitz. In this study the IBM Corporation incorporated knowledge tests into internally developed training. To ensure the best design, IBM conducted a study to identify the optimal test for internally developed courses.

Four separate tests composed of 25 questions each were developed based on ten key learning components.

Four scoring methods were evaluated including one that used a unique measure of confidence. The confidence measurement assessed how confident the trainee was with answers given. Tests were administered both before and after training. Indices from the study assisted the organization to evaluate the course design, effectiveness of the training, and effectiveness of the course instructors. The development of the confidence index was the most valuable aspect of the study. Alliger and Horowitz stated that behavior in the workplace was not only a function of knowledge, but also of how certain the employee was of that knowledge.

Two studies were found that measured job application and changes in behavior (level three of the Kirkpatrick Model). British Airways assessed the effectiveness of the Managing People First (MPF) training by measuring the value shift, commitment, and empowerment of the trainees (Paulet & Moult). An in-depth interview was used to measure the action potential (energy generated in the participants by the course) and level of action as a result of the course. A want level was used to measure the action potential and a do level for the action. Each measurement was assigned a value of high, medium, or low. However, high, medium, and low were not defined. The study showed that 27% of all participants (high want level and high do level) were committed to MPF values and pursued the programmes.
aim/philosophy. Nearly 30% of participants were fully committed to the aims/philosophy of MPF although they did not fully convert commitment to action (high want level and medium and low do level). Approximately one-third of the participants (29%) moderately converted enthusiasm into committed action (medium and low want level and medium and low do level). But 13% remained truly uncommitted (low want level and low do level).

Behavioral changes (level three of the Kirkpatrick Model) were measured following low impact Outdoor-Based Experiential Training with the goal of team building (OBERT) (Wagner & Roland)\textsuperscript{72}. Over 20 organizations and 5,000 participants were studied. Three measures were used to determine behavioral changes. Measure one was a questionnaire completed by participants both before and after training. The second measure was supervisory reports completed on the functioning of work groups before and after training. The third measure was interviews with managers, other than the immediate supervisor, to obtain reactions to individual and work-group performance after an OBERT programme. Results reported showed no significant changes in behavior.

After forty years of using the classic Kirkpatrick Model, several authors have suggested that adaptations should be made to the model. Warr, Allan and Birdie\textsuperscript{73} evaluated a two-day technical training course involving 123 motor-vehicle technicians over a seven-month period in a longitudinal study using a variation of the Kirkpatrick Model. The main objective of this study was to demonstrate that training improved performance, thereby justifying the investment in the training as appropriate. Warr et al. suggested that the levels in the Kirkpatrick Model may be interrelated. They investigated six trainee features and one organizational characteristic that might predict outcomes at each measurement level. The six trainee features studied were learning motivation, confidence about the learning task, learning strategies, technical qualifications, tenure, and age. The one organizational feature evaluated was transfer climate which was defined as the extent to which the learning from the training was actually applied on the job.

Warr et al. examined associations between three of the four measurement levels in a modified Kirkpatrick framework. Warr et al. combined the two higher Kirkpatrick measurement levels, behavior and results, into one measurement level called job behavior. The three levels of measurement included were reactions, learning, and job behavior. Trainees completed a knowledge test and a questionnaire on arrival at the course prior to
training. A questionnaire was also completed after the training. A third questionnaire was mailed one month later. All questionnaire data were converted into a measurement level score. The reaction level was assessed using the data gathered after the training that asked about enjoyment of the training, perceptions of the usefulness of the training, and the perceptions of the difficulty of the training. The learning level was assessed using all three questionnaires. Since a training objective was to improve trainee attitude towards the new electronic equipment, the perception of the value of the equipment was measured at the second level of learning. Because experience or the passage of time impacts performance, these researchers measured the amount of learning that occurred during the course. Change scores were examined between before training and after training data. Warr et al. derived a correlation between change scores and six individual trainee features such as motivation. Individual trainee features appeared correlated with both pretest and posttest scores and could predict change in training. Job behavior, the third measurement level, was evaluated using the before training questionnaire results as compared to the data gathered one-month after training. Multiple regression analyses of the different level scores were used to identify unique relationships. Warr et al. reported the relationship of the six individual trainee features and one organizational feature as predictors of each evaluation level. At level one, all reaction measures were strongly predicted by motivation of the participants prior to training. At level two, motivation, confidence, and strategy significantly predicted measures of learning change. Learning level scores that reflected changes were strongly predicted by reaction level scores. Findings suggested a possible link between reactions and learning that could be identified with the use of more differentiated indicators at the reaction level. At level three, trainee confidence and transfer support significantly predicted job behavior. Transfer support was a part of the organizational feature of transfer climate. Transfer support was the amount of support given by supervisors and colleagues for the application of the training material. Warr et al. suggested that an investigation into the pretest scores might explain reasons for the behavior and generate organizational improvements.

Abernathy\textsuperscript{74} admitted quantifying the value of training was no easy task and mentions about Donald J. Kirkpatrick's Level 4 model. He first published a series of articles in 1959, describing a four-stage evaluation model-reaction, learning, behavior, and results—and he and others have been refining it ever since. Abernathy quotes Kevin Oakes of Asymetrix Learning Systems who sums up the Kirkpatrick levels this way:
Level 1: Smile-sheet evaluation. *Did you like the training?*

Level 2: Testing. *Did you understand the information and score well on the test?*

Level 3: Job improvement. *Did the training help you do your job better and increase performance?*

Level 4: Organizational improvement. *Did the company or department increase profits, customer satisfaction, and so forth as a result of the training?*

Another adaptation of the Kirkpatrick Model was developed by Marshall and Schriver\textsuperscript{75} in work with Martin Marietta Energy Systems. Marshall and Schriver suggested that many trainers misinterpreted the Kirkpatrick Model and believed that an evaluation for knowledge was the same as testing for skills. Because skills and knowledge were both included in level two of the Kirkpatrick Model, evaluators assumed skills were tested when only knowledge was tested. As a result, Marshall and Schriver recommended a five-step model that separated level two of the Kirkpatrick Model into two steps. The five-step model included the following:

- Measures of attitudes and feelings,
- Paper and pencil measures of knowledge,
- Performance demonstration measures of skills and knowledge,
- Skills transfer, behavior modification measured by job observation,
- Organizational impact measurement of cost savings, problems corrected, and other outcome measures.

Only the theory of the model was presented in the article; no application of this model was found.

Bushnell\textsuperscript{76} also created a modification to the Kirkpatrick Model by identifying a four-step process of evaluation. Bushnell’s model included evaluation of training from the development through the delivery and impact.

**Step one**- This involved the analysis of the System Performance Indicators that included the trainee’s qualifications, instructor abilities, instructional materials, facilities, and training dollars.
**Step two**-This involved the evaluation of the development process that included the plan, design, development, and delivery.

**Step three**-Was defined as output which equated to the first three levels of the Kirkpatrick Model. Step three involves trainees’ reactions, knowledge and skills gained, and improved job performance.

**Step Four**-Bushnell separated outcomes or results of the training into the fourth step. Outcomes were defined as profits, customer satisfaction, and productivity.

This model was applied by IBM’s global education network, although specific results were not found in the literature. With the advancement of training into the electronic age and the presentation of training programmes electronically, evaluation of these types of programmes is also necessary. However, much of the literature described evaluation of electronic based training programmes formation rather than evaluation of the training effectiveness. Two applications of effectiveness evaluation were found.

Evaluation of the training deals broadly with four questions
(a) Whether a training programme has actually brought about the desired modification in behavior or not?
(b) Whether training has demonstrable effect on the performance of the task or achievement of organizational goals?
(c) Whether present methods of training are the superior one to achieve the desired results?
(d) Whether the cost of training is proportionate with achievements in the performance.

Evaluation also refers to reaction of the participants as to how they found the training programme. This is usually done at the end of the last session where participants are asked to fill out the form. The form contains information on the objectives of the programme and how well they were achieved during the training period. It also seeks information on the content material presentations, trainers’ qualities and relationship with other participants.

Evaluation of training effectiveness is most critical phase. It aims at assessing the quality of training imparted and based on the findings the future changes in the training programmes is also foreseen. The effect of training on the performance of the people to
achieve organizational goals and objective is difficult to measure because performance is a function of complex forces and motives (Mirza A Saiyadain).

The training effectiveness deals with the issue that whether formal training programmes contribute to the development of job related skills which ultimately lead to greater effectiveness. Mehta points out that the training effectiveness is dependent on two considerations. Firstly trainers are fully responsible for training activities. If the employees do not show the result, the trainer shall be accountable. Secondly training per se is not an answer to the problem. Training effectiveness depends on the kind of atmosphere and culture prevalent in the organization.

It may be pointed out here that the qualitative and quantitative improvement in the output is difficult indicator. Changes in the output depend on numerous variables, some known and others unknown. At a given time evaluating the effectiveness of training is a very slippery proposition. Because of this some researchers’ have tried to test the effect of the training on performance by the use of control group where two matched groups are identified and their performance is measured before and after training. Of these two group one group takes training and the other does not. Changes in the performance in the post training are taken as indicators of learning.

Jain collected data on 119 managers in the steel industry who had attended in company training programmes. A questionnaire was administered and their responses were tallied. A majority of the respondents were found to be satisfied with the instructors, the size of the training group, the training material, and training equipments. All but one felt that training contributed to a large extent in developing their knowledge, skills and attitudes.

Yet, two studies suggest some opposite findings. Bannerji collected data on supervisors who underwent training in an Indian engineering company. They were given a checklist. The responses indicated that the inputs on industrial relations had little impact on their effectiveness. However, most of them felt that training improved their self confidence, motivation, identification with the management goals and communication ability. In another study Maheshwari collected data on 999 respondents from banking institutions. Though managers found the training programme less effective with respect to their contributions to job performance, they agreed that the formal training is useful.
In a supervisory development programme, Sinha asked the participants before the commencement of training programme to write what qualities, in their opinion, should supervisor must have, and rate them on a scale of one to ten. The results of the study suggest that training can show visible and effective results and that depending upon the nature of the training participants could be helped upon improving existing qualities and develop new ones.

Sikka suggests two models to evaluate training effectiveness. First is the expectations achievements model consisting of matching post training achievements with pre-training expectations of the boss, peers, the subordinates and trainee himself. The second is the experimental control group model wherein a group of employees who have gone through training is compared in terms of their performance with those who have not. The models are useful in generating comparative data to judge if training has really made an impression.

4.2.3 NEED FOR EVALUATION

Evaluation is needed to achieve the following purposes:

- To know increase in productivity and company profit through human perfection by training.
- To know whether improvement in quality of a company product or service has taken place.
- Whether exiting employees are ready for higher level jobs.
- Whether there is enhancement in personal growth of the employees and motivation towards their work-area has taken place.
- Whether improvement in organizational climate has taken place.
- Existing employees require refresher training so as to keep abreast of the latest development in job-operations.
- To make employees mobile and versatile. They can be placed on various jobs depending on organizational needs.
• To raise the morale of the employees and maintain the validity of an organization and maintain the employees.

• Need for enabling employees to do the work in a more effective way to reduce learning time, reduce waste and spoilage of raw material and product quality service and develop their potential.

4.3 EFFECTIVENESS OF TRAINING

Training is effective only if it produces desired result. When the organization is executing a training programme, there should be an ideal evaluation scheme, to measure the effectiveness of training and development activities. To find out the effectiveness of the training & development programmes the evaluation of training programmes has to be done. Training evaluation is carried out by participants expressing their feedback regarding effectiveness of training programmes through questionnaires completed at the end of the training programmes. Participants’ reaction to the training can give opinions about the effectiveness of training programmes. This feedback can also be extremely useful in predicting performance after the programme. Training evaluation questions on the importance and relevance of the training to the job have been shown to have a correlation to actual use of skills and knowledge learned on the job.

Mani\textsuperscript{84} makes several suggestions to improve the effectiveness of training. As he points out, after liberalization, there is utmost emphasis on training programmes in Indian organization. He suggests following steps to maximize the effectiveness of training

\textbf{Training need identification} – Employee must get the training in the area where he needs.

\textbf{Pre-training activities} – Every superior is expected to explain to his subordinate the rationale for nominating him for training.

\textbf{Planning and organizing the programme} - Factors such as location and venue and duration are significant.
The training module must be discussed with either internal or external faculty to suit the participants.

**Feedback on faculty** - The feedback forms must be got filled from the participants.

**Feedback from the external faculty** - They must give feedback on:

i) Participation level of the trainees.

ii) Training infrastructure existing in the company and

iii) Training support received from the company.

Training is conceived as an effort to bring about constant progress in the quality of person’s work. Two aspect of training are building up inherent skills and update the existing skills and knowledge. The idea of training is not to make manager knowledgeable but behave differently. It is qualitative and works as change agent. It aims at bridging the quality gap. Training is a vital factor and a firm business strategy, but firms do not evaluate the impact of training over the employees all the time.

Evaluation of training is undertaken for several purposes. Generally they fall into two categories:

(i) To improve the process or

(ii) To decide whether or not to continue it.

Philips\textsuperscript{85} gives following reasons for evaluation.

- To determine whether a programme is accomplishing its objective.
- To identify strength and weakness in HRD processes.
- To determine cost/benefit ratio of HRD programmes.
- To decide who should participate in the future programmes.
- To reinforce major points made to participant.
- To identify which participants benefitted the most or the least from the programme
- To gather data to assist in marketing future programmes.
- To determine if the programme was appropriate.
4.4 A SYSTEMATIC APPROACH TO TRAINING & DEVELOPMENT

“Where the vision is one year, cultivate flowers; Where the vision is ten years, cultivate trees. Where the vision is eternity, cultivate people” Oriental Saying.

Training and Development

Systematic training is the most effective and tested tool for performance enhancement and up-gradation of knowledge and skills. Systematic training is also considered as a significant part of any organizational strategy for revitalization. Systematic training is a part of an integrated system in which performance is measured against criteria i.e. best practices benchmarks that are tied to strategic objectives. Systematic training helps in providing employees with knowledge and skills to perform more effectively, preparing them to meet the inevitable changes that occur in their jobs. However, systematic training is only an “opportunity for learning”. These learning processes depend upon many factors such as the design and implementation of systematic training, the motivation and learning style of the trainees and the learning environment of the organization.

Whether it be the systematic training for the new candidates placed on the jobs or it be for the workers also including the supervisors, managers and executives, it is required to perform their duties in an effective order.

“Systematic training is the formal and systematic modification of behaviour through learning which occurs as a result of education, instruction, development and planned experience.”

Development is training people to acquire new horizons, technologies or viewpoints. It enables leaders to guide their organizations onto new expectations by being proactive rather than reactive. It enables workers to create better products, faster services and more competitive organizations. It is learning for the growth of the individual, but not related to specific present or future job. Development can be considered as the forefront of the learning organization. Development involves changes in the organization that are systematic, organized and successive, which are there to serve an adaptive function. Upgrading the
existing qualities of an individual or an organization by using various techniques towards an
effective mode is development.

A systematic and planned organization structure and manpower analysis is undertaken
periodically so that an organization changes are effectively incorporated. For this purpose
diagnostic survey are carried out by external change agents from the premier management
institute of the country. Additionally internal change agents in the form of task force are
associated closely with the outside bodies for the effective implementation of the
organization pattern. The emphasis utilization of the human resources is to give better
efficiency and productivity. The personal policies are also reviewed and updated from time to
time with view of enhancing the career progression and aspirations of its personnel.

OBJECTIVES OF TRAINING AND DEVELOPMENT

The main objectives of the systematic T & D programme is to keep an organization at
the front of its industry maximize performance and energize every level of the organization.
It also helps in strengthening the tie between employee development and strategic operation
objectives. The objectives of Systematic training and development are to perform efficiency
in the working conditions; accidents, scrap and damage to machinery and equipment can be
avoided or minimized through systematic training. It helps in providing the future needs of
the employees giving an effective source of recruitment. The quality of products or services
will definitely increase by the better – informed workers. The T&D programme helps in
dealing with the personality development of the employees through setting goals,
motivational activities, leadership skills, etc. Systematic T&D programme helps to prevent
the manpower obsolescence, which may be due to age, temperament or the inability of the
person to adapt to technological changes. Systematic training makes the employees versatile
and flexible in operations of the organizational works. Systematic training brings efficiency
in the employees who contribute to the growth of the organization. This growth gives the
employee stability which helps the organization. The purpose of systematic training and
development can be explained as below.

1. Improving quality of work force :-

Training and development help companies to improve the quality of work
done by their employees. Training programmes concentrate on specific areas,
thereby improving the quality of work in that area.

2. Enhance employee growth :-

   Every employee who takes development programme becomes better at his job. Training provides perfection and required practice; therefore employees are able to develop themselves professionally.

3. Prevents obsolescence :-

   Through training and development the employee is up to date with new technology and the fear of being thrown out of the job is reduced.

4. Assisting new employees :-

   Training and development programmes greatly help new employees to get accustomed to new methods of working, new technology, the work culture of the company etc.

5. Bridging the gap between planning and implementation :-

   Plans made by companies expect people to achieve certain targets within certain time limit with certain quality for this employee performance has to be accurate and perfect. Training helps in achieving accuracy and perfection.

6. Health and safety measures :-

   Training and development programme clearly identifies and teaches employees about the different risk involved in their job, the different problems that can arise and how to prevent such problems. This helps to improve the health and safety measures in the company.

THE FIVE STEPS IN THE SYSTEMATIC TRAINING PROCESS

(1) NEED ANALYSIS

Need Analysis is partially concerned with defining the gap between what is happening and what should happen, that is, the difference between what people should know and be able to do.
(2) INSTRUCTIONAL DESIGN
Following steps are decided in advance:

* Training objectives/outcomes of training.
* Training techniques to be used (on-the-job/off-the-job).
* Training programme content
* Cost of training
* Period of training
* Training materials, aids, equipments.

(3) VALIDATION
Introduce and validate the training before a representative audience. Base final revisions on pilot result to ensure programme effectiveness. The errors/mistakes are worked out from the training programme by presenting it to a small representative group for further evaluation.

(4) IMPLEMENTATION

The training programme is implemented and is provided to the selected participants.

(5) EVALUATION AND FOLLOW UP

It is an assessment of the total value of the training programme/course in social and financial terms. It is needed in order to improve future programmes and to eliminate those programmes which are ineffective. It is done on the basis of some factors like

* **REACTION:** - Document the learners’ immediate reactions to the training.

* **LEARNING:** - Use feedback devices or pre and post tests to measure what learners have actually learned.
• **BEHAVIOUR:** - Note supervisor’s reaction to learner’s performance following completion of the training. This is one way to measure the degree to which learners apply new skills and knowledge to their jobs.

• **RESULTS:** - Determine the level of improvement in job performance and assess needed maintenance.

**TRAINING SUCCESS DEPENDS UPON:**

1. Motivation on level of the trainee to learn.
2. Match between ability requirements of a training programme and capabilities of trainee.

**CONTINUOUS REVIEW OF TRAINING NEEDS**

Training is a continuous process. Training programmes therefore, should not be used as a gimmick. Efficient business operations can only be maintained by training capable workers. Training needs must be continuously reviewed for following reasons:

- Experienced workers may leave during the course of employment.
- Workloads may fluctuate.
- New workers may be recruited.
- Company may improve the present product line or may introduce a new one.
- Job procedures may change.
- New technology may be introduced.

**FOLLOW-UP TRAINING**

The supervisor should regularly observe and record the performance of all the workers under his supervision. Any required follow-up training should be provided. Such training can be lived according to the normal ongoing operations. Slack period of work maybe effectively used for providing training.

**CONDITIONS INDICATING A NEED FOR A TRAINING PROGRAMME**
- High accident rates.
- Excessive errors and rejects.
- Low level of efficiency and production.
- Change in procedures.
- New employees.
- Technological changes.
- Introduction of new products or services.
- Large number of complaints or grievances.

**METHODS**

There are various methods which are used in the training process. They may be as follows.

1. On the job training
2. Off the job training
3. Apprenticeship
4. Lectures and Conferences
5. Technical and Professional training programmes
7. Demonstration
8. Coaching
9. Job Rotation ETC.

The trainer’s involvement with technical, professional, management and supervisory programmes may include the design, investigating funding, negotiating funding, administration, recruitment, monitoring, acting as counselor to the trainees, acting as “placement officer”, evaluating the programmes, etc.

Training and development programmes are most likely to be effective when they incorporate the employee motivation, recognizes the individual differences and makes proper schedule of the learning process.
(1) TRAINING NEEDS IDENTIFICATION

Training needs Identification (TNI) system is the integral part of any organization’s Human Resource Development policy. TNI is a tool utilized to identify what educational courses or activities to be provided to employees to improve their work productivity. A training need exists when there is a gap between what is required to an employee to perform their work competently and what they accurately know. Therefore the main purpose of conducting needs identification is to prevent a quick fix approach towards various business problems. Here the focus should be placed on needs as opposed to desires of the employees for a constructive outcome. The most important reason for doing Training Needs Identification is to assume that the training address the appropriate situation. It is both costly and embarrassing to recommend a direction that has no impact on the issue. Even informal need identification saves a lot of time, money, etc. In order to emphasis the importance of TNI, we can focus on the following areas: -

1. To pinpoint if training will make a difference in productivity and bottom line.
2. To decide what specific training each employee needs and what will improve their job performance.
3. To differentiate between the need for training and organizational issues and bring about a match between individual aspirations and organizational goals.

The findings of the study comprise the ultimate objective to initiate a more systematic technique and methodology to improve the capacities of enterprises through dynamic training system

Employee development is the process whereby people learn the skills, knowledge, attitude and behaviour, needed in order to perform their job effectively.

Training is an act of increasing knowledge, skills and attitude of the employee for improving his performance on his job.

Training is concerned with imparting specific skill doing particular job.
Training needs can be assessed by analyzing three major Human Resource areas. They are:

1. **ORGANISATIONAL NEEDS**

These concern the performance of the organization as a whole. Here TNI is done to find out whether the organization is meeting its current performance standards and objectives and if not, exploring ways in which training or learning might help it to do so. Sometimes organizational training needs are also identified when the organization decides that it has to adopt a major new strategy, create a new product or service, undergo a large-scale change programme, or develop a significant new relationships such as joining with others to form new partnerships.

2. **GROUP NEEDS**

Since working in groups and teams have become very much prevalent in today’s corporate world that is why now a day there is increased emphasis given on team effectiveness and performance, so training needs are also being identified at the group level. Training Needs here are concerned basically with the performance of a particular group, which may be a team, department, function, sub-unit and so on. Information about this group’s performance may identify areas of need which, again, may be for training or other interventions. It is used to find out how efficiently a particular team of group goes about its business and meets its current objectives.

3. **INDIVIDUAL NEEDS**

These concern the performance of one or more individuals (as individuals, rather than a member of a group). Here identification of training need is about finding out to what extent individuals need to learn or be trained in order to bring their current performance up to the required level as a result of changes in methods and processes that call for new competencies and skills. It helps to find out whether individuals are comfortable in working across boundaries, with people from different backgrounds and perspectives.
SOURCES FOR IDENTIFYING TRAINING NEEDS

Although the sources are independent for gathering the necessary data but it is usually beneficial if they are considered complementary to one another as the objectives of the exercise is to prepare as consolidated data of training needs as possible. The sources are:

1. Job profile
2. Experiences of the Training Agency
3. Pre – training survey of the participant’s needs

TNI ANALYSIS WILL PROVIDE ANSWERS TO THE FOLLOWING QUESTIONS

- Where is training needed?
- What specifically must an employee learn in order to be more productive?
- Who needs to be trained?

Training Needs Identification begins by assessing the current status of the organization how it does, what it does best and the abilities of the employees to do these tasks. This analysis will provide some benchmarks against which the effectiveness of the training programme can be evaluated. The firm should know where it wants to be in 5 years from its long – range strategic plan. What is needed is a training programme to take the firm from here to there.

Second, consider whether the organization is financially committed to supporting the training efforts. If not, any attempt, to develop a solid training programme will fail.

Next, determine exactly where training is needed. It is foolish to implement a company-wide training effort without concentrating resources where they are needed most. An internal audit will help point out the areas that may benefit from training. Also, a skills inventory can help determine the skills possessed by the employees in general. This inventory will also help the organization to determine what skills are available, how and what skills are needed for future development.
Also, in today’s market – driven economy it would be a remiss not to consider the feedback of customers what they like about the business and what areas they think should be improved. In summary the analysis should focus on the total organization and should reveal the following facts:

- Where training is needed?
- Where it will work within the organization?

Once it is determined where training is needed, concentrate on the content of the programme. Analyze the characteristics of the job based on its description and the written narrative of what the employees actually do. Training based on job descriptions should go into detail about how the job is performed on a task – by task basis. Actually proper in depth analysis of the job enables into getting a better feel for what is done.

Individual employees can be evaluated by comparing their current skill levels or performance to the organization’s performance standards or anticipated needs. Any discrepancies between actual and anticipated skill levels identify a training need.

**Using the six (6) steps of the Training Needs Identification process:**

The needs identification process summarizes the actions necessary to compete the first phase of training process. Like training process, the need identifying process has six actions to create six related products. The steps are:

1. Assess the current situation.
2. Envision the future.
3. Gathering the information
4. Sorting out the gathered information.
5. Sharing of results.
6. Deciding the next step.

**Training Needs Assessment:**

TNA is basically a data gathering process used to identify and compare an organization’s level of actual level of performance to the desire level of performance.
**Defining Training Needs:**

Current desired level of performance and its discrepancy reveals immediate training need.

Actual level of performance and its discrepancy reveals long range training needs.

**Steps in Need Identification Process:**

**Step – 1: - Identify problem needs**

**Determine Organizational context:**

Organizational context is important in the determination of attitudes and behaviours before and after the training. It is important to find employees job satisfaction, organizational commitment, job involvement and political inclusion and higher levels of role conflict and role ambiguity.

**Perform gap analysis:**

Identify where employees are and then plan where employees want to be and how to get there. This analysis needs to be conducted by the managers who notes down the shortcomings and weak areas of the employees. Managers compare the actual performance and the desired performance of the employees.

**Set objectives:**

As the managers see the clear indications of the gap, they set recommendations for the training of the employees.

**Step – 2: - Determine design of Needs Identification**

**Methods selection criteria:**

After the identification of the problem areas, managers establish criteria to select the method to improve things. They plan for the training modules and mode of training.

**Step – 3: - Collect data**

**Conduct interviews:**

Departmental heads start taking interviews of the concerned persons to get each and every thing. With the help of this managers get what are the shortfalls for employees
**Questionnaires and Surveys:**

Questionnaires and surveys also enable managers to get the employees' input, because they can formulate training courses with the help of these results.

**Observe people at work:**

When employees are working on site then managers can easily scrutinize all working and give their suggestions and recommendations.

**Step – 4: - Data Analysis**

**Initial Analysis:**

The assessment can be as detailed and involved as needed. Factors to consider when considering the level of detail are time, money, number of people involved, criticality of skill, anticipated return on investment, resources available, etc.

**Determine solution/ recommendation:**

Finalize the plan after finding all the possible solutions.

**Step – 5: - Provide feedback**

**Write report and make overall presentation:**

The Head of the department makes a report and presentation and delivers it to the management of the organization.

**Determine next step – training needs:**

After thorough evaluation of report and the presentations, management finally decides whether to conduct training or not. That is whether it will be fruitful or not.

**Step – 6: - Develop action plan**

Once this formal Needs Identification process is completed the information is used as the basis for training design, development and evaluation. However managers continue to assess the attitudes, knowledge and skill level of participants prior to each session. Different employees may have different requirements. This can be done both through a basic questionnaire sent just prior to a specific training event and also during the welcome time of each session.
Kirkpatrick's Four-Level Training Evaluation Model

Perhaps the best known evaluation methodology for judging training programmes is Donald Kirkpatrick's Four Level Evaluation Model that was first published in a series of articles in 1959 in the Journal of American Society of Training Directors (now known as T+D Magazine). The series was later compiled and published in a book, Evaluating Training Programs in 1975. While Kirkpatrick has written a number of books on the subject, his best known work is the 1994 edition of Evaluating Training Programs.

The four-levels of evaluation consist of (Kirkpatrick, 1994):

- **Reaction** - how the learners react to the learning process
- **Learning** - the extent to which the learners gain knowledge and skills
- **Behavior** - capability to perform the learned skills while on the job
- **Results** - includes such items as monetary, efficiency, moral, etc.

Notes: “Performance” is often the preferred word for “behavior”. Performance has two aspects: behavior being the means and its consequence being the end. In addition, some use the term “transfer” in lieu of “behavior” to identify the transfer of learning to the workplace. And “impact” is often used for “results,” such as impact on the business unit.

**Level One - Reaction**

As the word implies, evaluation at this level measures how the learners react to the training. This level is often measured with attitude questionnaires that are passed out after most training classes. This level measures one thing: the learner's perception (reaction) of the course. Learners are often keenly aware of what they need to know to accomplish a task. If the training programme fails to satisfy their needs, a determination should be made as to whether it is the fault of the programme design or delivery.

This level is not indicative of the training's performance potential as it does not measure what new skills the learners have acquired or what they have learned that will transfer back to the working environment. This has caused some evaluators to down play its value. However, the interest, attention and motivation of the participants are often critical to the success of any training process — people often learn better when they react positively to the learning environment by seeing the importance of it.
Kirkpatrick writes, “Reaction may best be considered as how well the trainees liked a particular training programme.” However, the less relevance the learning package is to a learner, then the more effort that has to be put into the design and presentation of the learning package. That is, if it is not relevant to the learner, then the learning package has to hook the learner through slick design, humor, games, etc. This is not to say that design, humor, or games are unimportant; however, their use in a learning package should be to promote or aid the learning process rather than the learning package itself. And if a learning package is built of sound purpose and design, then it should support the learners in bridging a performance gap. Hence, they should be motivated to learn! If not, something went wrong during the planning and building processes! If you find yourself having to hook the learners through slick design, then you probably need to reevaluate the purpose of the learning programme.

**Level Two - Learning**

This is the extent to which participants change attitudes, improve knowledge, and increase skill as a result of participating in the learning process. It addresses the question: Did the participants learn anything? The learning evaluation requires some type of post-testing to ascertain what skills were learned during the training. In addition, the post-testing is only valid when combined with pre-testing, so that you can differentiate between what they already knew prior to training and what they actually learned during the training programme.

Measuring the learning that takes place in a training programme is important in order to validate the learning objectives. Evaluating the learning that has taken place focuses on such questions as:

- What knowledge was acquired?
- What skills were developed or enhanced?
- What attitudes were changed?

Learner assessments are created to allow a judgment to be made about the learner's capability for performance. There are two parts to this process: the gathering of information or evidence (testing the learner) and the judging of the information (what does the data represent?). This assessment should not be confused with evaluation. Assessment is about the progress and achievements of the individual learners, while evaluation is about the learning programme as a whole. Evaluation in this process comes through the learning assessment that
was built in the design phase. Note that the assessment instrument normally has more benefits to the designer than to the learner. Why? For the designer, the building of the assessment helps to define what the learning must produce. For the learner, assessments are statistical instruments that often poorly correlate with the realities of performance on the job and they rate learners low on the “assumed” correlatives of the job requirements (Gilbert). Thus, the next level, performance, is the preferred method of assuring that the learning transfers to the job, but sadly, it is quite rarely performed.

**Level Three - Performance (behavior)**

This evaluation involves testing the trainees’ capabilities to perform learned skills while on the job, rather than in the classroom. Level three evaluations can be performed formally (testing) or informally (observation). It determines if the correct performance is now occurring by answering the question, “Do people use their newly acquired learnings on the job?”

In Kirkpatrick's original four-levels of evaluation, he names this level as behavior. However, behavior is the action that is performed, while the final result of the behavior is the performance. If we were only worried about the behavioral aspect, then this could be done in the training environment. However, the consequence of the behavior (performance) is what we are really after — can the learner now perform and produce the needed results in the working environment?

It is important to measure performance because the primary purpose of training is to improve results by having the trainees learn new skills and knowledge and then actually applying them to the job. Learning new skills and knowledge is no good to an organization unless the participants actually use them in their work activities. Since level-three measurements must take place after the learners have returned to their jobs, the actual Level three measurements will involve someone closely involved with the learner, such as a supervisor.

Although it takes a greater effort to collect this data than it does to collect data during training, its value is important to the training department and organization as the data provides insight into the transfer of learning from the classroom to the work environment and
the barriers encountered when attempting to implement the new techniques learned in the programme.

**Level Four - Results**

This is the final results that occur. It measures the training programme's effectiveness, that is, “What impact has the training achieved?” These impacts can include such items as monetary, efficiency, moral, teamwork, etc.

As we move from level one to level four, the evaluation process becomes more difficult and time-consuming; however, the higher levels provide information that is of increasingly significant value. Perhaps the most frequently type of measurement is Level-one because it is the easiest to measure, yet it provides the least valuable data. Measuring results that affect the organization is often considerably more difficult, thus it is conducted less frequently, although it yields the most valuable information.

The first three-levels of Kirkpatrick's evaluation — Reaction, Learning, and Performance are largely soft measurements; however, decision-makers who approve such training programmes, prefer results (returns or impacts). That does not mean the first three are useless, indeed, their use is in tracking problems within the learning package:

- Reaction informs how relevant the training is to the work the learners perform (it measures how well the training requirement analysis processes worked).
- Learning informs the degree of relevance that the training package worked to transfer KSAs from the training material to the learners (it measures how well the design and development processes worked).
- The performance level informs of the degree that the learning can actually be applied to the learner's job (it measures how well the performance analysis process worked).
- Impact informs of the return the organization receives from the training. Decision-makers prefer this harder result, although not necessarily in monetary sense. For example, a recent study of financial and information technology executives found that they consider both hard and soft returns when it comes to customer-centric technologies, but give more weight to non-financial metrics (soft), such as customer satisfaction and loyalty (Hayes).
There is a difference in “information” and “returns.” That is, the first three-levels give information for improving the learning package. While the fourth-level gives the returns for investing in the learning process. A hard result is generally given in monetary terms, while soft results are more informational in nature. There are exceptions. For example, if the organizational vision is to provide learning opportunities (perhaps to increase retention), then a level-two or level-three evaluation could be used to provide a soft return.

Jack Phillips, who probably knows Kirkpatrick’s four-levels, better than anyone, writes that the value of information becomes greater as we go up these levels of information (from reaction to results/impacts). For example, the evaluation of results has the highest value of information to the organization, while reaction provides the least information (although like any information, it can be useful). And like most levels of information, the ones that provide the best value are often more difficult to obtain. Thus we readily do the easy ones (levels one and two) and obtain a little information about our training efforts, while bypassing the more difficult ones (three and four) that would provide the most valuable information for the organization.

4.5 CONCLUSION

Evaluation, in simple terms, may be defined as the assessment of value or worth of an activity in terms of some criterion of value in the light of the available information. In the field of training, the meaning of evaluation has been broadened to cover not only the measurement of value of a training programme but also the collection and analysis of the information facilitating the assessment. Learning is basically a process of subjective improvement which has to be expressed through consistent objective parameters to substantiate that learning has taken place in a person. This suggests that the worth of training can be assessed provided information on the total situation like the learning programme and its logistics, learning process, its conduct and application of learning in real life situations, is available. Evaluation of training therefore, includes appraisal, investigation, review or measurement of all such activities and efforts to ensure its effectiveness and it is conducted before, during and after training. These three types of information disclose three situations of training and help in finding its effect. In summary, evaluation can be defined as an analytical process involving the collection of data of all (or some) phases of the training programme and finishing in the combination of a report containing recommendations about the training
programme being evaluated. The overall aim of evaluation is to influence decisions about the need for the programme in the future; the need for modifications to the programme; and the need to provide cost/benefit data about the programme. Therefore, evaluation can be said to have at least seven purposes:

1. To confirm needs assessment tools and methods.
2. To confirm or revise answer alternative.
3. To confirm or revise training strategies.
4. To determine trainee/trainer reactions.
5. To assess trainee acquisition of knowledge and attitudes.
6. To assess trainee performance.
7. To determine if organizational goals are met.

Training is about changing the people. The process of setting objectives defines what changes we intend to make, and make possible the assessment of those changes. Determining whether or not the training has been effective and worthwhile is difficult, but number of methods have been developed to make this exercise possible and to find out evaluation strategies. The strategies and usefulness of training evaluation was demonstrated in the studies made by many authors. The Kirkpatrick Model was assessed as a valuable framework designed with four levels of measure to evaluate the effectiveness of training.

The popularity of the Kirkpatrick Model was demonstrated by the 1997 ASTD survey results; however, few studies showing the full use of the model were found. Kirkpatrick recommended that as many as possible the four levels of evaluation be conducted. In order to make the best use of organizational resources of time, money, materials, space, equipment, and manpower, continuous efforts are needed to assess all levels of effectiveness of training programmes. Trainers from all disciplines should develop evaluation plans for training and share the results of these methods.

The researcher, after making an extensive survey of the method of the training evaluation in various industries in and around Pune in different sectors, also found that all the industries used Kirkpatrick Model for training evaluation. Therefore, it can be safely assumed that the Kirkpatrick Model is the popular model as demonstrated by the 1997 ASTD survey results. In light of this, the next chapter deals with the Literature Review.

We learn by example and by direct experience because there are real limits to the adequacy of verbal instruction. ~ Malcolm Gladwell
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