# Chapter 4

## Training & Development (T & D)

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4.1 Introduction

HRD has multiple goals, which include employee competence development, employee motivation development and organizational climate development. In a competent scenario where most of the organizations are evenly placed the difference that makes difference is human element in the form of employees. An organization, which has the most competent and motivated work force, will outperform others in business. Competence is the knowledge, experience and skill that an individual or group brings to a particular task or activity. Motivation is the willingness with which an individual or group demonstrates the confidence and commitment to accomplish a specific task.

While there are many processes (HR Sub systems) available to achieve the multiple goals of HRD, Training is the most sought after exercise most organizations prefer as development system. Training is a learning experience in that it seeks a relatively permanent change in an individual that will improve his or her ability to perform on the job. We typically say training can involve the changing of skills, knowledge, attitudes, or social behavior. It may mean changing what employees know, how they work, their attitudes toward their work, or their interactions with their co-workers or their supervisor. The need for training your employees has never been greater. As business and industry continues to grow, more jobs will become created and available. Customer demands, employee morale, employee productivity, and employee turnover as well as the current economic realities of a highly competitive workforce are just some of the reasons for establishing and implementing training in an organization.

This chapter outlines the evolution of training concept, concept of training, training process design. The chapter also highlights the recent trends in the training function. The last section is about the detail information about the different models available related to employee training function.
4.2 Evolution of different Training Practices and Models

The training profession has changed dramatically over the last 15 years. The earliest form of training was on-the-job training, which is one-to-one training in which an experienced craftsperson shows a novice how to do a task (Sleight, 1993). On-the-job training is still common today, in part because of its simplicity; all that an organization needs to do is assign an experienced employee to show a new employee how to do the job. While on-the-job training was the earliest form of training, it was typically informal in nature. A more formal arrangement arose with the apprenticeship system. The guild and apprenticeship systems continued to dominate training and learning until the Industrial Revolution, which began in England, spread to France and Belgium, and then to Germany and the United States (Miller, 2008). However, the onset of industrialism started the acceleration of change in business that we see today as well as changes in training and learning practices. One of the new forms that learning took at this time was vocational and manual schools. These schools were intended to provide training in skills related to specific jobs. One of the earliest vocational schools was established by the Masonic Grand Lodge of New York in 1809; in 1824, Rensselaer Polytechnic Institute in Troy, New York, became the first technical college; and in 1828, the Ohio Mechanics Institute opened in Cincinnati, Ohio (Miller, 2008; Steinmetz, 1976).

By the time that Hoe and Company in New York City started its factory school in 1872, classroom training had become the norm in education. The innovation was to attach the school directly to the factory and to develop the curricula based on tasks that were carried out in the factory. Sleight (1993) explains why factories turned to classroom training at this time: “The machines of the Industrial Revolution greatly increased the ability of the factory to produce concrete goods quickly and cheaply, so more workers were needed to run the machines.”

References


The factory owners wanted the workers trained quickly because there was a large demand for the produced goods. Since the machines were much more complicated than the tools of the agrarian society of the past, and training needed to be accomplished quickly, the training methods of the past were inadequate.

Around the turn of the 20th century, an innovation came about that addressed some of the problems of classroom training, namely vestibule training. Also called “near-the-job” training, vestibule training took place as close to the factory floor as feasible and contained the same equipment that the worker would use on the job. The trainer was an experienced employee in the company and would train six to 10 people at a time. This combined the benefits of classroom training (economy of scale, minimal distractions on the floor, equipment kept in production) with the benefits of on-the-job training (more hands-on, more feedback, fewer problems with transfer, fewer accidents). It did have some downsides, however. It was expensive, requiring duplication of the production line and fulltime instructors, so it was restricted to situations in which many workers needed to be trained at once on unskilled or semiskilled tasks. Nonetheless, this form of training was popular through both world wars (Sleight, 1993) 76.

The world wars—especially World War II—saw the profession of training and learning really start to take off. The wars brought on a massive surge in demand for products, at the same time that large numbers of experienced workers were enlisting. As a result, industry needed workers not only to fill positions left empty but also to fill new positions.

In response to these conditions, Frederick Winslow Taylor proposed a method to shorten the amount of time that it took to complete a task by studying workers and eliminating nonproductive time, which is referred to as scientific management. Another innovation conceived to speed up production was the assembly line. Training methods also had to be developed to train workers faster and more thoroughly than before.

References

World War I, Charles R. Allen put forward the show–tell–do–check method of training to train shipbuilders, which he adapted from the 18th century German philosopher, psychologist, and educator Johann Friedrich Herbart’s five-step framework for pedagogy. Herbart’s framework included preparing the students, presenting the lesson, associating the lesson with ideas previously studied, using examples to illustrate, and testing pupils to ensure they learned (Clark, 1999)\(^{77}\).

Allen’s work and Army research gave rise to several training principles. Sleight (1993)\(^ {78}\) summarizes these principles:

- Training should be done within industry by supervisors who should be trained how to teach.
- Training should be done in groups of nine to 11 workers.
- The job should be analyzed before training.
- Break-in time is reduced when training is done on the job.
- When given personal attention in training, the worker develops a feeling of loyalty.

Although these principles were used in training, a systematic approach to training did not develop until World War II. At this point large numbers of women and men over the age of 40 were entering the workforce to replace the men who had been called up for the war. These people needed training, but the supply of vocational school instructors ran out before the need was fully met (Shaw, 1994; Steinmetz, 1976)\(^ {79}\).

References


To supply much-needed trainers, the Training within Industry Service of the War Manpower Commission developed the Job Instructor Program, or JIT. The JIT’s purpose was to teach first- and second line supervisors how to teach their skills to others. These train-the-trainer programs came to be known as J programs and expanded to include topics such as human relations, job methods, safety, and program development. Influences on these topics included Abraham Maslow’s “A Theory of Human Motivation” (1943) and Kurt Lewin’s first experiments with group dynamics (1948).

In concert with systematic training came a systematic approach to instructional design. During World War II, the military applied a systems approach to learning design, which became the forerunner for today’s instructional systems design (ISD). The research and theories of B.F. Skinner on operant conditioning affected the design of these training programs, which focused on observable behaviors. Training designers created learning goals by breaking tasks into subtasks, and training was designed to reward correct behaviors and remediate incorrect behaviors. In 1942, the American Society of Training Directors (ASTD) formed.

The 1950s

After World War II, the economy boomed as the efficiencies that had been gained in industry to accommodate the demands of war production were harnessed for peacetime reconstruction. However, some of the methods that had been used to achieve those efficiencies—specifically, scientific management—were beginning to prove demotivating to employees. As a result, human relations training grew increasingly popular, and supervisors were often trained in psychology (Shaw, 1994) 80.

References

Training departments had become widely established during the war. Businesses wanted to continue training their workers but at the same time lower the costs of training and increase its efficiency. In 1953, B.F. Skinner’s book *Science and Human Behavior* was published, introducing behaviorism, which was built on the work he had done during the war. Behaviorism and the concept of job analysis formed the basis for a new form of training—individualized instruction—which would answer business’s need for cheaper and more efficient training.

Sleight (1993) describe the practice: Individualized instruction in essence replaces the teacher with systematic or programmed materials. Programmed materials are instruction that has been divided into small steps which are easily understood by the learner. After each step is required an active response by the learner in the form of answering a question, drawing a graph, solving a problem, and so on. Immediate feedback is given after each response.

Another development in ISD that occurred during the 1950s was the introduction of Bloom’s taxonomy of educational objectives. In 1956, Benjamin Bloom presented this classification of learning objectives, which describes cognitive, psychomotor, and affective outcomes. Cognitive outcomes, or knowledge, refer to the development of intellectual skills. Psychomotor outcomes, or skills, refer to the physical movement, coordination, and use of motor skills to accomplish a task. Affective outcomes, or attitudes, refer to how people deal with things emotionally. These categories are often referred to as KSAs (knowledge, skills, and attitudes) and relate to the way that learning objectives are written to specify the types of learning to be accomplished. For example, a knowledge objective might be to describe how the increased production needs of World War II affected the field of training and learning. At the end of the decade, ASTD published Donald Kirkpatrick’s articles about four levels of evaluation in *The Journal of the American Society of Training Director* (later *T+D*), which introduces a new theme into the field: measurement.

References


The 1960s
The introduction of measurement into the field of training tied closely with another theme that started to emerge in the 1960s: the need to understand the business. Another sign that the training profession was beginning to broaden its horizons at this time was the adoption of organization development (OD). Its roots lie in the behavioral sciences, using theories about organization change, systems, teams, and individuals based on the work of Kurt Lewin, Douglas McGregor, Rensis Likert, Richard Beckhard, Wilfred Bion, Ed Schein, Warren Bennis, and Chris Argyris (Haneberg, 2005). Meanwhile, Robert F. Mager proposed his model for instructional objectives in his 1962 book, Prepared Objectives for Programmed Instruction. This model indicates that objectives should have three components: behavior, condition, and standard. That is to say that the objective should describe the specific, observable behavior that the training should accomplish; indicate the conditions under which the behavior should be completed; and state the desirable level of performance. This type of objective is alternatively known as behavioral, performance, or criterion-reference objectives (ASTD, 2006).

Mager’s theory of objectives was originally developed for use in programmed instruction. In the 1960s, programmed instruction became increasingly automated through the briefly popular use of teaching machines, which were electromechanical devices for delivering programmed instruction. Another development in technology at this time was the increasingly wide availability of minicomputers starting in 1965.

**The 1970s**

Thus trainers began to understand that to achieve peak performance, both the technical and the social aspects of organizations had to be considered and optimized together.

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**References**


This aligned with the broader focus for the field that OD and HPI had begun to establish in the 1960s. Another popular training topic during the 1970s was sensitivity training—also
known as the laboratory method—which was a form of human relations training that took place in groups and was designed to raise the attendees’ self-awareness and understanding of group dynamics and enable them to modify their own behavior appropriately. Chief among new forms of training that developed during the 1970s was the case method, which had been used in business schools prior to this time but not in training programs. The case method involves the use of a case study to explore a topic. Trainers also begin to teach management by objective, introducing expectancy theory as a way to predict employee behavior (Shaw, 1994) 84.

(ASTD, 2006) 85 show that the area of learning theory saw several developments. Malcolm Knowles’s book *The Adult Learner: A Neglected Species* was published in 1973, which introduced adult learning theory. Although not the first to suggest that adults learn differently from children (already back in 1926 Eduard C. Lindeman challenged the notion that pedagogy was appropriate for adults in *The Meaning of Adult Education*), Knowles coined the term *andragogy* and presented five key principles that affect the way that adults learn:

- Adult learners have a need for self-direction and learn best when they have some control over what they learn.
- Linking learners’ prior experience to learning is an important way to create powerful learning.
- Learners’ readiness to learn is linked to their perception of its importance in filling their roles.
- Adult learners seek knowledge they can use immediately to solve a problem or complete a task.
- Adult learners are motivated to learn by internal incentives and curiosity.

References


At about the same time, the nine events of instruction were presented for the first time in the 1974 book *Principles of Instructional Design*, by Robert M. Gagné and Leslie J. Briggs. Although Gagné originated from the behaviorist school of learning, the nine events represented a new theory in learning: cognitivism. While behaviorism focuses on outward behaviors, cognitivism focuses on how information is processed, stored, and retrieved in the mind.

**The 1980s**

In the 1980s, productivity in the United States slowed down, while global economic competition became the biggest business challenge. Organizations in the United States underwent large downsizings, and many managers found themselves without jobs (Shaw, 1994).86

These events led organizations to look more closely at their training budgets, causing many training and development executives to focus more on training budgets and the bottom line and on proving the value that training brings to organizations. For this reason and others, cost-benefit analysis and the concept of return-on-investment (ROI) became increasingly hot topics.

At the same time, women entered the field of training and development at an unprecedented rate. By 1989, women made up 47 percent of ASTD’s members. Assertiveness training flourished. Other popular training topics were behavior modeling, teamwork, empowerment, diversity, adventure learning, feedback, corporate culture, and trainers’ competencies (Shaw, 1994)87.

The latter—trainers’ competencies—were the topic of two competency models published in the 1980s that increasingly positioned the field of training and development as part of the broader field of human resources work.

References.

The first modern attempt to define training and development—*Models for Excellence: The Conclusions and Recommendations of the ASTD Training and Development Study*—captured this expansion of the role of training (McLagan, 1983). By 1989, career development and organization development had been added to the repertoire of training and development work, and the report titled *Models for HRD Practice* (McLagan, 1989) captured this new development by using Leonard Nadler’s term for the field: *human resource development* (HRD).

**The 1990s**

In the 1990s, technology exploded. Proponents of e-learning, computer-based training, and online learning proclaimed that classroom learning was over. Early e-learning followed the same behaviorist model that informed the programmed instruction of the 1950s and the learning machines of the 1960s in which a learner went through a sequence of steps, after which he or she responded correctly (or incorrectly) and then continued to the next learning element or doubled back as required. The benefits were also similar: learners could learn at their own pace, make mistakes and get feedback without being embarrassed, and repeat sections until they had mastered them. E-learning had the additional benefit of more branching capabilities than the old programmed instruction and learning machines, which allowed learners to automatically bypass sections they already knew and focus more on problem areas. Multimedia capabilities also made e-learning more effective by stimulating more of the senses and appealing to different types of learners. And finally, e-learning allowed greater accessibility to training by minimizing costs associated with travel to training, time off of work to attend, and facilities. However, e-learning did have some drawbacks. For one thing, it was hard to keep learners involved. Without the interactivity of a classroom, learners frequently tuned out of e-learning programs. Also, e-learning did not work as well for training interpersonal skills as live training. Thus blended learning, which combines e-learning with live classroom elements, became an increasingly viable option. One way to use blended learning was for learners to use e-learning elements to complete any prerequisite training so that all participants in a classroom session started from the same point, thus minimizing time spent to get everyone up to speed and maximizing time on the new skills and knowledge to be learned. An alternate use for e-learning technologies that gained popularity
at this time was their use as a performance support tool. Performance support tools in the form of job aids had been around since World War II in the form of printed cards with step-by-step instructions (Sleight, 1994)\(^88\), but technology allowed performance support to become integrated into the work. Another development in HRD in the 1990s was the introduction of the concept of the learning enterprise. In 1990, Peter Senge published his book *The Fifth Discipline*, which presented this concept. A learning organization commits itself to disciplines that will allow it to develop its learning capacity to create its future. These last two topics—performance support and learning organizations—were popular training topics in the 1990s. Other popular topics included “reengineering, reorganization and transformation of work, customer focus, global organizations, ‘visioning, ‘and balancing work and family’” (Shaw, 1994)\(^89\).

**The 2000s**

Since World War II, learning has evolved in many directions. In learning theory, behaviorism continues to have a strong influence on learning design, but cognitive and constructivist learning theories also have their effects through the use of Gagné’s nine events of learning and discovery learning. Malcolm Knowles’s theory of adult learning informs most training by emphasizing making learning relevant, using learners’ experience as a platform for learning, and giving learners some say in how or what they learn. In learning design, the basic ISD model has evolved; new models have developed that are applicable to different situations and have different emphases, such as rapid prototyping and learning modules. However, Bloom’s taxonomy and Mager’s model for learning objectives continue to influence the way that learning objectives are written today by specifying first the type of learning—knowledge, skill, or attitude—and then the behavior, condition, and degree.

References


Measurement is another strong theme in the field of training and development. Kirkpatrick’s classic four levels of evaluation—reaction, learning, behavior, and results—and the work of people such as Jack Phillips and others in ROI still dominate the ways that learning is measured and reported. Measurement plays a big part in the drive to understand the business and to make the learning and performance function a strategic part of organizations. On the international stage, the explosive growth of China and India is having an increasing effect on business as well as on training and development worldwide. Chinese companies are beginning to see the importance of developing managerial and professional talent, which ties in to another trend in the field: talent management.

The dominant learning-related trend in India is growth in developing custom e-learning content (Harris, 2006). India’s dominance in the area of providing custom e-learning content relates to the overall way that technology continues to grow and branch at an ever-increasing rate and the ways that training professionals continue to find new ways to put it to use for learning. For example, iPods and cell phones are harnessed for mobile learning (m-learning); Web 2.0 technologies allow people to connect to each other to enhance collaborative learning; and wikis, knowledge management systems, and more allow workers to find the knowledge and learning they need, when they need it. Despite the growth in these technologies, traditional classroom learning continues to be a strong and excellent way to improve people’s skills and knowledge. The exuberance over e-learning in the 1990s has been tempered by experience; the understanding now is that each form has its best uses and that one does not replace the other but instead complements it.
4.3 Concept of Training

Training is an organized activity for increasing the knowledge and skills of people for definite purpose. It involves systematic procedures for transferring technical know-how to the employees so as in increase their knowledge and skills for doing specific jobs with proficiency. In other words, the trainees acquire knowledge, skills and problem solving ability by undergoing the training programme. The different researcher defined the Training different ways like

Irwin Goldstein (1974)\(^90\), explain the Training in his book , “workplace training is systematic approach to learning and development improve individual, team or organizational effectiveness. A systematic approach refers to the idea that the training is intentional. It is being conducted to meet a perceived need. Learning and development concerns the building of expertise as a function of these systematic training efforts. Learning outcomes can include changes in knowledge, skills or attitudes (KSAs)”.

Goldstein (1980)\(^91\) defines training as “The acquisition of skills, concepts or attitudes that result in improvement performance in an on the job situation”.

Other very details definition McLagan (1989)\(^92\) defines training , “Training and development focuses on identifying, assuring, and helping develop, through planning learning, the key competencies that enable individuals to perform current or future jobs. Training and development’s primary emphasis is on individuals in their work roles. The primary training and development solution is planning individual learning, whether accomplished through training, on-the-job learning, coaching, or other means of fostering individual learning”.

References


Very important Maglen (1995)\textsuperscript{93} defines training as ‘instruction that is directly related to the employment activities of the trainees, and usually given in their place of employment. But even if all or part of it is conducted outside … training is usually initiated and/or sponsored by employers’. This definition differentiates between training which is contemporaneously related to employment, and education which is typically less specific to the trainee’s work tasks and most often undertaken prior to employment.

Reymond Noe (1996)\textsuperscript{94} defined training in his book, “It refers to a planned effort by a company to facilitate employee’s learning of job related competencies. These competencies include knowledge, skills, or behaviors that are critical for successful job performance.

References

4.4 Training process designing and development

Training design process is based on the principle of Instructional System Design (ISD). ISD refers to a process of designing and developing training programs. There is not one universal accepted instructional systems developed model. The Training design process sometimes referred to as the ADDIE model. The ISD model was designed to solve human performance problems (U.S. Department of Defense, 1975). The figure shown below is a flowchart of the ISD model. It was first established by Florida State University in conjunction with the Department of Defense, but can now be found in almost any type of organization.

**Figure 4.1 : Training Process**

According to ISD model (1975) the training process have five phases i.e Analysis, Design, Development, Implementation and evaluation.

1. **Analyze**

   - Determine business outcome or linkage.
   - Analyze system (department, job, etc.) to gain an understanding of it.
   - Compile a **task inventory** of all tasks associated with each job (if needed).
   - Select tasks that people need to learn to become performers (needs analysis).
   - Build performance measures for the tasks to be learned.
   - Choose instructional setting for the tasks to be learned, e.g. classroom, e-learning, on-the-job, self study, blended, etc.
   - Estimate cost and compare to benefits gained.

2. **Design**

   - Develop the learning objectives, to include both terminal and enabling objectives.
   - Identify and list the learning steps required to perform the task.
   - Develop performance tests to show mastery of the tasks.
   - List the entry behaviors that the learner must demonstrate prior to entering the learning program.
   - Sequence and structure the learning objectives.

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References

3. **Develop**

- List activities that will help the students learn the task.
- Select the delivery methods (media).
- Review existing material so that you do not reinvent the wheel.
- Develop the instructional courseware.
- Synthesize the courseware into a viable learning program.
- Validate the instruction to ensure it accomplishes all goals and objectives.

4. **Implement**

- Create a management plan for conducting the training.
- Conduct the training.

5. **Evaluate**

- Review and evaluate each phase (analyze, design, develop, implement) to ensure it is accomplishing what it is supposed to.
- Perform external evaluations, e.g. observe that the tasks that were trained can actually be performed by the learners in their working environment.
- Revise training system to make it better and to meet future challenges.
4.5 Importance of some step in training process

1. Training need analysis (Analysis Phase)

This step identifies activities to justify an investment for training. The techniques necessary for the data collection are surveys, observations, interviews, and customer comment cards. Several examples of an analysis outlining specific training needs are customer dissatisfaction, low morale, low productivity, and high turnover.

The objective in establishing a needs analysis is to find out the answers to the following questions:

- “Why” is training needed?
- “What” type of training is needed?
- “When” is the training needed?
- “Where” is the training needed?
- “Who” needs the training? and "Who" will conduct the training?
- “How” will the training be performed?

By determining training needs, an organization can decide what specific knowledge, skills, and attitudes are needed to improve the employee’s performance in accordance with the company’s standards. The needs analysis is the starting point for all training. The primary objective of all training is to improve individual and organizational performance. Establishing a needs analysis is, and should always be the first step of the training process.

Thayer & McGhee (1961) developed the model for training need analysis which includes following steps

1. Organizational analysis,
2. Task or role analysis
3. Manpower analysis.

References

Len Holden (1994) outline different techniques for training need analysis like

1. For task analysis: Job description, job analysis, interview with job holders, and interview with managers and supervisors.

2. For individual analysis: performance appraisals, assessment center techniques, training audits, interviews etc

3. Learning Objectives (Design Phase)

Learning objectives are the statements describing what trainee will be able to do upon completion of training program. These objectives is an essential step in designing training program. Since it describe exactly what learners will be able to do after the training. This also helps in training evaluation.

Robert Mager's (1962) learning objectives is perhaps the key cornerstone of ISD as it gives the system a purpose. Robert Mager has developed strategy for developing instructional objectives that has been widely accepted and used. He breaks instructional objectives into three main components: performance, conditions and criteria.

- Observable Action (task) - This describes the observable performance or behavior. An action means a verb must be in the statement, for example "type a letter" or "lift a load." Each objective covers one behavior, hence, only one verb should be present. If there are many behaviors or the behaviors are complicated, then the objective should be broken down into one or more enabling learning objectives that supports the main terminal learning objective.

References


• At Least One Measurable Criterion (standard) - This states the level of acceptable performance of the task in terms of quantity, quality, time limitations, etc. This will answer any question such as "How many?" "How fast?" or "How well?". For example "At least 5 will be produced", "Within 10 minutes", "Without error". There can be more than one measurable criterion. Do not fall into the trap of putting in a time constraint because you think there should be a time limit or you cannot easily find another measurable criterion. Use a time limit only if required under the normal working standards.

• Conditions of performance (usually) (condition) - Describes the actual conditions under which the task will occur or be observed. Also, it identifies the tools, procedures, materials, aids, or facilities to be used in performing the task. This is best expressed with a prepositional phase such as "without reference to a manual" or "by checking a chart".

4. Deliver the training program. (Development phase)

This step is responsible for the instruction and delivery of the training program. Once you have designated your trainers, the training technique must be decided. One-on-one training, on-the-job training, group training, seminars, and workshops are the most popular methods.

Rathan Reddy (2006)99, mention comprehensive list of Training methods in his book as follows:


References

B. Off the Job Methods

1. Vestibule training
2. Lecture
3. Role plays
4. Case study
5. T-group
6. In basket Exercise
7. Computer Based Training
8. Brain Storming
9. Projects
10. Conference
11. Management Games

Training Methods such as business games, role playing exercises, T-groups, in-basket exercises, committee participation, field trips, forums, group discussions, panel meetings, seminars, and these methods are experiential training methods.

**Louis Fry, Aryeh Kidron, Chester Schriesheim, (1975)** in their empirical evidence reviewed that business games, role playing exercises, and T-groups have not been demonstrated to be either effective or ineffective as training and educational devices and that much more research needs to be performed on each of these experiential methods. In the future it would seem that more attention needs to be paid to programmatic research efforts which involve at least four steps: (1) determination of behavioral objectives for each of these methods, (2) determination of specific and valid evaluative criteria, (3) development of maximally effective experiential methods, and (4) comparison and testing of a set of maximally effective experiential methods against alternative training and educational devices. Only then, the question of experiential training method effectiveness be adequately and fully resolved.

References.

For a training program to be successful, the trainer should be conscious of several essential elements, including a controlled environment, good planning, the use of various training methods, good communication skills, and trainee participation.

4. **Evaluate the Training program (Evaluation Phase).**

This step will determine how effective and profitable your training program has been. Methods for evaluation are pre-and post-surveys of customer comments cards, the establishment of a cost/benefit analysis outlining your expenses and returns, and an increase in customer satisfaction and profits.

The reason for an evaluation system is simple. The evaluation of training programs are without a doubt the most important step in the training process. It is this step that will indicate the effectiveness of both the training as well as the trainer.

There are several obvious benefits for evaluating a training program. First, evaluations will provide feedback on the trainer’s performance, allowing them to improve themselves for future programs. Second, evaluations will indicate its cost-effectiveness. Third, evaluations are an efficient way to determine the overall effectiveness of the training program for the employees as well as the organization. Different models can be used to evaluate the training program like the details of these models are given in the next section of the chapter.
4.6 Need and Importance for Employee Training

Effective Training function plays the important role in the organizational effectiveness and has following benefits like:

1. Improves organizational performance

Training improves overall performance of the organization like improvement in profitability, efficiency etc. With relation to that Bo Hansson (2002)\textsuperscript{101} in his study “Company-based determinants of training and the impact of training on company performance: Results from an international HRM survey”, concluded that the Training have positive impact on company performance. This study uses an international dataset (26 countries) in examining the questions of what determines employee training from an organizational perspective and to what extent training investments contribute to company performance.

2. Improves the Employee productivity

The main contribution of the training is in employee productivity. The study by Ann P. Bartel (1991)\textsuperscript{102} finds that positive relation between training and labor productivity exists, not only at the level of the individual employees. It concludes that the implementation of employee training program can enable businesses that are operating at below expected levels of labor productivity to eliminate this gap.

References


3. Brings innovation in organization
Continuous learning through training program improves the innovative skills of the employees. The study of Stefan Bauernschuster, Oliverfalck Stephan Heblich (2008)\textsuperscript{103}, “The Impact of Continuous Training on a Firm’s Innovations”, given relationship of innovation and training. The goal of paper was to test the hypothesis that continuous training is a necessary condition for successful innovation. Study shows that continuous training does have a positive effect on a firm’s innovative ability.

Another study of Laplagne, P. and Bensted, L. (1999)\textsuperscript{104} stated that Training leads to an increase in the quality of labour, by equipping employees with greater skills and knowledge (and possibly fostering greater effort). Innovation, which can take many forms (eg the introduction of new technology or of new management techniques), improves capital services and the efficiency of the production process.

4. Improves the employee productivity and morale
Training has positive impact on the employee productivity and morale. The study by Richard Coony, Mile Terziovski & Danny Samsoon (2002)\textsuperscript{105} proves this. In the research they find that the training has positive impact on quality in organization, productivity, customer satisfaction, and employee morale. Training has direct effect on productivity, internal quality and financial outcome for firms, by raising the general level of skills and enhancing the human capital of the firm.

References


6. Cope up with Changing workplace and workforce

Golstein (1990) mentions that the training is needed as changes in demographics of employees, increasing job complexity, changes in technology and competition in the market. The training function helps organization to face all these factors.

References

4.7 Trends in employee training

There is lot of scope to bring innovation in the field of training and development. Many new trends are coming in this field. The new trends like Multimedia and Online Training, Web Based Training (WBT), Performance Consulting etc are becoming popular in the field. The study of Julie Bos(2007)\textsuperscript{107} analyzed following trends in Training and development

1. Changing Deliver Method
2. Faster Delivery and just in time Training
3. Realization that Training volume does not equal success
4. Increased measurement of impact through results
5. Taking succession management to the front lines
6. Development Plans are becoming increasingly individualized
7. More virtual team leadership

Putting together classroom Training is no longer the exclusive opportunity to learn. The age of training that includes training CDs, online training and blended learning is exploding. Reddy Sumati in her edited book entitled “E-Learning and Technology: New Opportunities in Training and Development” (2003)\textsuperscript{108} has highlighted how distance training and education helps organizations to meet the challenge of organizational change reach competitive standards and achieve organizational goals. Distance and online training is considered as an investment in people which helps in meeting pre-determined objectives.

Reference

Training outsourcing is also increasing.

According to a recent survey, respondents reveal that there is a considerable shift in training activities outsourcing. Earlier, training outsourcing was not given much importance and was considered for the less visible back-office activities. On the other hand, when respondents were asked to rate the training activity that is outsourced in a greater percentage, training delivery (i.e. 76%) and content management (i.e. 68%) came out to be the two most commonly selected activities. These two activities emerged as the “potatoes and onions” of the training function, which indicates the changing scenario of training outsourcing i.e. organizations are now becoming confident in training outsourcing activities.
4.8 Models Related to Employee Training

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1. ADDIE model for Instructional Systems Design

In 1975, Florida State University developed the ADDIE 110 model of Analysis, Design, Development, Implementation, and Evaluation, which was selected by the Armed Services as the primary means for developing training. At the time, the term "ADDIE" was not used, but rather "SAT" (Systems Approach to Training) and later "ISD" (Instructional Systems Development). As a generally rule, the military used SAT, while their civilian counterparts began using ISD. The "D" in "ISD" first stood for "Development," but now normally means "Design." It is an Instructional Systems Design (ISD) model. Most of the current instructional design models are spin-offs or variations of the ADDIE model; other models include the Dick & Carey and Kemp ISD models. One commonly accepted improvement to this model is the use of rapid prototyping. This is the idea of receiving continual or formative feedback while instructional materials are being created. This model attempts to save time and money by catching problems while they are still easy to fix. For example, the ADDIE model was used in the framework for helping create new research topics in learning technology. In the ADDIE concept(Figure 2), each step i.e Analysis, Design, Development, Implementation, and Evaluation has an outcome that bleeds into the subsequent step.

Analysis Phase

In the analysis phase, the instructional problem is clarified, the instructional goals and objectives are established and the learning environment and learner's existing knowledge and skills are identified. Below are some of the questions that are addressed during the analysis phase:

References


- Who is the audience and what are their characteristics?
• What is the new behavioral outcome?
• What types of learning constraints exist?
• What are the delivery options?
• What are the online pedagogical considerations?
• What are the Adult Learning Theory considerations?
• What is the timeline for project completion?

**Figure 4.2: ADDIE Model**


**Design Phase**

The design phase deals with learning objectives, assessment instruments, exercises, content, subject matter analysis, lesson planning and media selection. The design phase should be systematic and specific. *Systematic* means a logical, orderly method of identifying, developing and evaluating a set of planned strategies targeted for attaining the project’s goals. *Specific* means each element of the instructional design plan needs to be executed with attention to details.
These are steps involved in design phase:

- Document the project’s instructional, visual and technical design strategy
- Apply instructional strategies according to the intended behavioral outcomes by domain (cognitive, affective, and psychomotor).
- Design the user interface and user experience
- Create prototype
- Apply visual design (graphic design)

**Development phase**

The development phase is where instructional designers and developers create and assemble the content assets that were blueprinted in the design phase. In this phase, storyboards and graphics are designed. If e-learning is involved, programmers develop and/or integrate technologies. Testers perform debugging procedures. The project is reviewed and revised according to the feedback received.

**Implementation Phase**

During the implementation phase, a procedure for training the facilitators and the learners is developed. The facilitators’ training should cover the course curriculum, learning outcomes, method of delivery, and testing procedures. Preparation of the learners includes training them on new tools (software or hardware) and student registration. This is also the phase where the project manager ensures that the books, hands-on equipment, tools, CD-ROMs and software are in place, and that the learning application or website is functional.

**Evaluation Phase**

The evaluation phase consists of two parts: formative and summative. Formative evaluation is present in each stage of the ADDIE process. Summative evaluation consists of tests designed or domain specific criterion-related referenced items and providing opportunities for feedback from the users which were identified.
2. The Dick and Carey Model - 1978

Although there are several versions ISD, with an almost unlimited number of flavors, the ADDIE model probably reigns supreme, with the Dick and Carey model following close behind it developed in 1978. Dick and Carey's model details a comprehensive and detailed process, however, it has been criticized for at the same time being too rigid and cumbersome for the average design process.

Stage 1. Instructional Goals

- Instructional Goal: Desirable state of affairs by instruction.
- Needs Analysis: Analysis of a discrepancy between an instructional goal and the present state of affairs or a personal perception of needs.

Stage 2. Instructional Analysis

- Purpose: To determine the skills involved in reaching a goal.
- Task Analysis (procedural analysis): about the product of which would be a list of steps and the skills used at each step in the procedure.
- Information-Processing Analysis: about the mental operations used by a person who has learned a complex skills.
- Learning-Task Analysis: about the objectives of instruction that involve intellectual skills.

References

Figure 4.3: The Dick and Carey Model

Stage 3. Entry Behaviors and Learner Characteristics

- **Purpose**: To determine which of the required enabling skills the learners bring to the learning task.

- Intellectual skills.

- Abilities such as verbal comprehension and spatial orientation.

- Traits of personality
Stage 4. Performance Objectives

- **Purpose**: To translate the needs and goals into specific and detailed objectives.

- **Functions**: Determining whether the instruction related to its goals.  
  Focusing the lesson planning upon appropriate conditions of learning  
  Guiding the development of measures of learner performance  
  Assisting learners in their study efforts.

Stage 5. Criterion-Referenced Test Items

- To diagnose an individual possessions of the necessary prerequisites for learning new skills.

- To check the results of student learning during the process of a lesson.

- To provide document of students progress for parents or administrators  
  Useful in evaluating the instructional system itself (Formative/ Summative evaluation).

- Early determination of performance measures before development of lesson plan and instructional materials

Stage 6. Instructional Strategy

- **Purpose**: To outline how instructional activities will relate to the accomplishment of the objectives.

- The best lesson design: Demonstrating knowledge about the learners, tasks reflected in the objectives, and effectiveness of teaching strategies.  
  e.g. Choice of delivering system. Teacher-led, Group-paced vs. Learner-centered, Learner-paced
Stage 7. Instructional Materials

- Purpose: To select printed or other media intended to convey events of instruction.
- Use of existing materials when it is possible.
- Need for development of new materials, otherwise.
- Role of teacher: It depends on the choice of delivery system.

Stage 8. Formative Evaluation

- Purpose: To provide data for revising and improving instructional materials.
- To revise the instruction so as to make it as effective as possible for larger number of students.
- One on One: One evaluator sitting with one learner to interview.
- Small Group.
- Field Trial

Stage 9. Summative Evaluation

- Purpose: To study the effectiveness of system as a whole.
- Conducted after the system has passed through its formative stage.
- Small scale/ Large Scale.
- Short period/ Long period

Figure 4.4: Thayer & McGhee model

- Reasons or “Pressure Points”
  - Legislation
  - Lack of Basic Skills
  - Poor Performance
  - New Technology
  - Customer Requests
  - New Products
  - Higher Performance Standards
  - New Jobs

- Outcomes
  - What Trainees Need to Learn
  - Who Receives Training
  - Type of Training
  - Frequency of Training
  - Buy Versus Build Training Decision
  - Training Versus Other HR Options Such as Selection or Job Redesign

Thayer & McGhee(1961)\textsuperscript{112} developed model for the training need analysis consists of following steps:

1). **Organizational analysis**: It involves a study of the entire organization in terms of its objectives, its resources, the utilization of these resources, in order to achieve stated objectives and its interaction pattern with environment. The important elements that are closely examined in this connection are:

   a. **Analysis of objectives**: This is a study of short term and long-term objectives and the strategies followed at various levels to meet these objectives.

   b. **Resource utilization analysis**: How the various organizational resources (human, physical and financial) are put to use is the main focus of this study. The contributions of various departments- are also examined by establishing efficiency indices for each unit. This is done to find out comparative labour costs, whether a unit is under manned or over manned.

   c. **Environmental scanning**: Here the economic, political, socio-cultural and technological environment of the organization is examined.

   d. **Organizational climate analysis**: The climate of an organization speaks about the attitudes of members towards work, company policies, supervisors, etc. Absenteeism, turnover ratios generally reflect the prevailing employee attitudes.

2) **Task or role analysis**: This is a detailed examination of a job, its components, its various operations and conditions under which it has to be performed. The focus here is on the roles played by an individual and the training needed to perform such roles. The whole exercise is meant to find out how the various tasks be performed and what kind of skills, knowledge, attitudes are needed to the job needs. Questionnaires, interviews, reports, tests, observation and methods are generally used to collect job related information from time-to-time.

Reference:

After collecting the information, an appropriate training program may be designed, paying attention to (i) performance standards required of employees, (ii) the tasks they have to discharge, (iii) the methods they will employ on the job and (iv) how they have learned such methods, etc.

3) **Manpower analysis**: Here the focus is on the individual-in a given job. There are three issues to be resolved through manpower analysis. First we try to find, whether performance is satisfactory and training is required. Second, whether the employee is capable of being trained and the specific areas in which training is needed. Finally, we need to state whether poor performances (who can improve with requisite training inputs) on the job need to be replaced by those who can do the job. Other options to training such as modifications in the job or processes should also be looked into. Personal observation, performance reviews, supervisory reports, diagnostic tests help in collecting the required information and select particular training options that try to improve the performance individual workers.
4. Goldstein’s Model of Training Needs Analysis

Goldstein (1986, 1991, 1993) develop Model of Training Needs Analysis. Figure 4.5 presents a model of the components of the need assessment process.

**Figure 4.5 : Goldstein’s Model of Training Needs Analysis**

- **Stage One**
  Establish organisation’s commitment and support

- **Stage Two**
  Organisational Analysis

- **Stage Three**
  Requirement Analysis

- **Stage Four**
  ‘Needs Assessment’ - Task & KSA analysis of training needs

- **Stage Five**
  ‘Person Analysis’

- **Stage Six**
  Collate data to input to, and design of, training environment and training evaluation


References


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1. Organization commitment and support

First step organization support signifies identify whose cooperation is needed, i.e. management, workers, clients, other stakeholders. Also identify ‘Project Parameters’: rationale of approach(es), time needed, numbers of people involved, admin. (& other) support needed.

2. Organizational Analysis

Organizational analysis can be conducted to codify the important factors that can impact the effectiveness of Training program that operate within an organizational context. Training managers must clearly understand the strategic direction of their organization.

To design training system that fit into the organization’s goals and plans. Goldstein (1993) develop following four stages of Organizational Analysis

- Specify training goals (3 types)
- Determine training climate
- Identify legal constraints (vertical and horizontal)
- Determine resources available

3. Requirement Analysis

- Goldstein develop following steps to do requirement analysis.
- Determine target job to be assessed
- Identify how needs assessment data best collected: using interviews, observations, surveys, tests, records, SME’s, focus groups, work samples, etc.
- Determine who is going to provide necessary info
- Ascertain key points of contact and their responsibilities
- Anticipate problems and difficulties
- Develop a TNA protocol
4. **Training Needs Assessment (TNA)-Task and KSA Analysis**

- TA for TNA should provide a job specification (KSA’s/competencies required). Training needs derived from difference between employees’ current and ideal levels.

- Three main TNA TA approaches (task identification & task element analysis).
  - Comprehensive Approach
  - Key Task Analysis
  - Problem-Centred Approach

- Task fidelity (physical and psychological): e.g. stages and ‘key points analysis’, manual skills analysis, job learning analysis, faults analysis, benchmarking, Critical Incidents Technique.

5. **Person Analysis: Following factors are analysed in person analysis**

- Who in the organisation needs training
- What kind of training is needed
- KSA deficits - must have suitable performance criteria
  - performance appraisal ratings
  - 360-feedback ratings
  - KSA’s of new recruits
  - Development Centre ratings
  - self-assessments

6. **Input to design the training environment and evaluation**
5. ARCS Model for Motivate Learners

Motivation is the most overlooked aspect of instructional strategy, and perhaps the most critical element needed for employee-learners. Even the most elegantly designed training program will fail if the students are not motivated to learn. Without a desire to learn on the part of the student, retention is unlikely. Many students in a corporate setting who are forced to complete training programs are motivated only to "pass the test." Designers must strive to create a deeper motivation in learners for them to learn new skills and transfer those skills back into the work environment.

As a first step, instructional designers should not assume they understand the target audience's motivation. To analyze needs, the designer should ask prospective learners questions such as:

- What would the value be to you from this type of program?
- What do you hope to get out of this program?
- What are your interests in this topic?
- What are you most pressing problems?

The answers to these types of questions are likely to provide insight into learner motivation, as well as desirable behavioral outcomes.

By considering this John Keller synthesized existing research on psychological motivation and created the ARCS model (Keller, 1987)\(^\text{114}\). ARCS stands for Attention, Relevance, Confidence, and Satisfaction.

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References

1. **Attention**

The first and single most important aspect of the ARCS model is gaining and keeping the learner's attention.

1. Keller attention can be gained in two ways: (1) Perceptual arousal – uses surprise or uncertainly to gain interest. Uses novel, surprising, incongruous, and uncertain events; or (2) Inquiry arousal – stimulates curiosity by posing challenging questions or problems to be solved.

2. Methods for grabbing the learners’ attention include the use of:

   - Active participation - Adopt strategies such as games, role play or other hands-on methods to get learners involved with the material or subject matter.
   - Variability – To better reinforce materials and account for individual differences in learning styles, use a variety of methods in presenting material (e.g. use of videos, short lectures, mini-discussion groups).
• Humor - Maintain interest by use a small amount of humor (but not too much to be distracting)
• Incongruity and Conflict – A devil’s advocate approach in which statements are posed that go against a learner’s past experiences.
• Specific examples – Use a visual stimuli, story, or biography.
• Inquiry – Pose questions or problems for the learners to solve, e.g. brainstorming activities.

2. Relevance

Attention and motivation will not be maintained, however, unless the learner believes the training is relevant. Put simply, the training program should answer the critical question, "What's in it for me?" Benefits should be clearly stated. For a sales training program, the benefit might be to help representatives increase their sales and personal commissions. For a safety training program, the benefit might be to reduce the number of workers getting hurt. For a software training program, the benefit to users could be to make them more productive or reduce their frustration with an application. A healthcare program might have the benefit that it can teach doctors how to treat certain patients.

Establish relevance in order to increase a learner’s motivation. To do this, use concrete language and examples with which the learners are familiar. Six major strategies described by Keller include:

• Experience – Tell the learners how the new learning will use their existing skills. We best learn by building upon our preset knowledge or skills.
• Present Worth – What will the subject matter do for me today?
• Future Usefulness – What will the subject matter do for me tomorrow?
• Needs Matching – Take advantage of the dynamics of achievement, risk taking, power, and affiliation.
• Modeling – First of all, “be what you want them to do!” Other strategies include guest speakers, videos, and having the learners who finish their work first to serve as tutors.
• Choice – Allow the learners to use different methods to pursue their work or allowing choice in how they organize it.

3. Confidence

The confidence aspect of the ARCS model is required so that students feel that they should put a good faith effort into the program. Following strategies can be applied to build confidence:

• Help students understand their likelihood for success. If they feel they cannot meet the objectives or that the cost (time or effort) is too high, their motivation will decrease.
• Provide objectives and prerequisites – Help students estimate the probability of success by presenting performance requirements and evaluation criteria. Ensure the learners are aware of performance requirements and evaluative criteria.
• Allow for success that is meaningful.
• Grow the Learners – Allow for small steps of growth during the learning process.
• Feedback – Provide feedback and support internal attributions for success.
• Learner Control – Learners should feel some degree of control over their learning and assessment. They should believe that their success is a direct result of the amount of effort they have put forth.

4. Satisfaction

Finally,

• Learning must be rewarding or satisfying in some way, whether it is from a sense of achievement, praise from a higher-up, or mere entertainment.
• Make the learner feel as though the skill is useful or beneficial by providing opportunities to use newly acquired knowledge in a real setting.
• Provide feedback and reinforcement. When learners appreciate the results, they will be motivated to learn. Satisfaction is based upon motivation, which can be intrinsic or extrinsic.
• Do not patronize the learner by over-rewarding easy tasks.
Thus According to John Keller’s ARCS Model of Motivational Design, there are four steps for promoting and sustaining motivation in the learning process: Attention, Relevance, Confidence, Satisfaction (ARCS).
6. David Kolb's learning styles model and experiential learning theory (ELT)

Having developed the model over many years prior, David Kolb published his learning styles model in 1984\textsuperscript{115}. The model gave rise to related terms such as Kolb's experiential learning theory (ELT), and Kolb's learning styles inventory (LSI).

Kolb's learning theory sets out \textbf{four distinct learning styles} (or preferences), which are based on a \textbf{four-stage learning cycle}. (which might also be interpreted as a 'training cycle'). In this respect Kolb's model is particularly elegant, since it offers both a way to understand \textbf{individual people's different learning styles}, and also an explanation of a \textbf{cycle of experiential learning that applies to us all}.

Kolb includes this 'cycle of learning' as a central principle his experiential learning theory, typically expressed as \textbf{four-stage cycle of learning}, in which \textit{'immediate or concrete experiences'} provide a basis for \textit{'observations and reflections'}. These 'observations and reflections' are assimilated and distilled into \textit{'abstract concepts'} producing new implications for action which can be \textit{'actively tested'} in turn creating new experiences.

Kolb says that ideally (and by inference not always) this process represents a learning cycle or spiral where the learner 'touches all the bases', i.e., a cycle of experiencing, reflecting, thinking, and acting. Immediate or concrete experiences lead to observations and reflections. These reflections are then assimilated (absorbed and translated) into abstract concepts with implications for action, which the person can actively test and experiment with, which in turn enable the creation of new experiences.

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Kolb’s model therefore works on two levels – a **four-stage cycle**:

1. **Concrete Experience** - (CE)
2. **Reflective Observation** - (RO)
3. **Abstract Conceptualization** - (AC)
4. **Active Experimentation** - (AE)

and a **four-type definition of learning styles**, (each representing the combination of two preferred styles, rather like a two-by-two matrix of the four-stage cycle styles, as illustrated below), for which Kolb used the terms:

1. **Diverging** (CE/RO)
2. **Assimilating** (AC/RO)
3. **Converging** (AC/AE)
4. **Accommodating** (CE/AE)

**Kolb’s learning styles - matrix view**

It's often easier to see the construction of Kolb's learning styles in terms of a two-by-two matrix. The diagram also highlights Kolb's terminology for the four learning styles; diverging, assimilating, and converging, accommodating:

<table>
<thead>
<tr>
<th>feeling (Concrete Experience - CE)</th>
<th>doing (Active Experimentation - AE)</th>
<th>watching (Reflective Observation - RO)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>accommodating</strong> (CE/AE)</td>
<td></td>
<td><strong>diverging</strong> (CE/RO)</td>
</tr>
<tr>
<td><strong>converging</strong> (AC/AE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>assimilating</strong> (AC/RO)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Thus, for example, a person with a dominant learning style of 'doing' rather than 'watching' the task, and 'feeling' rather than 'thinking' about the experience, will have a learning style which combines and represents those processes, namely an 'Accommodating' learning style, in Kolb's terminology.

**Kolb learning styles definitions and descriptions:**

Knowing a person's (and your own) learning style enables learning to be orientated according to the preferred method. That said, everyone responds to and needs the stimulus of all types of learning styles to one extent or another - it's a matter of using emphasis that fits best with the given situation and a person's learning style preferences.
Here are brief descriptions of the four Kolb learning styles:

- **Diverging (feeling and watching - CE/RO)** - These people are able to look at things from different perspectives. They are sensitive. They prefer to watch rather than do, tending to gather information and use imagination to solve problems. They are best at viewing concrete situations from several different viewpoints. Kolb called this style 'Diverging' because these people perform better in situations that require ideas-generation, for example, brainstorming. People with a Diverging learning style have broad cultural interests and like to gather information. They are interested in people, tend to be imaginative and emotional, and tend to be strong in the arts. People with the Diverging style prefer to work in groups, to listen with an open mind and to receive personal feedback.

- **Assimilating (watching and thinking - AC/RO)** - The Assimilating learning preference is for a concise, logical approach. Ideas and concepts are more important than people. These people require good clear explanation rather than practical opportunity. They excel at understanding wide-ranging information and organizing it in a clear logical format. People with an Assimilating learning style are less focused on people and more interested in ideas and abstract concepts. People with this style are more attracted to logically sound theories than approaches based on practical value. These learning style people are important for effectiveness in information and science careers. In formal learning situations, people with this style prefer readings, lectures, exploring analytical models, and having time to think things through.

- **Converging (doing and thinking - AC/AE)** - People with a Converging learning style can solve problems and will use their learning to find solutions to practical issues. They prefer technical tasks, and are less concerned with people and interpersonal aspects. People with a Converging learning style are best at finding practical uses for ideas and theories. They can solve problems and make decisions by finding solutions to questions and problems. People with a Converging learning style are more attracted to technical tasks and problems than social or interpersonal issues. A Converging learning style enables specialist and technology abilities. People with a Converging style like to experiment with new ideas, to simulate, and to work with practical applications.

- **Accommodating (doing and feeling - CE/AE)** - The Accommodating learning style is 'hands-on', and relies on intuition rather than logic. These people use other people's analysis, and prefer to take a practical, experiential approach. They are attracted to new challenges and experiences, and to carrying out plans. They commonly act on 'gut' instinct rather than logical analysis. People with an Accommodating learning style will tend to rely on others for information than carry out their own
analysis. This learning style is prevalent and useful in roles requiring action and initiative. People with an Accommodating learning style prefer to work in teams to complete tasks. They set targets and actively work in the field trying different ways to achieve an objective.

Nevertheless most people clearly exhibit clear strong preferences for a given learning style. The ability to use or 'switch between' different styles is not one that we should assume comes easily or naturally to many people.

Simply, people who have a clear learning style preference, for whatever reason, will tend to learn more effectively if learning is orientated according to their preference.

For instance - people who prefer the 'Assimilating' learning style will not be comfortable being thrown in at the deep end without notes and instructions.

People who like prefer to use an 'Accommodating' learning style are likely to become frustrated if they are forced to read lots of instructions and rules, and are unable to get hands on experience as soon as possible.

Thus Kolb learning cycle is useful for effective learning in the Training program. It is also useful for the selecting training methods which suits to the learning style of the trainees
7. Neil Fleming – VARK

The VARK (Visual, Aural, Read/Write, and Kinesthetic) learning style inventory was created by Neil Fleming of Lincoln University in New Zealand. VAK learning styles theory was pioneered in 1987 by Neil Fleming and revised by Fleming and Mills (1992) and suggested four categories that seemed to reflect the experiences of the students and teachers as VARK. The acronym VARK stands for Visual, Aural, Read/write, and Kinesthetic sensory modalities that are used for learning information. VARK is about our preferences for taking information into the brain and communicating them “outside

**Visual (V):**

This preference includes the depiction of information in maps, spider diagrams, charts, graphs, flow charts, labeled diagrams, and all the symbolic arrows, circles, hierarchies and other devices that instructors use to represent what could have been presented in words. It could have been called Graphic (G) as that better explains what it covers. It does NOT include movies, videos or PowerPoint. It does include designs, whitespace, patterns, shapes and the different formats that are used to highlight and convey information.

**Aural / Auditory (A):**

This perceptual mode describes a preference for information that is "heard or spoken." Students with this modality report that they learn best from lectures, tutorials, tapes, group discussion, email, using mobile phones, speaking, web chat and talking things through. It includes talking out loud as well as talking to yourself. Often people with this preference want to sort things out by speaking, rather than sorting things out and then speaking.

References

116. www.vark-learn.com
Read/write (R):

This preference is for information displayed as words. Not surprisingly, many academics have a strong preference for this modality. This preference emphasizes text-based input and output - reading and writing in all its forms. People who prefer this modality are often addicted to PowerPoint, the Internet, lists, dictionaries, thesauri, quotations and words, words, words...

Kinesthetic (K):

By definition, this modality refers to the "perceptual preference related to the use of experience and practice (simulated or real)." Although such an experience may invoke other modalities, the key is that people who prefer this mode are connected to reality, "either through concrete personal experiences, examples, practice or simulation". It includes demonstrations, simulations, videos and movies of "real" things, as well as case studies, practice and applications.

What about Mixtures? Multimodals (MM):

Life is multimodal. There are seldom instances where one mode is used, or is sufficient, so we have a four-part VARK profile. That is why the VARK questionnaire gives you four scores. Those who prefer many modes almost equally are of two types. There are those who are context specific who choose a single mode to suit the occasion or situation. There are others who are not satisfied until they have had input (or output) in all of their preferred modes. They take longer to gather information from each mode and, as a result, they often have a deeper and broader understanding.
Figure 4.8: Neil Fleming – VARK Model

Visual (V)

Learning Styles

Kinesthetic (K)

Aural / Auditory (A)

Read/write (R):

(Source: www.vark-learn.com)
8. Holton’s Transfer of Training Model

Holton’s transfer of training model (1996), which suggests that three crucial factors affect transfer of training—motivation to transfer, transfer climate, and transfer design etc.

Figure 4.9: Holton’s Factors Affecting Transfer of Training


According to model following factors affect the Training transfer
1. Motivation to learn

Positive transfer of training is the application of the knowledge, skills, and attitude gained in a training context to the trainee’s job. In this model motivation to transfer is defined as the intended effort towards utilizing the skills and knowledge learned in a training atmosphere to the real world work situation.

Individual attitude also a factor affects the motivation to learn. Individual attitude that trainee brings to the training programme. They are attitude that are not directly related to the training programme, but are expected to influence both motivation to learn and motivation to transfer. Individual attitude included in this model is desire to learn, internal work motivation and organizational commitment

Individual who have a strong desire to learn new things are thought to enjoy the learning process. The individual who enjoy learning new things would be more motivated to attend and participate in training and to practice what they have learned.

Organizational commitment:

Trainees with higher organizational commitment may have greater motivation to transfer than those trainees with lower organizational commitment.

2. Training attitude

Favorable and unfavorable training attitude also affect the transfer of the training.

Attitude may develop the past experiences in the training programs, management attitude about training programme, or peer group influences. Training attitude is positively related to pre Training motivation. If trainees receives optimistic information about the training program before participating in the training had more positive outcome, greater motivation to learn, positive reactions to training, and greater transfer of learning.
3. Reactions to Training

Here reaction to training means reactions to the learning environment and reaction to content validity. Here content validity is most important as adult learners are believed to learn best when they can see the relevance of the materials being taught to an immediate need they have. The most likely reasons that learning does not transfer to the job are the work environment is not supportive of the learned behavior and trainees think the training is irrelevant.

4. Learning

The purpose of the learning experiences is for the trainee to gain skills and knowledge and/or for there to be a change in attitude and beliefs. The individual who learn more can be more motivated to both try to use their learning and succeed in doing so.

5. Environmental Factors

Environmental Factors refer to the organizational climate and situational constraints or aids of the actual job setting in which the training will be utilized. It is the trainee’s perception of the environmental favorability and what he/she expects to encounter in the work setting that influence motivation to transfer. Prior Knowledge of the transfer climate into which trainees would return could influence their motivation to learn as well as their motivation to use the Training and thus their transfer behavior. Environmental factors in the model are supervisor support, supervisor sanctions, peer support and opportunity to use the training. Generally support has been found for the influence of supervisors and peer on motivation to transfer. Opportunity to use training as conceptualized in the model includes having all the resources, tools and information that allow the trainee to use the training as well as being allowed to use the training even if others do not.

References

Holton, Bates and Ruona (2000), developed following 16 factors Learning Transfer System Inventory (LTSI) which affect transfer of training shown in Table 4.1.

### Table 4.1: Learning Transfer System Inventory

<table>
<thead>
<tr>
<th>No</th>
<th>Variables</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Learner Readiness</td>
<td>Extent to which trainees are prepared to enter and participate in training.</td>
</tr>
<tr>
<td>2</td>
<td>Motivation to Transfer</td>
<td>Trainees’ desire to use the knowledge and skills mastered in the training program on the job.</td>
</tr>
<tr>
<td>3</td>
<td>Peer Support</td>
<td>Extent to which peers reinforce and support use of learning to the job.</td>
</tr>
<tr>
<td>4</td>
<td>Supervisor Support</td>
<td>Extent to which supervisors/managers support and reinforce use of training on the job.</td>
</tr>
<tr>
<td>5</td>
<td>Personal Outcomes-positive</td>
<td>Degree to which applying training on the job leads to outcomes that is positive for the trainees.</td>
</tr>
<tr>
<td>6</td>
<td>Personal Outcomes-negative</td>
<td>Extent to which individuals believe that not applying skills and knowledge learned in training will lead to negative personal outcomes.</td>
</tr>
<tr>
<td>7</td>
<td>Supervisor Sanctions</td>
<td>Extent to which individuals perceive negative responses from supervisors/managers when applying skills learned in training.</td>
</tr>
<tr>
<td>8</td>
<td>Content Validity</td>
<td>Extent to which trainees judge training content to accurately reflect job requirements.</td>
</tr>
<tr>
<td>9</td>
<td>Transfer Design</td>
<td>Degree to which (1) training has been designed and delivered to give trainees the ability to transfer learning to the job (2) training instructions match job requirements.</td>
</tr>
<tr>
<td>10</td>
<td>Personal Capacity to Transfer</td>
<td>Extent to which individuals have the time, energy and mental space in their work lives to make changes required to transfer learning to the job.</td>
</tr>
<tr>
<td>11</td>
<td>Opportunity To Use</td>
<td>Extent to which trainees are provided with or obtain resources and tasks on the job enabling them to use training on the job.</td>
</tr>
<tr>
<td>12</td>
<td>Performance Self Efficacy</td>
<td>Trainee’s general belief that they are able to change their performance when they want to.</td>
</tr>
<tr>
<td>13</td>
<td>Transfer Effort-Performance Expectations</td>
<td>Expectation that effort devoted to transferring learning will lead to changes in job performance.</td>
</tr>
<tr>
<td>14</td>
<td>Performance-Outcome Expectations</td>
<td>Expectation that changes in job performance will lead to valued outcomes.</td>
</tr>
<tr>
<td>15</td>
<td>Feedback</td>
<td>Formal and informal indicators from an organisation about an individual’s job performance.</td>
</tr>
<tr>
<td>16</td>
<td>Openness to Change</td>
<td>Extent to which prevailing group norms are perceived by trainees’ to resist or discourage the use of skills and knowledge acquired in training.</td>
</tr>
</tbody>
</table>

9. Kirkpatrick's model for training evaluation

Donald Kirkpatrick (1959) develop model for training evaluation. The Donald Kirkpatrick's 1994 in book Evaluating Training Programs defined his originally published ideas of 1959, thereby further increasing awareness of them, so that his theory has now become arguably 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.

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

Figure 4.10 : Kirkpatrick Model

<table>
<thead>
<tr>
<th>Level</th>
<th>Evaluation type (what is measured)</th>
<th>Evaluation description and characteristics</th>
<th>Examples of evaluation tools and methods</th>
<th>Relevance and practicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Reaction</td>
<td>Reaction evaluation is how the delegates felt about the training or learning experience.</td>
<td>'Happy sheets', feedback forms. Verbal reaction, post-training surveys or questionnaires.</td>
<td>Quick and very easy to obtain. Not expensive to gather or to analyze.</td>
</tr>
<tr>
<td>2</td>
<td>Learning</td>
<td>Learning evaluation is the measurement of the increase in knowledge - before and after.</td>
<td>Typically assessments or tests before and after the training. Interview or observation can also be used.</td>
<td>Relatively simple to set up; clear-cut for quantifiable skills. Less easy for complex learning.</td>
</tr>
<tr>
<td>3</td>
<td>Behaviour</td>
<td>Behaviour evaluation is the extent of applied learning back on the job - implementation.</td>
<td>Observation and interview over time are required to assess change, relevance of change, and sustainability of change.</td>
<td>Measurement of behavior change typically requires cooperation and skill of line-managers.</td>
</tr>
<tr>
<td>4</td>
<td>Results</td>
<td>Results evaluation is the effect on the business or environment by the trainee.</td>
<td>Measures are already in place via normal management systems and reporting - the challenge is to relate to the trainee.</td>
<td>Individually not difficult; unlike whole organisation. Process must attribute clear accountabilities.</td>
</tr>
</tbody>
</table>

10. Jack Phillip ROI model

Jack Phillips (1991)\textsuperscript{119} develop model for the training evaluation. Jack Phillip Model is same as Kirkpatrick Model but one extra one step is added in the model. The Jack Phillip Model includes following steps

![Figure 4.11: Jack Phillip Model](Source: Jack Phillip (1996), “Measuring ROI: Fifth level of Evaluation”, Available on www.astd.org)

1. Reaction and planned action

Reaction and planned measures participant’s reaction to the program, their satisfaction and their planned implementation

References

2. Learning

Learning measures skills. Knowledge or attitude changes related to the program and implementation

3. Job Application

It measures changes in behavior on the job and implementation specific application and implementation of the program

4. Business Results

It measures changes related to program. This step analyze the benefits the business got after the program

5. Return on investment (ROI)

Calculating ROI requires a process model, as depicted in figure 2 below. The various elements of evaluation (design instruments, levels, and purposes) form the specific data collection plans. A variety of data collection tools, ranging from questionnaires and surveys to monitoring on-the-job performance, are available to trainers. Once data is collected, the next step of the ROI analysis begins with deliberate attempts to isolate the effects of training on the data items. At least ten strategies have been used to accomplish this:

- use of controls
- trend line analysis (time series)
- forecasting methods
- participant estimates of training impact
- supervisor estimates of training impact
- management estimates of training impact
- customer input
- expert estimates of training impact
• subordinate input on training impact
• calculations/estimations of the impact of other factors.

The next step is to convert collected data to monetary values. This requires a direct conversion of hard data, such as quantity, quality, cost, or time, which an easy task for some programs like for technical training. For “soft” data, the task is more difficult, although a variety of techniques are used to place values on the improvements. Among the techniques used are

• Historical costs
• Supervisor estimation
• Management estimation
• Expert opinion
• Participant estimation
• External studies.

The next step is to calculate the costs for the program. Although there has always been a need to capture training costs, the need is amplified with more attention on accountability and the ROI calculation.

The ROI formula is the annual net program benefits divided by program costs, where the net benefits are the monetary value of the benefits minus the costs of the program. The ROI formula is as follows:

\[
\text{ROI (\%)} = \frac{\text{Benefits} - \text{Costs}}{\text{Costs}} \times 100
\]

This model also recognizes that there should be intangible benefits that will be presented along with the ROI calculation.