

TRAINING & DEVELOPMENT
SESSION 1 TO 10

Training and development is a planned, continuous effort by management to improve employees' competency levels and organizational performance.

Difference between training and development

Basis	Training	Development
Meaning	It is a process of increasing knowledge and skills of an employee.	It is a process of learning and growth.
Orientation	It is a job-oriented process.	It is a career-oriented process.
Duration	It is a short-term process, for a fixed duration.	It is a long-term process, which takes place throughout the life of a person.
Effect/Objective	It enables the employee to perform the job better.	It ensures the overall growth of the employee.
Focus	It focuses on technical skills.	It focuses on conceptual and human ideas.
Level of trainees	It is meant for supervisors and labourers.	It is meant for managerial levels.
Scope	It has a narrow scope.	It has a wider scope.

Source: <https://ask.learnchse.in/t/distinguish-between-training-and-development/9283>

Objectives of training and development

- Individual Objectives – help employees in achieving their personal goals, which in turn, enhances the individual contribution to an organization.
- Organizational Objectives – assist the organization with its primary objective by bringing individual effectiveness.
- Functional Objectives – maintain the department's contribution at a level suitable to the organization's needs.
- Societal Objectives – ensure that an organization is ethically and socially responsible to the needs and challenges of the society.

Need for training and development

- Economic cycles
- Globalization
- Increased value placed on intangible assets and human capital
- Employee engagement
- Focus on link to Business strategy
- Talent management
- Customer service
- Leverage new technology

Importance of Training and Development

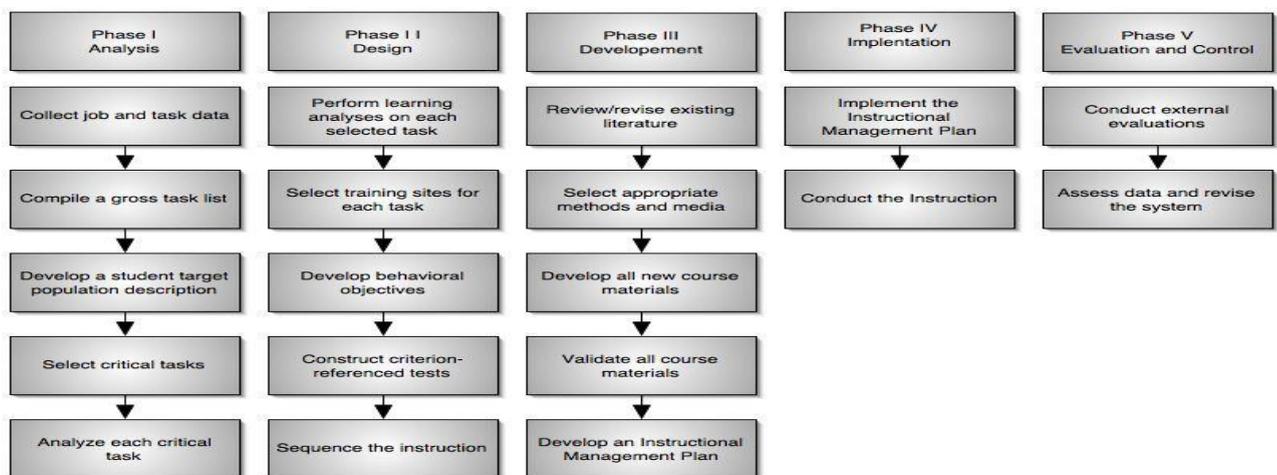
- Increases productivity
- Reduces accidents
- Lesser supervision
- Improves promotion prospects
- Improves employee morale

Steps in Training

- Conduct need analysis
- Ensure employees have motivation and skills
- Create learning environment
- Ensure application of training content

Systematic Approach to Training

The US army in collaboration with Florida State University developed a five phase training model in 1975. It had distinct 19 steps for implementation of training program. The system was termed as Systems approach to Training SAT or Instructional System Design (ISD). Subsequently it was modified and a redesigned system was introduced in 1981. It still had five basic phases but the implementation was slightly different as per following diagram.



The five phases of ISD according to Russell Watson (1981)

This approach to training has been further refined for the corporate world and is now termed as Systematic Approach to Training .The flow can be represented by the following diagram:-

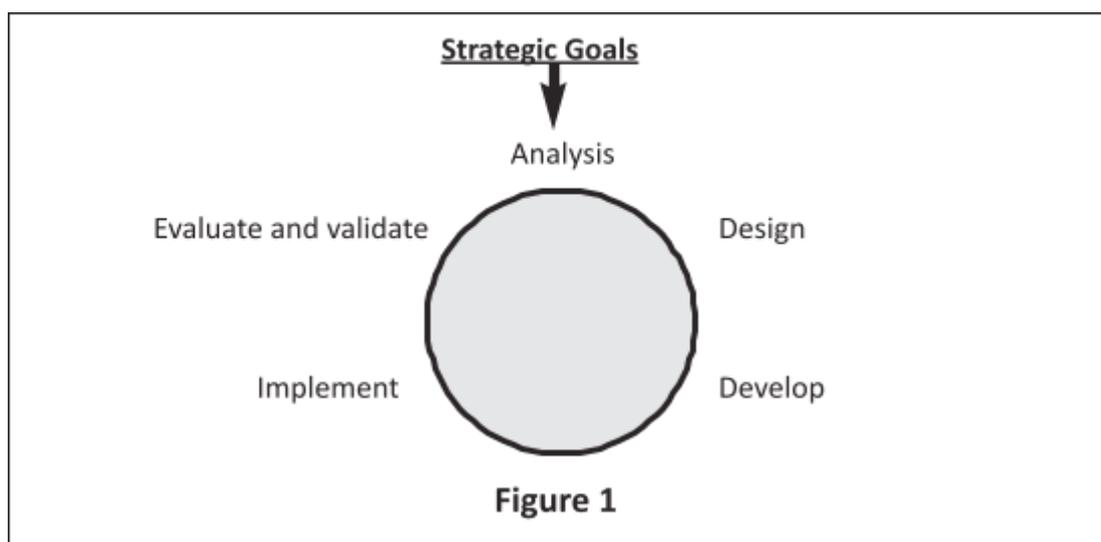


Figure 1

Analysis

Once need analysis has indicated a gap exists for future functioning of the organization or there is a performance issue, the HR has to identify whether this requires training intervention

or can be handled by other methods such as job rotation. Analyzing training needs implies finding out what people need to learn. It entails organizational analysis, individual analysis and task analysis. All levels of the organization should be involved in this phase.

The question it seeks to answer is whether there is a gap in in-house availability of skills, knowledge or behavior for foreseen activities in future, performance gap, safety procedures that need to be addressed or new competencies that are essential for meeting organizational objectives.

Design

This implies specifying what trainees should be able to achieve in terms of skill, knowledge and behavior as a result of training. This stage in the systematic approach is concerned with planning the optimal use of available training resources, and to select appropriate media to impart training. It is the primary responsibility of the human resource professionals and operational managers to plan and design the training program to solve the need gaps. In case expertise does not exist in-house, consultants with requisite competencies may be called in. These have to be planned within constraints such as budgets, operational demands, facilities, availability of trainers and trainees.

Design should answer following:-

- (a) What will be taught and the instructional methods to be used?
- (b) Specific instructional objectives both terminal objective and learning objectives
- (c) Resources to be used for training.

Development

The third phase is development of exact material, such as lecture scripts, simulations, presentations that would be used during implementation of the training.

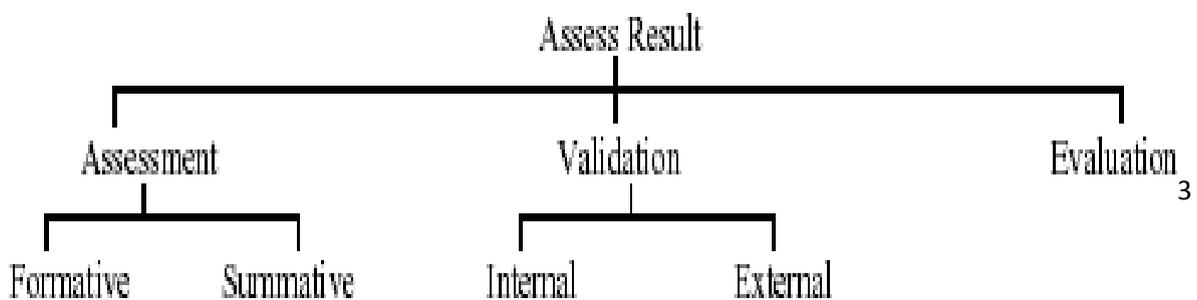
Implementation

Implementation phase is conduct of training program by designated trainers for the identified individuals or groups. Within the systematic approach to training, this is the stage where people undertake learning activities. This requires active participation of the trainee and the support of the organization. The degree to which the trainee is willing to participate in training activities depends on the following factors

- a. The trainee recognizes the need for training
- b. The trainee is sufficiently motivated to want to learn
- c. During implementation this motivation is maintained or increased
- d. The design of learning events is realistic within the context of the organization
- e. Clearly defined objectives are used to direct learning activities
- f. The trainers possess sufficient technical and instructional skills
- g. Personnel in the organization who are associated with the training activities support the application and development of newly acquired knowledge, skills and attitudes.

Evaluation

The last phase is evaluation, which in effect runs concurrently with all the previous phases, providing valuable feedback for review of the program, its design and conduct. It allows for suitable intervention should it indicate midcourse correction is necessary.



Assessment can be made in two ways - formative assessment and summative assessment.

- a) **Formative Assessment** - Depending on the training methods being used, there can be many instances where we can give trainees feedback information about their performance, which will help them to improve. It is easy for trainee to be apprehensive of committing mistakes and therefore formative assessment should be non-threatening and designed to help the trainee to learn by assuring them that making errors is part of learning process.
- b) **Summative Assessment** will produce a pass or a fail result based solely on performance, not on learning.

Summative assessment is divided into two groups namely Normative Assessment & Criterion - Referenced Assessment.

- i. **Normative Assessment** - Consider the final of the 100 meters in the any athletic meet. Eight athletes are lined up ready to race. They are the best sprinters in their respective organizations and in less than 15 seconds, results of the race are announced, with one winner, although all of them may have broken the meet records. Since the norm has been pitched at winning the race, it is 'Normative Assessment'.
- ii. **Criterion - Referenced Assessment** – Since the purpose of training should be that all the training objectives are achieved, performance improved and the problem solved. This is to strive towards a situation in which everybody achieves the standard, or criterion for success. This forms Criterion - Referenced Assessment.

Internal Validation - A series of assessments are designed to ascertain whether a training program has achieved the training objectives specified.

Internal Validation gives feedback on the quality of training and how it is implemented.

External Validation – is a process which will be used to find out whether the trainees are able to perform to a satisfactory standard. This process is likely to be done by the people concerned at organizational level.

Evaluation - Once training has been completed and its validity has also been established, the organization may now decide to evaluate investment in the entire training project. This might be done by senior management, by accountants, consultants, or by customers. Each will use what they consider to be an appropriate criterion. While doing this evaluation, it is likely that the results will also be used to evaluate the training function, as a whole.

Training intervention is powerful tool for organizations to remain relevant, competitive and future ready in the fast changing world.

Training Need Assessment

Needs assessment refers to the process used to determine whether training is necessary. This process involves organizational analysis, person analysis, and task analysis.

Organizational analysis involves determining the suitability of training, given the company's business strategy, resources available for training and support by managers and peers for training activities.

Person analysis involves determine whether performance deficiencies result from a lack of knowledge, skill, or ability or from a motivational or work-design problem, identifying who

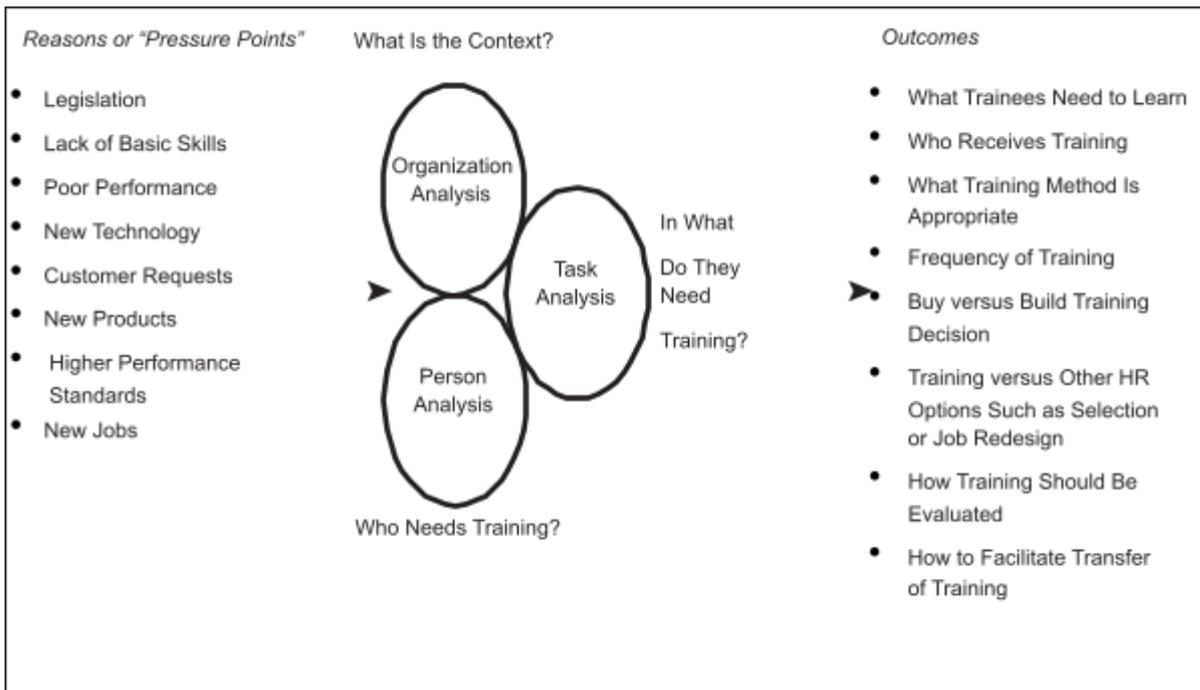
needs training and determining employees' readiness for training.

Task analysis identifies the important tasks and knowledge, skills and behaviors that need to be emphasized in training for employees to complete their task.

Importance of Need Assessment

Since needs assessment is the first step in the instructional design process it is important to understand the causes and outcomes of the need assessment process.

Causes and Outcomes of Needs Assessment



Source: Noe, R.A. (2009) Employee Training and Development. 5th Edition, McGraw Hill, Boston.

Methods used in need assessment

Technique	Advantages	Disadvantages
Observation	Generates data relevant to work environment Minimizes interruption of work	Needs skilled observer Employees' behavior may be affected by being observed
Questionnaire	Inexpensive Can collect data from a large number of persons Data easily summarized	Requires time Possible low return rates, inappropriate responses Lacks detail Only provides information directly related to questions asked
Interviews	Good at uncovering details of training needs as well as causes of and solutions to problems Can explore unanticipated issues that come up	Time consuming Difficult to analyze Needs skilled interviewer Can be threatening to SMEs Difficult to schedule

	Questions can be modified	SMEs only provide information they think want to hear
Focus Groups	Useful with complex or controversial issues that one person may be unable or unwilling to explore Questions can be modified to explore unanticipated issues	Time-consuming to organize Group members only provide information think you want to hear Group members may be reluctant to participate if status or position differences exist among members
Documentation (Technical Manuals, Records)	Good source of information on procedure Objective Good source of task information for new jobs and jobs in the process of being created	You may be unable to understand technical language Materials may be obsolete
Online Technology (Software)	Objective Minimizes interruption of work Requires limited human involvement	May threaten employees Manager may use information to punish rather than train Limited to jobs requiring interaction customers via computer or phone

Source: Noe, R.A. (2009) Employee Training and Development. 5th Edition, McGraw Hill, Boston.

The different methods of need assessment along with the advantages & disadvantages are listed above. Since no particular method of conducting needs assessment is superior to the other, multiple methods are usually used for training need assessment.

The Needs Assessment Process

Organizational analysis is concerned with identifying whether training fits with the company's strategic objectives and whether the company has the budget, time, and expertise for training so this analysis is the first step taken in organizations. Person analysis and task analysis are often conducted at the same time because it is difficult to determine whether performance deficiencies are a training problem without understanding the tasks and the work environment.

Organizational Analysis

At different levels of a company the problem is perceived differently. All stake holders involved should be involved in needs assessment. Organizational analysis involves ascertaining whether

- Training supports Company's Strategic Direction
- Managers, Peers and Employees support Training Activities
- Training Resources are available

It is necessary to identify whether the company has the budget, time, and expertise for training. If a company decides to purchase a training program from a consultant or vendor rather than build the program in-house, it is important to choose a high-quality provider. Training providers may include individual consultants, consulting firms, or academic institutions.

Person Analysis

Person analysis helps to identify employees who need training. Person analysis also helps in

understanding employees' **readiness for training** which includes

(1) The employee has the personal characteristics (ability, attitudes, beliefs, and motivation) necessary to learn program content and apply it on the job

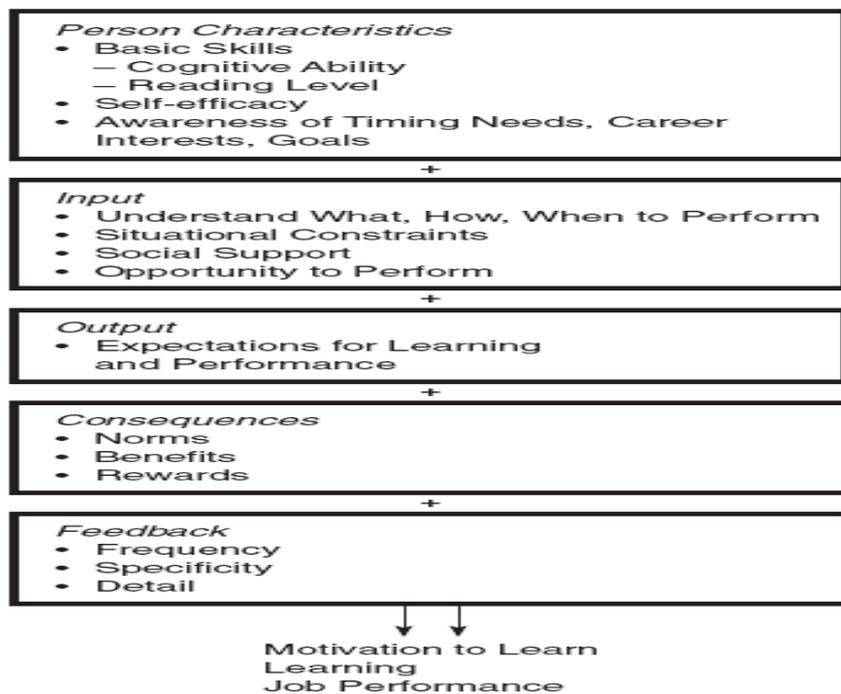
(2) The work environment will facilitate learning and not interfere with performance

A major pressure point for training is substandard performance. This is indicated by increased customer complaints, low performance ratings, or on-the-job incidents such as accidents and unsafe behavior. The other potential indicator of the need for training is change in the job and use of new technology.

Process for Person Analysis

Person Analysis involves evaluating person characteristics, input, output, consequences, and feedback

The figure shows a process for analyzing the factors that influence performance and learning.



Source: Noe, R.A. (2009) Employee Training and Development. 5th Edition, McGraw Hill, Boston.

Person characteristics, input, output, consequences, and feedback influence the motivation to learn.

Motivation to learn is the trainees' desire to learn the content of training programs. This is related to knowledge gained, behavior change or skill acquisition resulting from training. The following factors contribute to the motivation to learn and so have a relationship to performance and learning.

Person Characteristics

Basic skills refer to skills that are necessary for employees to successfully perform on the job and learn the content of training programs. Basic skills include cognitive ability and reading and writing skills.

Cognitive Ability includes three dimensions: verbal comprehension, quantitative ability, and reasoning ability. Cognitive ability influences job performance and ability to learn in training programs. If trainees lack the cognitive ability level necessary to perform job tasks they will neither perform well nor learn well.

Self-Efficacy is employees' belief that they can successfully perform their job or learn the content of the training program. Self-efficacy level of an employee can be enhanced by the manager by numerous ways.

Awareness of Training Needs, Career Interests, and Goals -To be motivated to learn in training programs, employees must be aware of their strengths and weaknesses and the link between the training program and improvement of their skill weaknesses or knowledge deficiencies. Managers can achieve this by sharing performance feedback with employees, holding career development discussions, or having employee's self-evaluate their strengths and weaknesses as well as career interests and goals. If feasible, employees need to be given a choice of what programs to attend.

Input

Employees' perceptions of situational constraints and social support are the two characteristics of the work environment that are determinants of performance and motivation to learn.

Situational constraints include lack of proper tools and equipment, materials and supplies, budgetary support, and time.

Social support refers to managers' and peers' willingness to provide feedback and reinforcement. If employees have the knowledge, skills, attitudes and behavior needed to perform but do not have the proper tools and equipment needed, their performance will be inadequate.

Output

Trainees also need to know what specifically they are expected to learn in the training program and the level of proficiency that is expected of them. The standards or the level of performance is part of the learning objectives.

Consequences

If employees do not believe that rewards for performance are adequate, they will be unlikely to meet performance standards even if they have the necessary knowledge, behavior, skill, or attitudes. Sometimes work-group norms may encourage employees not to meet performance standards. **Norms** refer to accepted standards of behavior for work-group members. Similarly employees' motivation to learn can be boosted by communicating to them the realistic potential job-related, personal, and career benefits they may receive as a result of attending training and learning the content of the training program.

Feedback

Performance problems can result when employees do not receive feedback regarding the extent to which they are meeting performance standards. Employees need to be given specific, detailed feedback of effective and ineffective performance. For employees to perform to standard, feedback needs to be given frequently, not just during a yearly performance evaluation.

Task Analysis

Task Analysis necessitate that employees possess specific levels of knowledge, skills and abilities to undertake the assigned task efficiently.

Steps in a Task Analysis

A task analysis involves four steps:

1. Select the job or jobs to be analyzed
2. Develop a preliminary list of tasks performed on the job by
 - a. interviewing and observing expert employees and their managers
 - b. talking with others who have performed a task analysis
3. Validate or confirm the preliminary list of tasks. This step involves having a group of Subject

Matter Experts (job incumbents, managers, etc.) answer in a meeting or on a written survey several questions regarding the tasks.

The person conducting the needs assessment must decide the level of ratings across dimensions that will determine that a task should be included in the training program. Tasks that are important frequently performed and of moderate-to-high level of difficulty are tasks for which training should be provided.

4. Once the tasks have been identified, it is important to identify the knowledge, skills, or abilities necessary to successfully perform each task. This information can be collected through interviews and questionnaires.

Competency Models

A **competency** refers to an area of personal capability that enables employees to successfully perform their jobs by achieving outcomes or accomplishing tasks. A competency can be knowledge, skills, attitudes, values, or personal characteristics.

Competency models actually are something like job analysis only where jobs are related to skill, level and abilities and the predominance is of the task which it is presumed can be performed by individual having those skill. However, competency model focuses on individual expertise level demonstrated in subject matter such as data handling, system architecture, data migration, documentation in specific domain etc.

Competency models are useful for training and development in several ways

- They identify behaviors needed for effective job performance.
- They provide a tool for determining what skills are necessary to meet today's needs as well as the company's future skill needs.
- They help to determine what skills are needed at different career points.
- They provide a framework for ongoing coaching and feedback to develop employees for current and future roles.

Steps in developing a competency model are as under:-

1. Consider Business strategy
2. Identify job positions and job families
3. Conduct interviews with performers in given field
4. Ascertain specific competencies for related jobs.
5. Validate and review.

Once we have the gaps known in desired competencies suitable training program can be evolved towards the same.

Conclusion

In order to remain competitive, businesses must keep themselves updated and oriented towards fast changing environment. This obviously needs productivity must remain at optimal level. Needs Assessment brings out critical skill, knowledge and abilities that should be upgraded through suitable HR intervention, in which training is one of the major tools. Care must be taken to ensure that all stake holders have correctly identified gaps in the desired level of skill, knowledge and abilities. Training without proper need assessment entails unnecessary diversion of funds and resources towards non-productive training and should be guarded against.

LEARNING THEORIES

Human resources professionals anchor the process of training and development and therefore it is essential to have a working knowledge of learning theories and processes to be able to evolve suitable training strategies. A perception of these theories help us to assess the motivation of individuals, task complexity and align them to learning process that must be

selected to ensure optimal returns on training investments and evolve the organization in a learning organization.

Definition of Learning

Learning has been defined as a relatively permanent change in behavioral potentiality that occurs as a result of reinforced practice.

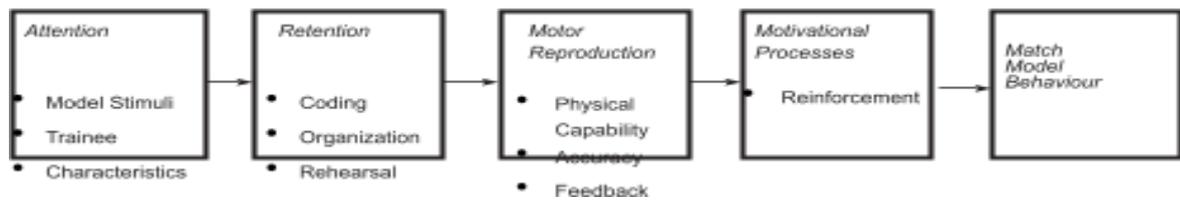
The following elaborates on this basic definition:

- (a) Learning is indexed by a change in behavior, which must be translated into observable behavior. After learning, learners are capable of performing something that they could not do before the learning experience.
- (b) This change is relatively permanent; it is neither transitory nor fixed.
- (c) The change in behavior need not occur immediately following the learning experience.
- (d) The change in behavior results from experience or practice.
- (e) The experience or practice must be reinforced. Learning a subject seems to involve three almost simultaneous processes:
 - (i) First, there is acquisition of new information - often information that runs counter to or is a replacement for what the person has previously known.
 - (ii) A second aspect of learning may be called transformation - the process of manipulating knowledge to make it fit new tasks. Transformation comprises the ways we deal with information in order to go beyond it.
 - (iii) A third aspect of learning is evaluation - checking whether the way we have manipulated information is adequate to the task.

Theories of Learning

1. **Reinforcement Theory**: Emphasizes that people are motivated to perform or avoid certain behaviors because of past outcomes that have resulted from those behaviors.
 - Processes in reinforcement theory -Positive reinforcement, negative reinforcement, Extinction and Punishment
 - The trainer needs to identify what outcomes the learner finds most positive and negative
 - Trainers then need to link these outcomes to learners acquiring knowledge, skills or changing behaviors.
 - Trainers can withhold/ provide job-related, personal, and career-related benefits to learners who master program content.
 - Behavior modification is a training method that is primarily based on reinforcement theory.
2. **Social Learning Theory**: Emphasizes that people learn by observing other persons (models) whom they believe are credible and knowledgeable.
 - The theory recognizes that behavior that is reinforced or rewarded tends to be repeated Learning new skills or behavior comes from:
 - Directly experiencing the consequences of using a behavior or skill
 - The process of observing others and seeing the consequences of their behavior
 - Person's self-efficacy can be increased using several methods
 - a. Verbal persuasion
 - b. Logical verification
 - c. Observation of others (modeling)
 - d. Past accomplishments

Processes of Social Learning Theory suggests that four processes are involved in learning: attention, retention, motor reproduction, and motivational processes as per the following diagram:-



3. Goal Theories.

- a. **Goal setting theory:** Behaviour results from a person's conscious goals and intentions. Goals influence a person's behaviour by:

- Directing energy and attention
- Sustaining effort over time
- Motivating the person to develop strategies for goal attainment
- Learning facilitated with specific challenging goals and objectives

b. **Goal orientation Theory:**

- High Learning orientation: Attention to Task
- High Performance orientation ; Attention to performing well

4. **Need Theories** : explain the value that a person places on certain outcomes. Maslow's and Alderfer's need theories focused on

- a) Physiological needs
- b) Relatedness needs
- c) Growth needs

- Need Theories suggest that to motivate learning, trainers should identify trainees' needs and communicate how training program content relates to fulfilling these needs. If certain basic needs of trainees are not met, they are unlikely to be motivated to learn. Implication of need theory relates to providing employees with a choice of training programs to attend.

5. **Expectancy Theory** :suggests that a person's behavior is based on three factors:

- Expectancies: Beliefs about the link between trying to perform a behavior and actually performing well.
- Instrumentality: Belief that performing a given behavior is associated with a particular outcome.
- Valence: Value that a person places on an outcome.
- From a training perspective, expectancy theory suggests that learning is most likely to occur when employees believe they can learn the content of the program (expectancy); learning is linked to outcomes such as better job performance, a salary increase, or peer recognition (instrumentality) and employees value these outcomes (valence).

6. **Adult Learning Theory:** developed out of a need for a specific theory of how adults learn.

Assumptions of the theory

- a) Need to know why they are learning something
- b) Need to be self-directed
- c) More work-related experiences into the learning situation
- d) Problem-centered approach to learning
- e) Motivated to learn by both extrinsic and intrinsic motivators

Implications of Adult Learning Theory for Training

- a) Design Issues - Implications
- b) Self-concept - Mutual planning and collaboration in instruction
- c) Experience- Use learner experience as basis for examples and applications
- d) Readiness- Develop instruction based on the learner's interests and competencies
- e) Time Perspective -Immediate application of content

f) Orientation to learning- Problem-centered instead of subject centered

7. **Information Processing Theory**: propose that information or messages taken in by the learner undergo several transformations in the human brain. Information processing begins when a message or stimuli (which could be sound, smell, touch, or pictures) from the environment is received by receptors (ears, nose, skin, eyes). The message is registered in the senses and stored in short-term memory. The message is then transformed or coded for storage in long-term memory. A search process occurs in memory during which time a response to the message or stimulus is organized. The response generator organizes the learners response and tells the effectors (muscles) what to do. The “what to do” relates to one of the five learning outcomes namely verbal information, cognitive skills, motor skills, intellectual skills and attitudes. The final link in the model is feedback from the environment. This feedback provides the learner with an evaluation of the response given.
8. **Gagne’s Theory of Learning** - Gagne suggests that learning tasks for intellectual skills can be organized in a hierarchy according to complexity: stimulus recognition, response generation, procedure following, use of terminology, discriminations, concept formation, rule application, and problem solving.
- The primary significance of the hierarchy is to identify prerequisites that should be completed to facilitate learning at each level. Prerequisites are identified by doing a task analysis of a learning/training task. Learning hierarchies provide a basis for the sequencing of instruction.
 - In addition, the theory outlines nine instructional events and corresponding cognitive processes:
 1. Gaining attention (reception)
 2. Informing learners of the objective (expectancy)
 3. Stimulating recall of prior learning (retrieval)
 4. Presenting the stimulus (selective perception)
 5. Providing learning guidance (semantic encoding)
 6. Eliciting performance (responding)
 7. Providing feedback (reinforcement)
 8. Assessing performance (retrieval)
 9. Enhancing retention and transfer (generalization).
 - These events should satisfy or provide the necessary conditions for learning and serve as the basis for designing instruction and selecting appropriate media.
 - While Gagne’s theoretical framework covers all aspects of learning, the focus of the theory is on intellectual skills. The theory has been applied to the design of instruction in all domains

Principles

- a) Different instruction is required for different learning outcomes.
 - b) Events of learning operate on the learner in ways that constitute the conditions of learning.
 - c) The specific operations that constitute instructional events are different for each different type of learning outcome.
 - d) Learning hierarchies define what intellectual skills are to be learned and a sequence of instruction in training.
9. **Bloom’s Taxonomy** - Bloom identified three *domains* of learning:
- a) Cognitive Domain: mental skills (*knowledge*), involves knowledge and the development of intellectual skills. This includes the recall or recognition of specific facts, procedural patterns, and concepts that serve in the development of intellectual abilities
 - b) Psychomotor Domain: manual or physical skills (*skills*)

c) Affective Domain: growth in feelings or emotional areas (*attitude*)

- Domains may be thought of as categories.
- This taxonomy of learning behaviours may be thought of as “the goals of the learning process.” That is, after a learning episode, the learner should have acquired a new skill, knowledge, and/or attitude.
- Their compilation divides the three domains into subdivisions, starting from the simplest cognitive process or behaviour to the most complex. The divisions outlined are not absolutes and there are other systems or hierarchies that have been devised.

The cognitive process dimension and knowledge dimension matrix can be understood with following matrix:-

The Knowledge Dimension	The Cognitive Process Dimension						
	Remember	Understand	Apply	Analyze	Evaluate	Create	
Facts	list	paraphrase	classify	outline	rank	categorize	
Concepts	recall	explain	show	contrast	criticize	modify	
Processes	outline	estimate	produce	diagram	defend	design	
Procedures	reproduce	give example	relate	identify	critique	plan	
Principles	state	convert	solve	differentiate	conclude	revise	
Metacognitive	proper use	interpret	discover	infer	predict	actualize	

- Those with least facility are in the first column and those with highest are in create column.
- The psychomotor domain includes physical movement, coordination, and use of the motor-skill areas.
- Development of these skills requires practice and is measured in terms of speed, precision, distance, procedures, or techniques in execution.
- Thus, psychomotor skills range from manual tasks, such as digging a ditch or washing a car, to more complex tasks, such as operating a complex piece of machinery or dancing.

Levels of Psychomotor Domain (complex to simple)

- Origination
- Adaptation
- Complex overt response
- Mechanism
- Guided
- Response set
- Perception

The Affective Domain: includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes. The five major levels are listed from the simplest behaviour to the most complex as under:-

- Receiving
- Responding
- Valuing
- Organizing
- Characterizing

The Learning Process

While learning styles show that we are all different, the learning process shows how and why we learn something. This, perhaps, is even more important than addressing the various learning styles. Although people have a preferred style, they can still learn under almost any

style. While various learning styles can make it easier or harder for a person to master a subject, if the learning process is not in place, it makes that subject almost unachievable. Therefore a badly conceived training program would run the risk of wastage of money, time and other resources without delivering tangible results. In order to be able to put in place a training curriculum that helps the organization to grow as learning organization we need to see a broad frame work of prevalent learning theories.

The Learning Cycle

Learning can be considered a dynamic cycle. Kolb's (1984) ‘Experiential Learning Style Theory’ is represented by a four stages learning cycle in which the learner goes through

- Concrete experience (Feeling): A new experience of situation is encountered, or a reinterpretation of existing experience.
- Reflective observation (Watching): Any inconsistencies between past experience and understanding of new experience.
- Abstract conceptualization (Thinking): Creating theories to explain observations. Gives rise to a new idea, or a modification of an existing abstract concept.
- Active experimentation (Doing): The learner applies them to the world around them to see what results. Using new theories to solve problems make decisions.

Learning Styles

- It is known that learning is different for every student in terms of interests, aptitude, pace and timings. A learning style is a consistent way of responding to and using stimuli in the context of learning. Achieving a solid learning environment that meets the student’s need, rather than their styles seems to be the most important key for effective learning.
- The following table shows the characteristics and dominant learning stage of the four types of learning style namely Divergers, Assimilators, Convergers, and Accommodators. These learning styles combine elements of each of the four stages of the learning cycle.

<u>Learning Style Type</u>	<u>Dominant Learning Abilities</u>	<u>Learning Characteristics</u>
Diverger	Concrete experience Reflective observation	Is good at generating ideas, seeing a situation from multiple perspectives, and being aware of meaning and value Tends to be interested in people, culture, and the arts
Assimilator	Abstract conceptualization Reflective observation	Is good at inductive reasoning, creating theoretical models combining disparate observations into an integrated explanation Tends to be less concerned with people than with ideas and abstract concepts
Converger	Abstract conceptualization Active experimentation	Is good at decisiveness, practical application of ideas, hypothetical deductive reasoning Prefers dealing with technical tasks rather than interpersonal issues
Accommodator	Concrete experience Active experimentation	• Is good at implementing decisions, carrying out plans, getting involved in new experiences Tends to be at ease with people but may be seen as impatient and pushy

Source: Based on D. Kolb, Learning Style Inventory, Version 3 (Boston, MA: Hay/McBer Training Resources Group, 1999).

Learning Outcomes

Type of Learning Outcome	Description of Capability	Example
Verbal Information	State, tell, or describe previously stored information	State three reasons for following company safety procedures
Intellectual Skills	Apply generalizable concepts and rules to solve problems and generate novel products	Design and code a computer program that meets customer requirements
Motor Skills	Execute a physical action with precision and timing	Shoot a gun and consistently hit a small moving target
Attitudes	Choose a personal course of action	Choose to respond to all incoming mail within 24 hours
Cognitive Strategies	Manage one's own thinking and learning processes	Selectively use three different strategies to diagnose engine malfunctions

Implications of the Learning Process for Instruction

Instruction refers to the trainer's manipulation of the environment in order to help trainees learn. The features for a positive learning environment need to be incorporated into programs or a specific method of training like lectures, e-learning, or on-the-job training needs to be used for instruction. The features of good instruction that facilitates learning are

1. Employees Need to Know Why They Should Learn

Employees learn best when they understand the objective of the training program. The **objective** refers to the purpose and expected outcome of training activities. There may be objectives for each training session as well as overall objectives for the program. Objectives are also useful for identifying the types of training outcomes that should be measured to evaluate the effectiveness of the training program.

A training objective has three components:

- A statement of what the employee is expected to do (performance or outcome).
- A statement of the quality or level of performance that is acceptable (criterion).
- A statement of the conditions under which the trainee is expected to perform the desired outcome (conditions).

2. Employees Need Meaningful Training Content

Employees are most likely to learn when the training is linked to their current tasks so that it is meaningful to them. The meaningfulness of training content can be enhanced by using concepts, terms and examples familiar to trainees and the training context emulating the work environment. The **training context** refers to the physical, intellectual, and emotional environment in which training occurs.

3. Employees Need Opportunities to Practice

Practice refers to the physical or mental rehearsal of a task, knowledge, or skill to achieve proficiency in performing the task or skill or demonstrating the knowledge. For practice to be effective, it needs to actively involve the trainee, include overlearning (repeated practice), take the appropriate amount of time, and include the appropriate unit of learning (amount of material). Practice also needs to be relevant to the training objectives.

Pre-practice Conditions

There are several steps trainers can take within the training course prior to practice to enhance trainees' motivation to learn and facilitate retention of training content. Before practice,

trainers can

- a) Provide information about the process or strategy that will result in the greatest learning.
- b) Encourage trainees to develop a strategy (metacognition) to reflect on their own learning process. **Metacognition** refers to individual control over one's thinking. Two ways that individuals engage in metacognition are through monitoring and control. Metacognition helps trainees monitor learning and decide what content needs more energy and attention.
- c) Provide **advance organizers**—outlines, texts, diagrams, and graphs that help trainees organize the information that will be presented and practiced.
- d) Help trainees set challenging learning goals.
- e) Create realistic expectations for the trainees by communicating what will occur in training.
- f) When training employees in teams, communicate performance expectations and clarify roles and responsibilities of team members.

Practice Involves Experience Learning will not occur if employees practice only by talking about what they are expected to do. Training should involve an active learning approach in which trainees must explore and experiment to determine the rules, principles, and strategies for effective performance.

Trainees need to continue to practice even if they have been able to perform the objective several times (**overlearning**). Overlearning helps the trainee become more comfortable using new knowledge and skills and increases the length of time the trainee will retain the knowledge, skill, or behavior. The common belief is that we learn most from our errors.

Error management training refers to giving trainees opportunities to make errors during training. In error management training, trainees are instructed that errors can help learning, and they are encouraged to make errors and learn from them. Error management training is effective because it provides the opportunity for trainees to engage in metacognition, that is, to plan how to use training content, to monitor use of training content, and to evaluate how training content was used.

Massed versus Spaced Practice -The frequency of practice has been shown to influence learning, depending on the type of task being trained. **Massed practice** conditions are those in which individuals practice a task continuously without rest. Massed practice also involves having trainees complete practice exercises at one time within a class versus distributing the exercises within the lesson. In **spaced practice** conditions, individuals are given rest intervals within the practice session. Spaced practice is superior to massed practice. However, the effectiveness of massed versus spaced practice varies by the characteristics of the task. **Task characteristics** include overall task complexity, mental requirements, and physical requirements. **Overall task complexity** refers to the degree to which a task requires a number of distinct behaviors, the number of choices involved in performing the task, and the degree of uncertainty in performing the task. **Mental requirements** refer to the degree to which the task requires the subject to use or demonstrate mental skills or cognitive skills or abilities to perform the task. **Physical requirements** refer to the degree to which the task requires the person to use or demonstrate physical skills and abilities to perform and complete the task. For more complex tasks like Web-based instruction long rest periods appear to be beneficial for task learning. To enhance learning trainees need specific feedback. This includes feedback

from the task or job itself, trainers, managers, and peers.

Whole versus Part Practice – Whole practice is that all tasks or objectives should be practiced at the same time while **Part Practice** is that an objective or task should be practiced individually as soon as each is introduced in the training program . It is probably best to employ both whole and part practice in a training session.

Effective Practice Conditions -To make practice relevant it must involve the actions emphasized in the training objectives, be completed under the conditions specified in the training objectives, help trainees perform to meet the criteria or standard that was set, provide some means to evaluate the extent to which trainees' performance meets the standards, and allow trainees to correct their mistakes.

4. **Employees Need to Commit Training Content to Memory**

To create long-term memory, training programs must be explicit on content and elaborate on details. There are several ways to create long-term memory.

- A. Create a concept map to show relationships among ideas.
- B. Use multiple forms of review including writing, drawings, and role plays to access memory through multiple methods.
- C. Teaching key words, a procedure, or a sequence, or providing a visual image gives trainees another way to retrieve information.
- D. Reminding trainees of knowledge, behavior, and skills that they already know that are relevant to the current training content
- E. External retrieval cues can also be useful.
- F. Making trainees review and practice over multiple days (overlearning) can help them retain information in long-term memory
- G. **Automatization** refers to making performance of a task, recall of knowledge, or demonstration of a skill so automatic that it requires little thought or attention. Automatization also helps reduce memory demands. The more active a trainee is in rehearsal and practice, the greater the amount of information retained in long- term memory and the less memory decay occurs over time.

5. **Employees Need Feedback**

Feedback is information about how well people are meeting the training objectives. To be effective, feedback should focus on specific behaviors and be provided as soon as possible after the trainees' behavior. Trainers should view the videotape with trainees, provide specific information about how behaviors need to be modified, and praise trainee behaviors that meet objectives. Feedback can also come from tests and quizzes, on-the-job observation, performance data, a mentor or coach, written communications, or interpersonal interactions.

6. **Employees Learn through Observation, Experience, and Social Interaction**

According to adult learning theory, employees also learn best if they learn by doing. This involves giving employees hands-on experiences or putting them with more experienced employees and providing them with the tools and materials needed to manage their knowledge gaps.

Learning also occurs through interacting with other trainees in small groups during the training session as well as back at work.

Problem-based learning may be useful for stimulating and holding trainees' attention.

Communities of practice refer to groups of employees who work together, learn from each other, and develop a common understanding of how to get work accomplished. The idea of communities of practice suggests that learning occurs on the job as a result of social interaction

The drawbacks are

- A. Since participation is often voluntary, so some employees may not share their knowledge unless the organizational culture supports participation
- B. Employees may receive so much information (information overload) that they fail to process it.

7. Employees Need the Training Program to Be Properly Coordinate and Arranged

Training administration refers to coordinating activities before, during, and after the program. Training administration involves:

- A. Communicating courses and programs to employees.
- B. Enrolling employees in courses and programs.
- C. Preparing and processing any pre-training materials such as readings or tests.
- D. Preparing materials that will be used in instruction (e.g., copies of overheads, cases).
- E. Arranging for the training facility and room.
- F. Testing equipment that will be used in instruction.
- G. Having backup equipment (e.g., paper copy of slides, an extra overhead projector bulb) should equipment fail.
- H. Providing support during instruction.
- I. Distributing evaluation materials (e.g., tests, reaction measures, surveys).
- J. Facilitating communications between trainer and trainees during and after training (e.g., coordinating exchange of e-mail addresses).
- K. Recording course completion in the trainees' training records or personnel files.

Good coordination ensures that trainees are not distracted by events that could interfere with learning.

Consideration for designing an effective training program

The steps involved in designing effective training programs include selecting and preparing the training site, selecting trainers, creating a positive learning environment and program design.

A. Selecting and Preparing the Training Site

The **training site** refers to the room where training will be conducted.

Details to consider when evaluating a training room

1. Noise
2. Colours
3. Room structure'
4. Lighting
5. Wall and floor covering
6. Meeting room chairs
7. Glare
8. Ceiling
9. Electrical Outlets
10. Acoustics
11. Seating arrangements – Fan type seating, Classroom type seating, Conference type seating & Horseshoe arrangements.

B. Choosing Trainers

How trainers can make the training site and interaction conducive to learning?

- Creating a Learning Setting will involve matching the training rooms and learning requirements
- Preparation for class
- Classroom management
- Interacting with trainees
- Dealing with Disruptive trainees
- Managing group dynamics
- Program design refers to the organization and coordination of the training program. A training program may include one or several courses. Each course may contain one or more lessons. Program design includes considering the purpose of the program as well as designing specific lessons within the program. Effective program design includes a design document template, a course or lesson plan, and a course or lesson plan overview.
- Design Document - can be used to guide the development of training and to explain the training to managers, subject matter experts, reviewers, or other trainers
- Course or Lesson Plan is more detailed than the design document. The **detailed lesson plan** translates the content and sequence of training activities into a guide that is used by the trainer to help deliver the training.

The Learning Organization

A learning organization is an organization that has an enhanced capacity to learn, adapt, and change. Training processes are carefully scrutinized and aligned with company goals. In a learning organization, training is seen as one part of a system designed to create human capital. Learning organization emphasizes that learning occurs not only at the individual employee level (as we traditionally think of learning), but also at the group and organizational levels. The learning organization emphasizes knowledge management.

Key Features of a Learning Organization

- Supportive Learning Environment
- Employees feel safe expressing their thoughts about work, asking questions, disagreeing with managers, or admitting mistakes.
- Different functional and cultural perspectives are appreciated.
- Employees are encouraged to take risks, innovate, and explore the untested and unknown, such as trying new processes and developing new products and services.
- Thoughtful review of the company's processes is encouraged

Learning Processes and Practices

- Knowledge creation, dissemination, sharing, and application are practiced.
- Systems are developed for creating, capturing, and sharing knowledge.
- Managers Reinforce Learning
- Managers actively question and listen to employees, encouraging dialogues and debate.
- Managers are willing to consider alternative points of view.
- Time is devoted to problem identification, learning processes and practices, and post-performance audits.
- Learning is rewarded, promoted, and supported.

Senge's Five Disciplines of Learning organization

Peter Senge addresses the question how today's organizations can experience continuous growth to perform better than its competitors. He suggests that instead of visualizing a traditional hierarchy, today's organizations can survive when it succeeds in creating a learning organization. An organization where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free and where people are continually learning how to learn together. Senge's learning organization describes how to manage the success and development of an organization and how employees give the extra mile that goes beyond the expectations of the company. The five disciplines of learning organizations are as follows:

- Building a Shared vision
- Systems Thinking
- Mental Models
- Team Learning
- Personal Mastery

Conclusion

The pace of change in the business environment is accelerating with the progress in communications, computing and globalization. In the long run only those who are able to evolve and become a learning organization will survive. This obviously is a challenge for human resource professionals, and they need to laydown pragmatic training policies to achieve this.