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# Practical Manual on

# Training and Human Resource Development


**Dr. Antwal P. N.**

Senior Scientist, AICRP (Home Science)

**Department of Community Extension and Communication Management**

**College of Community Science**

**Vasantrao Naik Marathwada Krishi Vidyapeeth**

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# College of Community Science
# Vasantrao Naik Marathwada Krishi Vidyapeeth
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## CERTIFICATE

*It is to certify that this is record of the practical work carried out by*

.....

*Reg. No.....* (CECM 244) *in the course of* **Training and Human Resource Development** *during* **IV^th^** *Semester* **II^nd^ Year** *B.Sc.(Hons.) of Community Science.*

**Course Professor** **Student**

**External Examiner** **Head**

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# Setting Training Objective

**Definition**

The training objectives of a particular training programme are the statement of desired end product to be achieved through training programme.

**Introduction**

It should clearly spell out the type of changes or desired end product, when they will be attained and finally how will be measured to determine the level of success. In convening needs into objectives, three areas of performance may be focused on i.e. skills, knowledge and attitude.

**A Training Objective must be**

- Well defined.
- Directly related to ones job.
- Able to define a change that is measurable.
- Clearly specifying end-results.
- Achievable in its stipulated time.
- based on training needs of the trainees.
- Specific and precise
- Able to identify and enlist criteria against which success can be measured or judged.

**Training objective must be SMART**

- Simple
- Measurable
- Attainable
- Realistic
- Time-bound

**Purpose of a training objective is to**

- Create awareness
- General interest
- Motivate learning
- Impart knowledge
- change attitude
- generate skills

**ABCD in** determining the:

**A**udience who are to be trained.

**B**ehavior i.e. type of change you expect in the trainees behavior.

**C**ondition i.e. under which conditions you expect this change to occur in.

**D**egree i.e. how much change you expect

**Exercise**-Student will discuss concepts related to training objectives and frame the training objectives

# Hands on Experience with Training Need Analysis

Training is an important input in improving professional competence of extension personnel. An effective and purposeful training should be based on training needs of extension personnel. Needs may be conceived of as a gap between existing situation and another,under "ideal" or "desirable" conditions. A training need is said to exist when a "gap"between the work performance of an individual or organization and "desired"level of competency is perceived.

The training need of extension personnel is defined in terms of gap between their job requirement and the job performance. The training is a planned communication process for the extension functionaries which bring out desirable changes in knowledge (K), attitude (A) and the skills (S) in relation to the specific objectives. Training needs may be assessed in terms of gaps between the needed 'KAS' and the performance level of the extension worker. Therefore, training is required when the worker lacks in 'KAS' necessary to perform their job task according to established objectives and standards. Training needs assessment(TNA)refers to the process whereby such needs are indicated,priortised and selected for specific action as part of the training programme.TNA is an integral part of the training cycle and an indispensable elements in the overall planning process.TNA identifies the gap between "what is" and "what ought to be".A systematic needs assessment is a comprehensive process involving -deciding the target population\ beneficisries, defining and identifying needs, measuring competancy/short-comings, prioritising between them and^ setting training objectives in the light of assessment findings. The training need can be assessed by :

i) an individual himself
ii) assessment by supervisor
iii) assessment through structured set of questionnaires.

A determination of training need can run the spectrum from a very simple question ("What do you think we need most") to a complex research design. Some of the more commonly used types of analysis includes:

- Informal interviews
- Survey method
- Group conference
- Examination of records
- Observation
- Formal interviews
- Reports from superiors
- Advisory Committees

- Check list
- Questionnaires
- Management requests
- Formal research

National Workshop on "Planning of Agricultural Extension Training" held from January 23-25, 1990 introduced the simple technique of Training Need Assessment for formulating (a) the State Training Plan at the State level and (b) Planning training course at Institutional level. To simplify the task, Simple Approach to Training Needs Assessment (SATNA) has been suggested. This approach has a sequence of simple and pragmatic steps for identifying the training needs. It can be done in a short time and need not delay the implementation schedule of training. The steps of SATNA are as follows:-

i) Problem identification
ii) Job description (proposed solution)
iii) People identification j
iv) KAS identification
v) Analysis of trainees'KAS'
vi) Disparity identification
vii) Prioritising of discrepencies of suit:

- available trainers
- available time
- available training resources (money, material & manpower etc.)

As mentioned above, it is advisable to establish those problems that can be solved by training people. One problem at a time should be identified and then it should be worked out through all the different steps. There may be some overlapping of content area or repetition of similar learning experience but these can be synthesized together during the final stages of preparing the training curriculum. Other complicated problems that cannot be solved by training should be left for solving by other means.

In conclusion, SATNA is a simple and pragmatic approach for performing training need assessment. It also produces ogeraUve results which will create a dynamic and compelling process suitable for all problems oriented training programme.

# Hands - on Experience on training Methods

## A. Lecture Method

**Introduction**

- The introduction has also to be simple, clear and motivating to the participant. In addition the spoken words could also be supplemented by audio-visual aids for greater impact on the participants.
- To introduce a lecture effectively, a trainer could conveniently use the individual introduction which normally precedes a lecture.

**Definition**

- A lecture thus may now be defined as a carefully prepared oral presentation of a subject by a qualified person to group of participants it may be supplemented with audio-visual aids and question and answer session.

**Components of lecture method**

- Introduction
- Body of lecture
- Conclusion

**Key Elements of Lecture**

- The lecturer himself
- His style of lecturing
- His language level &language skills
- The duration of the lecture
- The physical setting
- The size of the audience
- The background& the intellectual level of the audience & their interest in the subject

**Advantages**

- It is easily accessible to anyone who want to makes use of it.
- Emotional expression through lectures results in desired attitudinal change in the participants.
- It can be used when class room time is limited.
- Flexibility in choosing a venue is also an advantage of this method.
- It offers an opportunity for listening which is easier than reading for many people

**Limitations**

- It is not a participative method.
- It is not useful for a small group.
- It is unsuitable for presenting material familiar to the audience.
- Effective lecturing necessities a strong background of rich vocabulary and command over grammar.
- Except for the school environment, it fails to appreciate the participant actual job environment.
- It does not allow for individual difference.

## B. Microlab

**Definition**

- A micro lab is a package of exercises organized at the beginning of any programme to provide a glimpse of all aspects of the training likely to be covered.
- It is a combination of physical activity and small group interactions amongst the participants.
- Its broad aim is to help the participants overcome barriers due to status position, consciousness, unfounded fears, complexes, etc.
- It is used as an unfreezing exercise helping the participants to unlearn some of their attitudes and behaviors and gain an understanding of the group, the trainers and the training programme. Micro lab serves as a very useful exercise especially with adult learners as it helps them unfreeze, builds and breaks their expectations, creates an informal atmosphere that helps in better interactions, stimulates the participants to think, helps them go back and forward in their life/work situation and above all it provides for an introduction of participants to the training programme.

**Unfreezing**

- To be able to get the maximum out of a programme, the participants must feel at ease.
- They should be psychologically prepared for it through some quick exercises that help them forget, for sometime at least, their formal position and inhibitions they may have and unlearn several such things that are likely to hinder their learning.
- The exercise should be such that motivates them to completely get involved in the programme. The curiosity should be built up to set them thinking.

**Breaking and Building Expectations**

- The trainees usually come with some expectations. If their expectations are not met the entire training programme becomes an exercise in futility.
- Micro lab helps in breaking some of the expectations that trainees may have,
- *e.g.,* some trainees may have come with the expectations that the training programme will be a package full of information and new research findings, filled with lectures from experts who have vast knowledge and experience and the programme will provide total guidance and solutions to problems they are faced with in their work situation. The farfetched unrealistic expectations can affect the entire learning process.
- Since learning is influenced by expectations, micro lab can be used to build up realistic expectations that would ultimately motivate the participants to learn.
- It provides an opportunity to carry home the message that the participants cannot merely be passive.
- They will not be provided any ready-made solutions it will facilitate them in thinking through their problems and jointly arriving at solutions.
- The duration of micro lab should not be too small, *i.e.,* half an hour or less and should not be too long

**Some sample activities of the micro lab could be:**

- Walk around
- Form into pairs; introduce yourself without using your name and your designation
- Walk around
- Form into new pairs, look into each other's eyes, introduce yourself non-verbally
- Walk around
- Form into new pairs, talk to each other about your hobbies
- Move backwards
- Form a triad, share with each other one significant incidence of your childhood
- Hop around
- Form into new pairs and share with each other two things you consider to be your strength
- Walk as fast as you can
- Form into new pairs, share one thing you learnt from your parents or teachers, walk slowly
- Greet each other while walking form into triad
- Tell the group the qualities that strike you most in a trainer
- Run in a circle holding hands, stop and walk across forming a pair with the person you are facing, share with your partner your goals in life
- Walk around with eyes closed
- Form into triads
- Talk about the trainer who has impressed you most
- Like this a series of exercises can be continued depending upon the objectives you have planned to achieved

At some point, the trainer will notice some kind of anxiety amongst the trainees as to the purpose of these exercises. The trainer need not explain. However, the trainer may raise the following questions addressing them to the group and/or the individuals.

- How do you feel?
- What you think could be the purpose of such activities?
- What are you gaining from such an experience?
- To what extent you felt involved?
- What made you do it?

When the trainer invites opinion the participants themselves explain some of the basic intentions behind these exercises.

At this point, it is important that the trainer does not explain rather lets the group find answers from amongst themselves.

At the close of the micro lab, however, the trainer may share with the participants the rationale of some items.

The experience of free and frank sharing of views during micro lab can be later cited by the trainers in some of the training modules.

**Micro lab conducted**

- Walk around
- Form group of two.
- Share with your partner how you find this place (Indian Agricultural Research Institute)
- Move around with your arms open see that you don't hurt anyone.
- Form into pairs
- Share with your partner about any childhood mischief
- Move backwards
- form into pairs
- Tell about your childhood experience that has influenced you most
- Hop around
- form triads
- Talk about any person and his qualities that you admire most
- Hold hands-move in a circle stop, move to the person facing you on opposite side.
- Share with each other two qualities you consider are your strengths
- Hands behind walk like a philosophy
- form into triad
- tell about your weakness that you dislike in yourself or you want to overcome
- Walk briskly
- form triads
- Share with your partner one strength of the organization you work.
- run around
- Form into pairs.
- Share with your partner the most serious shortcomings of your organisation you have experienced.
- Go to the board write one word that describes you the best and one word for your organization.
- Move around
- Form pairs of four
- Share strength of the farmers/tribal you work with.
- Walk around
- Share weaknesses of the farmers/tribal's you work with.
- Walk around
- Form trials
- Share your achievements in your area of work

**Advantages**

- The micro lab helps improve the level of interaction. Conducted in an informal setting with well thought of exercises, the individual participants find it easy to shed some of their complexes of status position.

- They get to know about each other much beyond their official status. The activities carried out in the micro lab help them interact in fast changing small groups usually in diads and triads.
- The activities of a micro lab often arouse curiosity in the minds of the participants as to what next? The activities like running, hopping and behaving like kids make them wonder what it is all about.
- Micro lab provides an experience, a taste of things to come
- The participants become aware that their programme includes not just lectures but several other methods like role play, group discussion, games, problem analysis, etc.
- Micro lab can be organized for any number of trainees.

**Limitations**

- It can be conducted properly only when large space is available for physical movement, preferably in an unstructured space which does not impose limitations to movement and inter-group interaction.
- The space should be large enough for a number of small groups to interact without disturbing each other.
- Besides space, timing is also an important aspect for organizing an effective micro lab. Ideally, afternoons or evenings an; most suited for micro lab and it is best to end the day with micro lab so that adequate gap is given between micro lab and the first technical module of the training.

## C. Case Study

**Definition**

Case study method is an excellent medium for developing analytical skill which is started by Harvard Business School.

**Nature**

1. Case study is a method of narrative account of a series of events of specific problem.
2. It is written description of an actual situation which provokes in the learner's need what is going on.
3. It is essentially a problem of identification , problem of solving activity

**Scope**

1. Case study is main focusing on thinking talking and deciding about the ways of solving problem.
2. This technique used for the learners in developing analytical and problem solving skill
3. It provides a learning situation which depends on involvement and participation in group discussion

**Details of case study method - Construction**

It starts with the identification of what the trainers want the participants to learn. Then a situation, tasks a time period of the case study are selected the following guidelines-

1 A case study is a description of a specific situation near to reality.
2 The focus of the case study is on experience.
3 Case studies emphasize the particular situation
4 The participants should feel that they have had the experience that the case study describes.
5 If it is used well then participant get the habit of making decisions.
6 To make good decision, all the factual material in the case study should be used.
1 Case studies are best when they are as close to reality as possible and with opportunity for differences of opinion.

**Writing**

1. Case study should depend on the objectives and the practical utility.
2. Length, detail, method of presentation, literary standards and style, should be subordinated to these two major criteria.
3. Case study should have an introduction of a body and a conclusion.
4. Different questions are asked under various sections which are useful for writing case studies.

**Introduction**

1. Where is the situation occurring and in what context? (This sets up the framework for the problem the case study would be addressing)

2. Who are the major character and what is there relationship to each other ?
3. What is the situation of these characters at the beginning of the case ?
4. What are their thoughts and feelings about these issues?

**Body**

1. What problem situations are developing?
2. What events and factors are contributing to the problems?
3. Where the major characters are what are they doing?
4. Are there minor characters that are now entering the picture?

**Application**

Case study involves group discussion for success. For choosing the right case study trainer would be used the following questions for analysis.

1. What are the main issues?
2. Why are the issues important?
3. What precisely are his objectives?
4. How realistic are the actions proposed?
5. What are their possible effects

**Analysis**

Individually where individuals discuss and analyze as a team in both cases. The main purpose of the case study is to stimulate discussion and bring out key issues.

1. Begin by asking questions directed towards the analytical task that has been given.
2. Then invite comments from others on the ideas presented, agreement, disagreement, different perspective etc.
3. The trainer would then move to another group to hear their response to the analysis task or if working with total group without sub-groupings

**Advantages**

1. It enables the pooling of the experiences of a group of participants.
2. It distributes knowledge and facts.
3. It promotes the process of synthesis of several concepts and principles.
4. The case study method helps in group co-operation and improves interpersonal skill.

**Limitations**

1. It takes more time compared to more direct, expositive teaching methods.
2. It requires more engaged person in processing of the general principles involved.
3. It requires special skills & expert knowledge on the part of the trainer

**Conclusion**

- What is the status of the problems now?
- What are the major/ minor characters doing and what are their thoughts & feeling?
- What has happened to the relationship between the major characters?
- How can the ending occur in such a way as to allow for differing interpretations?

## D. Brainstorming

A New Generation Training Method

**Introduction**

- Brainstorming is the only method which attempts at eliciting the creative response from the participants.
- It is a method of instruction is of recent ORIGIN it started when the US space scientists were working on the design of a space-suit for astronauts, the scientists invited scholars from specialization to express their ideas without any inhibition and even when the ideas seemed very silly.
- To their surprise a biologist's ideas in designing a space suits was most appropriate. It got accepted because there are inputs where the participants learns maximally by expressing ideas freely and without any sort of inhibition

**Components of brainstorming**

1. THE TRAINER: Expected to know pros and cons the method he also has to know the learning input for which he is employing that method
2. THE RECORDER: Should engage one recorder to note all the observations of the participants therefore the recorder forms the second component of the method
3. THE PARTICIPANTS: Are another component of the method they are the people for whom the method is employed to achieve desired learning objectives.
4. **Theme** of discussion next component of the brain storming method. What should be the nature of the theme and how should it be selected.

**Session of brainstorming**

- THE GREEN SESSION: In which the participants are expected to express their ideas without thinking about the reaction of others to what they speak.
- THE RED SESSION: In this session the ideas are recorded and taking up one idea from the recorded store are discuss.

**Advantages of brainstorming**

1. It creates an atmosphere for free expression of ideas.
2. It helps to develop creativity in an individual.
3. It provides the opportunity of free thinking and free expression for generating creative ideas.
4. This process helps develop higher cognitive abilities of participants.
5. This method also helps develop certain affect attributes like taking initiative by not becoming nervous, controlling emotion while discussing and so on.
6. Making seating arrangement for this method is not difficult.
7. It is most useful in case of any emergency situation where a quick and creative decision

has to become from a group.

8. In this method trainer does not depends upon gadgets or many co-trainers for completing the formalities of the method.

**Limitations of brainstorming**

1. The content which is informative in nature cannot be taken through it.
2. The method is not suitable for chronological young age.
3. A dynamic trainer essential to employ method successfully.
4. Proper recording is essential, without a proper and effective recording; the method is bound to fail.
5. In which it is very difficult initially to convince the participants that they could speak freely.

## E. Panel Discussion

**Nature & scope**

1. Panel discussion method is one of the training methods when a small group of panelists presents divergent views on some issues worth deliberating.
2. Panel should consist of three or more experts often skilled in various fields.
3. The foremost component is the panel of this method & the trainer is another component, the third component is audience.

**Theme for presentation in panel discussion**

1. Theme is an important factor for presentation.
2. Theme is completely informative.
3. Theme which can elicit different viewpoints.
4. Inver gent views and discussion are necessary for ex. "Priority to family planning in India."

**Modus operandi of panel discussion**

1. Selection of topic.
2. Arrange experts & form the panel.
3. The selection of the panel has to be done with utmost care.
4. The experts should be subject specialist.
5. The panel members are to be adequately briefed about their role.
6. The trainer has also to help the experts in getting access to relevant material which would enrich their level of awareness and expertise on the topic.
7. Appropriate sitting arrangement & other facilities.
8. The discussion by the panel members continues for about 50% of the time allotted for the whole session.
9. The trainer should invite the participants to ask questions & the panel members should reply.
10. The trainer tries to formally announce the ending.

**Advantages**

1. It provides the divergent & divers views on the same topic instead one view.
2. It stimulates the thinking of the participants & develops the higher cognitive attributes of the participants.
3. Another advantage is panelists could be selected from the group of participants.
4. Participants get richly benefited by the interaction process that generates spontaneous academic exchanges.
5. Any type of content can be treated meaningfully.

**Limitations**

1. The panelists fail to deliver the goods the method fails & the trainer obviously helpless in such a situation.

2. Panelists can do nothing if topic is not suitable one, a wrong choice of topic can spoil the whole programme.
3. Any sort of communication gap may disturb the participants.
4. The trainer's competence will have disastrous effect on the participants.

**Conclusion**

1. The method may appear somewhat similar to seminar method, but it is not so.
2. The instructional objectives of different for both methods.
3. The view points of a numbers of experts are presented in argumentative style.
4. To successfully conduct a panel discussion method, the trainer should be competent enough; the panelists should be genuinely experienced.
5. All the arrangement has to be done very systematically to get the desired effect.

## F. Role -Play

**Introduction**

- Role –play method is one of the simulation methods used in training executives.
- This training method is widely used trainers in management and technical training organizations.
- The trainer is behind the whole thing in the role-play method.
- The trainer also explains to they are supposed to do when the role-play is done and after.

**Trainer's Role**

To start with, the trainer decides the input for which role- play method is appropriate.

- The trainer carefully studies the instructional objectives of each input in the programme and chooses the input which would have maximum impact on the participants.
- After deciding the input, the trainer prepares the role-briefs for each role to be played by the participants.
- The trainer is to give an introductory lecture or better we may say a lecture by explaining the purpose of using role play means as the participants might not know this very clearly.
- The trainer selects the participants who would play the roles. Those selected participants are taken out of the class room and briefed adequately regarding their roles the briefing is done both orally and by the brief.

**Role players**

- The role players are also allowed to discuss among themselves for a brief period if they desire so. Before that the trainer may entertain question from for clarification regarding their roles.

**Observers**

- The trainer instructs the participants to observe the role play objectively and note down some points worth discussing later.

**Role playing**

- The role players are brought in and the role play starts and continues till the trainer announces that the time allotted for the activity is over.
- However, time allocation for the role play is not a very rigid schedule but a flexible one .the trainer intervenes at times during the role play session to make certain interaction clear for the participants.
- The role play as such comes to an end discussion on what has been played follows.

**Discussion**

- The discussion becomes very lively because of the wholehearted involvement of the participants and the trainer who conducts the session.
- The discussion session following the role play has a unique feature in intensity of involvement as a result of the direct exposure the participants get to some situation and concepts instead of the exposure to theoretical presentation.

**Advantages**

- The participants experience the roles directly either as players or as observers instead of studying the same theoretically.
- The participants develop certain skills which would otherwise be difficult to be developed through theoretical reading.
- Role play method also helps in developing sensitivity and to acquire insight the problems of human relation.
- There is involvement, of participants because of the role played by participant.
- Role play gives a change to the participants to experiment with new idea.

**Limitation**

- The trainer is not clear about the instructional objectives and suitability of the content to be treated through role play and simply uses the method for the sake of using the method.
- The trainer has to prepare the role briefs clearly and precisely.
- The participants to play the role sometimes require oral briefing from the trainer.
- Selection of participants for the roles is also another tricky situation.

## G. Experiential Learning

**Introduction**

- Training is a systematic attempt for acquisition of skills.
- The final aim of training is achievement of learning objective.
- Among various methods used for training experiential learning is one of the powerful and widely used techniques

**Meaning and definition**

- Experiential learning is the process of making meaning from direct experience i.e learning from self experience.
- It is learning through '*reflection on doing*' which is often contrasted with rote or didactic learning.
- It is learning through observation & interaction with around environment as opposed to reading about it.
- Self experience of learners leads to desired learning objectives

Ex.going to zoo & learning about animals is beneficial as it provides learning through interactions and observations with environment as opposed to reading about animals in books

- Experiential learning focuses on the learning process for a individual.
- Experiential learning can exist without a teacher and relates solely to the 'meaning making process' of the individual's direct experience
- According to David A. Kolb, an American educational theorist, knowledge is continuously gained through both personal and environmental experiences.
- He states that in order to gain genuine knowledge from an experience, certain abilities are required:
- The learner must be willing to be actively involved in the experience;
- The learner must be able to reflect on the experience;
- The learner must possess and use analytical skills to conceptualize the experience; and
- The learner must possess decision making and problem solving skills in order to use the new ideas gained from the experience.

**Kolb's experiential learning theory** (learning styles) model

- Kolb's learning theory sets out
- Four distinct learning styles (or preferences), based on a 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 *individual people's different learning styles,* and also
- An explanation of a *cycle of experiential learning that applies to us all.*

**Diagrams of Kolb's learning styles**

## H. Workshop

**Introduction**

The place or venue where some manual work is done

**Definition**

When it is use as a training method it can be defined as "work done with full involvement in problem solving and designing activities which need not to be manual but intellectual in nature "

**Component of workshop method**

1. Trainer: Director of workshop one who conduct proceedings.
2. Consultant or co- trainers: To actively co-operate with trainer and it help him to handle workshop
3. Participants: The one senior official sufficiently mature to use workshop method. These officials prefer to attend a workshop rather than undergo a training program because of the normally they feel uneasy to get trained by some body and feel satisfied when it is called a workshop
4. Theme: It should provide a scope for participant to work out something substantially and through practical involvement.
5. Venue: It has specific importance as all the participants will be actively working.

**Modus operandi of conducting workshop**

- Trainer has to select the theme first, that is suitable for workshop and it is strongest deciding factor.
- Theme should, actively involve the participants to practically work and develop something.
- After selection of theme trainer has to orient co-trainer about it.
- Trainer need to organize and systematically arrange the material he requires for smoothly conducting the workshop.
- The trainer remains over all in charge of all the activities are distributed so that each sub-group could concentrate on one aspect of the theme.

**Advantages**

- It makes the participants work with full involvement to produce something concrete.
- It produces something concrete which is practically useful to the members as well as to others needing it.
- It product which can be seen & used instead imagining of the product or thinking hypothetically of the gain.
- The discussion in the workshop situation helps develop the higher cognitive attribute sharpens the intellect of the participants.
- It develops attributes like controlling emotions having patience in discussion accepting others views having an open mind to learn & etc.

- It enables the participants to develop team spirit in intellectual activity where normally the scholars tend to think & work independently.
- Workshop method takes care of the theme which cannot be dealt with any other method.
- Many top levels executive who would not like to be trained by attending a training course would unhesitatingly come forward to attend a workshop.
- This implies participants contribute their might instead of simply receiving only.

**Limitations**

- The method suits top & middle level officials only & do not help that much to the junior staff.
- Acquiring knowledge through this method is very much limited.
- The trainers ignorance about the details of the theme can be hidden as is be have the method does not expect the trainer to do much on his own rather he is expected to make the groups work.
- The trainer is dependent on a team of co trainers.
- Inadequate physical facilities will disturb the smooth functioning of the workshop of the workshop method.
- Workshop method can be used when the number of participants is not too large.
- Systematic arrangement of training material for workshop method is essential. A weak trainer will spoil the whole thing if he has not made such arrangement.
- It is a where top executives have to work in harmony.
- With a heterogeneous group with nothing in common to share workshop method would fail.

**Conclusion**

- In this method participants are expected to work out through full involvement some plan of action or something of that sort.
- It should also be chosen when the instructional objective is to develop the critical thinking faculty &to develop the ability of analysis, synthesis, application & evaluation.

# Visit to State Level Training Institutes

YASHADA is the administrative training institute of the Government of Maharashtra. The State Government has established the Academy as an autonomous society. As the apex training institute in Maharashtra, the composite structure of the academy also includes various State-level Institute and subject-specific thematic Centres of excellence.

The Chief Minister of Maharashtra is also the Chief Patron of the Academy with the Minister for Rural Development as the Vice Patron. The Chief Secretary to the Government of Maharashtra (GoM) is the President of the Board of Governors (see composition). A senior IAS officer, usually of Principal Secretary rank, designated as the Director General, leads the academy. The annual programmes and activities of the Academy is monitored and reviewed by the Executive Committee (see composition), chaired by the Director General.

The faculty, officers and staff of the academy include a core team, officers on deputation and experts and advisors on tenure-based appointments. Academic, administrative, financial and facilitative wings enable the activities of the Academy. The various training programmes, workshops, seminars and research projects are made possible by the various institutes and centres at YASHADA.

**The objectives of YASHADA are as follows:**

- To promote modern management science as a major instrument for development of economic and social activities of the State Government, Zilla Parishads and other institutions and organizations of the State Government.
- To develop managerial skills, organizational capability, leadership and decision-making ability for development planning and efficiency in implementation of policies, programmes and projects.
- To carry on operational and policy-oriented research, to evolve ideas and concepts appropriate to the local, state and national environment and to formulate policy alternatives.
- To serve as the apex institute for the collection and dissemination of information regarding development administration.
- To foster, assist and support individuals, organizations and institutions in the use of management science.
- To provide consultancy services in development and public administration.
- To function as the nodal State-level training institute in the field of development administration.
- The programmes encompass aspects relating to concepts, principles and techniques applicable to management in government. Functionaries of the Government of Maharashtra as well as teachers and practitioners of management in boards, corporations, and other public sector

undertakings, representatives of non-governmental organisations, elected office-bearers of local self-government institutions and, in general, persons from institutions, bodies and organisations concerned with the use of knowledge in management are all participants in the activities of YASHADA.

# Visit to Vocational Training Institutes

Vocational training is training for a specific career or trade, excluding the professions. Vocational training focuses on practical applications of skills learned, and is generally unconcerned with theory or traditional academic skills. A large part of the education in vocational schools is hands-on training

Exercise No. 6

# Familiarization with monitoring and evaluation tools of training

**What is monitoring?**

Monitoring is a continuing function that uses systematic collection of data on specific indicators to provide the management and the main stakeholders of an ongoing project or programme to measure the extent of achievement of objectives and progress in the programmes.

***Indicators***

An indicator is a quantitative or qualitative variable that allows changes produced by an intervention relative to what was planned to be measured. It provides a reasonably simple and reliable basis for assessing achievement, change or performance. An indicator is preferably numerical and can be measured over time to show changes. Indicators, which are determined during the planning phase of a project, usually have the following components:

- What is to be measured? (What is going to change? E.g., participants reporting higher school attendance of girls in a village)
- Unit of measurement to be used (to describe the change, e.g., percentage)
- Pre-programme status (sometimes called the "baseline", e.g., 40 per cent in 2007)
- Size, magnitude or dimension of intended change (e.g., 75 per cent in 2008)
- Quality or standard of the change to be achieved (e.g., improvement such that girls obtain higher grades)
- Target populations(s) (e.g., girls vulnerable to trafficking from villages in southern district)
- Time frame (e.g., January 2008 to January 2009)

**What is evaluation?**

Evaluation is the systematic and objective assessment of ongoing and/or completed projects, programmes or policies, in respect of their:

- Design
- Implementation
- Results

**Tools**

1. Performance indicators
2. The logical framework approach
3. Theory-based evaluation
4. Formal surveys
5. Rapid appraisal methods
6. Participatory methods
7. Public expenditure tracking surveys
8. Impact evaluation
9. Cost-benefit and cost-effectiveness analysis

**1. Performance Indicators**

Performance indicators are measures of inputs, processes, outputs, outcomes, and impacts for development projects, programs, or strategies. When supported with sound data collection—perhaps involving formal surveys—analysis and reporting, indicators enable managers to track progress, demonstrate results, and take corrective action to improve service delivery. Participation of key stakeholders in defining indicators is important because they are then more likely to understand and use indicators for management decision-making.

**What can we use them for?**

- Setting performance targets and assessing progress toward achieving them.
- Identifying problems via an early warning system to allow corrective action to be taken.
- Indicating whether an in-depth evaluation or review is needed.

**Advantages**

- Effective means to measure progress toward objectives
- Facilitates benchmarking comparisons between different organizational units, districts, and over time.

**Disadvantages**

- Poorly defined indicators are not good measures of success.
- Tendency to define too many indicators, or those without accessible data sources, making system costly, impractical, and likely to be underutilized.
- Often a trade-off between picking the optimal or desired indicators and having to accept the indicators which can be measured using existing data.

**2. The Logical Framework Approach**

The logical framework (Log Frame) helps to clarify objectives of any project, program, or policy. It aids in the identification of the expected causal links--the "program logic"—in the following results chain: inputs, processes, outputs (including coverage or "reach" across beneficiary groups), outcomes, and impact. It leads to the identification of performance indicators at each stage in this chain, as well as risks which might impede the attainment of the objectives. The Log Frame is also a vehicle for engaging partners in clarifying objectives and designing activities. During implementation 'the Log Frame' serves as a useful tool to review progress and take corrective action.

**What can we use it for?**

- Improving quality of project and program designs—by requiring the specification of clear objectives, the use of performance indicators, and assessment of risks.
- Summarizing design of complex activities.
- Assisting the preparation of detailed operational plans.
- Providing objective basis for activity review, monitoring, and evaluation.

**Advantages**

- Ensures that decision-makers ask fundamental questions and analyze assumptions and risks.

- Engages stakeholders in the planning and monitoring process.
- When used dynamically, it is an effective management tool to guide implementation, monitoring and evaluation.

**Disadvantages**

- If managed rigidly, stifles creativity and innovation.
- If not updated during implementation, it can be a static tool that does not reflect changing conditions.
- Training and follow-up are often required.

**3. Theory-Based Evaluation**

Theory-based evaluation has similarities to the Log Frame approach but allows a much more in-depth understanding of the workings of a program or activity—the "program theory" or "program logic." In particular, it need not assume simple linear cause-and effect relationships. For example, the success of a government program to improve literacy levels by increasing the number of teachers might depend on a large number of factors. These include, among others, availability of classrooms and textbooks, the likely reactions of parents, school principals and schoolchildren, the skills and morale of teachers, the districts in which the extra teachers are to be located, the reliability of government funding, and so on. It can then be decided which steps should be monitored as the program develops, to see how well they are in fact borne out. This allows the critical success factors to be identified. And where the data show these factors have not been achieved, a reasonable conclusion is that the program is less likely to be successful in achieving its objectives.

**What can we use it for?**

- Mapping design of complex activities.
- Improving planning and management.

**Advantages**

- Provides early feedback about what is or is not working, and why.
- Allows early correction of problems as soon as they emerge.
- Assists identification of unintended side-effects of the program.
- Helps in prioritizing which issues to investigate in greater depth, perhaps using more focused data collection or more sophisticated M&E techniques.
- Provides basis to assess the likely impacts of programs.

**Disadvantages**

- Can easily become overly complex if the scale of activities is large or if an exhaustive list of factors and assumptions is assembled.
- Stakeholders might disagree about which determining factors they judge important, which can be time-consuming to address.

**4. Formal Surveys**

Formal surveys can be used to collect standardized information from a carefully selected sample

of people or households. Surveys often collect comparable information for a relatively large number of people in particular target groups.

**What can we use them for?**

- Providing baseline data against which the performance of the strategy, program, or project can be compared.
- Comparing different groups at a given point in time.
- Comparing changes over time in the same group.
- Comparing actual conditions with the targets established in a program or project design.
- Describing conditions in a particular community or group.
- Providing a key input to a formal evaluation of the impact of a program or project.
- Assessing levels of poverty as basis for preparation of *poverty reduction strategies.*

**Advantages**

- Findings from the sample of people interviewed can be applied to the wider target group or the population as a whole.
- Quantitative estimates can be made for the size and distribution of impacts.

**Disadvantages**

- With the exception of CWIQ, results are often not available for a long period of time.
- The processing and analysis of data can be a major bottleneck for the larger surveys even where computers are available.
- LSMS and household surveys are expensive and time-consuming.
- Many kinds of information are difficult to obtain through formal interviews.

**Types of formal surveys**

***Multi-Topic Household Survey (also known as Living Standards Measurement Survey LSMS)*** is a multi subject integrated survey that provides a means to gather data on a number of aspects of living standards to inform policy. These surveys cover: spending, household composition, education, health, employment, fertility, nutrition, savings, agricultural activities, other sources of income.

***Single-topic household surveys*** cover a narrower range of issues in more depth.

***Core Welfare Indicators Questionnaire (CWIQ)*** is a household survey that measures changes in social indicators for different population groups— specifically indicators of access, utilization, and satisfaction with social and economic services. It is a quick and effective tool for improving activity design, targeting services to the poor and, when repeated annually, for monitoring activity performance. Preliminary results can be obtained within 30 days of the CWIQ survey.

***Client Satisfaction*** (or ***Service Delivery)***

***Survey*** is used to assess the performance of government services based on client experience. The surveys shed light on the constraints clients face in accessing public services, their views about the

quality and adequacy of services, and the responsiveness of government officials. These surveys are usually conducted by a government ministry or agency.

***Citizen Report Cards*** have been conducted by NGOs and think-tanks in several countries. Similar to service delivery surveys, they have also investigated the extent of corruption encountered by ordinary citizens. A notable feature has been the widespread publication of the findings.

**5. Rapid Appraisal Methods**

Rapid appraisal methods are quick, low-cost ways to gather the views and **What can we use them for?**

- Providing rapid information for management decision-making, especially at the project or program level.
- Providing qualitative understanding of complex socioeconomic changes, highly interactive social situations, or people's values, motivations, and reactions.
- Providing context and interpretation for quantitative data collected by more formal methods.

**Advantages**

- Low cost.
- Can be conducted quickly.
- Provides flexibility to explore new ideas.

**Disadvantages**

- Findings usually relate to specific communities or localities—thus difficult to generalize from findings.
- Less valid, reliable, and credible than formal surveys.

**Different Rapid Appraisal Methods**

***Key informant interview***—a series of open-ended questions posed to individuals selected for their knowledge and experience in a topic of interest. Interviews are qualitative, in-depth, and semi-structured. They rely on interview guides that list topics or questions.

***Focus group discussion***—a facilitated discussion among 8–12 carefully selected participants with similar backgrounds. Participants might be beneficiaries or program staff, for example.

The facilitator uses a discussion guide. Note-takers record comments and observations.

***Community group interview***—a series of questions and facilitated discussion in a meeting open to all community members. The interviewer follows a carefully prepared questionnaire.

***Direct observation***—use of a detailed observation form to record what is seen and heard at a program site. The information may be about ongoing activities, processes, discussions, social interactions, and observable results.

***Mini-survey***—a structured questionnaire with a limited number of closeended questions that is administered to 50–75 people. Selection of respondents may be random or 'purposive' (interviewing stakeholders at locations such as a clinic for a health care survey).

**6. Participatory Methods**

Participatory methods provide active involvement in decision-making for those with a stake

in a project, program, or strategy and generate a sense of ownership in the M&E results and recommendations.

**What can we use them for?**

- Learning about local conditions and local people's perspectives and priorities to design more responsive and sustainable interventions.
- Identifying problems and trouble-shooting problems during implementation.
- Evaluating a project, program, or policy.
- Providing knowledge and skills to empower poor people.

**Advantages**

- Examines relevant issues by involving key players in the design process.
- Establishes partnerships and local ownership of projects.
- Enhances local learning, management capacity, and skills.
- Provides timely, reliable information for management decision-making.

**Disadvantages**

- Sometimes regarded as less objective.
- Time-consuming if key stakeholders are involved in a meaningful way.
- Potential for domination and misuse by some stakeholders to further their own interests.

***Stakeholder analysis*** is the starting point of most participatory work and social assessments. It is used to develop an understanding of the power relationships, influence, and interests of the various people involved in an activity and to determine who should participate, and when.

***Participatory rural appraisal*** is a planning approach focused on sharing learning between local people, both urban and rural, and outsiders. It enables development managers and local people to assess and plan appropriate interventions collaboratively often using visual techniques so that non-literate people can participate.

***Beneficiary assessment*** involves systematic consultation with project beneficiaries and other stakeholders to identify and design development initiatives, signal constraints to participation, and provide feedback to improve services and activities. ***Participatory monitoring and evaluation*** involves stakeholders at different levels working together to identify problems, collect and analyze information, and generate recommendations.

**7. Public Expenditure Tracking Surveys**

Public expenditure tracking surveys (PETS) track the flow of public funds and determine the extent to which resources actually reach the target groups. The surveys examine the manner, quantity, and timing of releases of resources to different levels of government, particularly to the units responsible for the delivery of social services such as health and education. PETS are often implemented as part of larger service delivery and facility surveys which focus on the quality of service, characteristics of the facilities, their management, incentive structures, etc.

**What can we use them for?**

- Diagnosing problems in service delivery quantitatively.
- Providing evidence on delays, "leakage," and corruption.

**Advantages**

- Supports the pursuit of accountability when little financial information is available.
- Improves management by pinpointing bureaucratic bottlenecks in the flow of funds for service delivery.

**Disadvantages**

- Government agencies may be reluctant to open their accounting books.
- Cost is substantial.

**8. Cost-Benefit and Cost-Effectiveness Analysis**

Cost-benefit and cost-effectiveness analysis are tools for assessing whether or not the costs of an activity can be justified by the outcomes and impacts. ***Cost-benefit analysis*** measures both inputs and outputs in monetary terms. ***Cost-effectiveness analysis*** estimates inputs in monetary terms and outcomes in non-monetary quantitative terms (such as improvements in student reading scores).

**What can we use them for?**

- Informing decisions about the most efficient allocation of resources.
- Identifying projects that offer the highest rate of return on investment.

**Advantages**

- Good quality approach for estimating the efficiency of programs and projects.
- Makes explicit the economic assumptions that might otherwise remain implicit or overlooked at the design stage.
- Useful for convincing policy-makers and funders that the benefits justify the activity.

**Disadvantages**

- Fairly technical, requiring adequate financial and human resources available.
- Requisite data for cost-benefit calculations may not be available, and projected results may be highly dependent on assumptions made.
- Results must be interpreted with care, particularly in projects where benefits are difficult to quantify.

**9. Impact Evaluation**

Impact evaluation is the systematic identification of the effects – positive or negative, intended or not – on individual households, institutions, and the environment caused by a given development activity such as a program or project. Impact evaluation helps us better understand the extent to which activities reach the poor and the magnitude of their effects on people's welfare. Impact evaluations can range from large scale sample surveys in which project populations and control groups are compared before and after, and possibly at several points during program intervention; to small-scale rapid assessment and participatory appraisals where estimates of impact are

obtained from combining group interviews, key informants, case studies and available secondary data.

**What can we use it for?**

- Measuring outcomes and impacts of an activity and distinguishing these from the influence of other, external factors.
- Helping to clarify whether costs for an activity are justified.
- Informing decisions on whether to expand, modify or eliminate projects, programs or policies.
- Drawing lessons for improving the design and management of future activities. Comparing the effectiveness of alternative interventions.
- Strengthening accountability for results.

**Advantages**

- Provides estimates of the magnitude of outcomes and impacts for different demographic groups, regions or over time.
- Provides answers to some of the most central development questions – to what extent are we making a difference? What are the results on the ground? How can we do better?
- Systematic analysis and rigor can give managers and policy-makers added confidence in decision-making.

**Disadvantages**

- Some approaches are very expensive and time-consuming, although faster and more economical approaches are also used.
- Reduced utility when decision-makers need information quickly.
- Difficulties in identifying an appropriate counter-factual.

Exercise No. 7

# Familiarization with Offline and Online Training Module

Online Training(**Web-based training anytime, anywhere)**

Also known as computer based training (CBT), distance learning, or e-learning, online training is a form of instruction that takes place completely on the internet. It involves a variety of multimedia elements, including graphics, audio, video, and web-links, which all can be accessed through one's internet browser. These elements are used in lieu of traditional classroom components.

In addition to presenting course material and content, online training gives students the opportunity for live interactions and real-time feedback for such things as quizzes and tests. Interactions between instructor and students are also conducted via an online medium, through such methods as chat, e-mail, or other web-based communication.

Online training is generally self-paced and customizable to suit an individual's specific learning needs. Therefore, online training can be conducted at almost any time and place, provided there is a computer with high-speed internet access. This makes this form of training convenient for the users, who can modify their training to fit into their day-to-day schedule.

To use online training, users should have a basic knowledge of computers. This should include, but is not limited to, the ability to use a mouse, which involves knowing the difference between left-click and right-click; the ability to open and close documents and web pages; and the ability to navigate a website and web pages. Those with no computer experience at all, may have trouble using our online training .

Training technologies continue to develop as rapidly as the rest of the technology world. Only a few years ago the CD-ROM revolutionized software training because interactive multimedia simulations could be bundled on a high capacity disk and exported far beyond the traditional classroom.

**Delivered with Internet Technologies**

Online training to be coursework delivered with Internet technology, meaning an origin website, a TCP/IP connection to the Internet (fixed or dialup) and a web browser on the user's computer.

**Use While Online**

A further distinction of online training means that the actual learning and activity takes place while the user is connected to the delivery website, as opposed to downloading files or exercises and running them on the user's computer while offline.

**What To Look For:**

There is such a wide variety of online training, of all qualities, available that the user or training

manager must have a clear set of criteria in mind in order to choose wisely. Although the composition and relative importance of each user's criteria list will vary by their need, here are a few items, which many users will want to consider.

**Synchronous vs. Asynchronous**

Some online courses are completely self-paced, designed to be used at the learner's complete discretion, starting or stopping sessions at any time of day without regard to any set schedule. These courses are, by design, intended for individual use without regard to other student or instructor schedules. These are referred to as "asynchronous" because they require no time synchronization between users, learners or instructors. By contrast, other courses are designed to replicate the traditional classroom environment. Learners, who are geographically dispersed, can "meet" at specified times, with an instructor online for "lectures" and "class interaction". Typically these classes make use of audio and video, chat rooms, email and other technologies to create a virtual classroom atmosphere. Because the participants must be synchronized in time for this to occur, this format of training is referred to as "synchronous". Neither format is inherently better, but they are significantly different in the way they can be used. The ability to keep to a designated class schedule, the ability to support some of the advanced technologies used (bandwidth) and the individual learning style of the user are all factors which might go into choosing between the two styles of courseware.

**Adaptive**

Good online training is like any other form of good training. It should be adaptable to the needs of the learner. Even for standardized courses, one size does not fit all, and good courseware should allow for individual differences. It should also have some form of navigational aid to allow stopping the course at any point and resuming at that point later. Sequential processing (having to start all over at the beginning) is laborious and counterproductive.

**Multimedia**

Internet technology has matured rapidly, and hosts of good training enhancements are available. Look for courses that incorporate them. Possibilities include streaming audio and video for demonstrations and explanations, on-screen full motion simulations to illustrate task steps and the opportunity for the learner to perform simulations. Too many courses still rely on static screens of text or simple static illustrations, which are the equivalent of simply reading a book. Avoid these if you can, and select those which offer the learner a full range of multimedia enhancements to enrich learning. Two cautions however: (1) some sites will use multimedia poorly, almost for the sake of using it, without really adding anything to the learning; and (2) always bear in mind that rich multimedia puts heavy demands on your bandwidth. Consider the robustness of your Internet connection and the responsiveness it will allow for the training site.

**Interactive**

Learning is an active, not a passive, event. Therefore, learning is enhanced when the user can participate in a variety of ways instead of simply reading or hearing material. At a minimum, a good training site will offer periodic â€œquizzesâ€ or learning validations where the user responds to

questions and receives instant feedback. And, as mentioned above, many sites now offer the opportunity to demonstrate task steps through interactive simulations. These are great enhancements to learning and offer a real value above a more passive site. Obviously, the degree to which this is possible varies widely by course topic, but look for interactivity when and where you can.

**Evaluation**

â€œDid you learn anything?â€ The best way to find out is with an end-of-course evaluation, which rigorously tests the learner's mastery of the training objectives. Good courses will provide a challenging evaluation, often including interactive simulations, and instant feedback on performance. From a training management perspective, these score sheets should be printed or screen-captured for filing and used as documentation of successful training. Don't accept courseware without good evaluation modules.

**Credit**

Depending on the topics and training objectives, some courses will offer â€œcreditâ€ in a variety of forms. Some will count for CPE; others will give continuing education credits, or actual college credits, while others will prepare the learner for standard certification tests. Certainly there will be many times when credit is neither necessary nor desired for the training, but if it is available and appropriate, this may be a positive discriminator in selecting coursework. Check with your provider to see what credits might be available and how they are documented and awarded.

**Cost**

Predictably, costs for online training are all over the map. There is a wealth of good training available for free if you take the time to dig for it. Many sites which charge for courses will offer free demo courses. These are often valuable in their own right. Most courseware, however, will be offered on a fee basis in a variety of ways. Some vendors charge by the course or for a package of courses. This is usually for a designated period of time, during which the user can access the courses as many times as they wish. Some vendors will offer site licenses or bundle â€œ5-packsâ€ for organizations that want multiple user access. Particularly for technical certification training, the fees will often include books or other materials to be used in conjunction with the online sessions. It is not unusual for a lengthy and detailed certification-training program to cost upwards of $1,500.

**Advantages and Disadvantages:**

Now that you know what to look for in an online training course, you should consider the advantages and disadvantages of using this form of training. Like all other training options, it isn't perfect, but it does have some potential advantages.

**24 x 7 x Anywhere**

At least for asynchronous courseware, one of the real advantages is the ability to train and learn when and where it is convenient. Anywhere you can connect to the Internet and spend a few minutes becomes a classroom setting. This enables learning during lunch breaks, at home and during the traditional workday. However, there can be a dark side to this availability. We will examine that prospect in a moment.

**Topics**

One of the greatest limitations of online training is the breadth of course offerings available. There is a wealth of material for training on computer subjects such as Windows 98/NT/2000, Microsoft Office and various graphics and multimedia software. There are plenty of good courses which prepare learners for the various Microsoft, Novell, Cisco and other certification exams. There are far fewer courses that deal with professional accounting subjects, and almost nothing that focuses on specific accounting software such as the major tax or practice management programs. Obviously, none of the considerations discussed above matter much if the training you need isn't available.

**Learning Style**

Individual learning style is a huge issue in assessing the advantages and disadvantages of online training. Some people thrive on the isolation and focus of self-paced, asynchronous training delivered through their own computer. Others need the interaction of a class group; synchronous training will fit their needs better. Some learners lack the self-discipline to study on their own, while others need the real life sights and sounds of a traditional classroom. Therefore, online training of any sort simply won't fit for them. The goal for the training manager is to match the right style with each learner and maximize the overall learning success. Once again the rule to remember is in one size does not fit all.

**Firm Culture**

The last consideration is one that is hard to quantify, but is very real. That is, how does online training fit into the learning and management culture of your firm? Is the owner group willing to have staff people use their computers during the workday for self-paced learning? Or, is someone going to criticize that as simply playing on the computer. Is the owner group willing to invest workday hours for training at all? Or, is the 24 x 7 availability going to push them towards telling staff to do that at home on your own time. These are not easy questions to answer, but the answers are important. Firm owners, who recognize that training is an efficiency multiplier and who create an atmosphere that rewards and encourages learning, will take a far different approach than those who see it as a diversion from billable hours. Look in the mirror, and see which attitude looks back at you.

The limited availability of some subjects, the technical requirements for delivery and the learning styles and preferences of your users all mean that this plays a specialized role within a comprehensive training program. However, in some circumstances, it is a very cost effective and flexible component of that training strategy.

The pros and cons of offline vs. online training

**Computationally much faster and more space efficient.** Another answer here claims offline methods are faster; that is flatly incorrect [1]. In the vanilla online model, you are allowed to make exactly one pass on your data, so these algorithms are typically much faster than their PAC equivalents, since most PAC algorithms are multi-pass. Also, since you can't reconsider your previous examples,

you typically do not store them for access later in the learning procedure, meaning that you tend to use a smaller memory footprint.

**Usually easier to implement.** Since the vanilla online model makes one pass over the data, we end up processing one example at a time, sequentially, as they come in from the stream. This usually (*usually*) simplifies the algorithm dramatically, if you're doing so from scratch. If you're using a library, the code that manages data is often simpler because you often don't have to keep all of your data lying around in RAM — you just put it in an API call, end up with a result, and throw it away or log it.

**A more general framework.** In batch algorithms, it is ok (and even encouraged) to shuffle your dataset before learning. This is because almost all batch algorithms assume your data is either exchangeable or iid. In the more general case, however, the order of your data matters, and when you really can't assume your data can be reordered arbitrarily, you must process it sequentially. That is precisely the point online algorithms — online learning is a more general framework than, and a strict superset of, batch learning.

**More difficult to maintain in production.** Deploying online algorithms in production typically requires that you have something constantly passing datapoints to your algorithm. If your data changes and your feature selectors are no longer producing useful output, or if there is major network latency between the servers of your feature selectors, or one of those servers goes down, or really, *any number of other things*, your learner tanks and your output is garbage. Making sure all of this is running ok can be a trial.

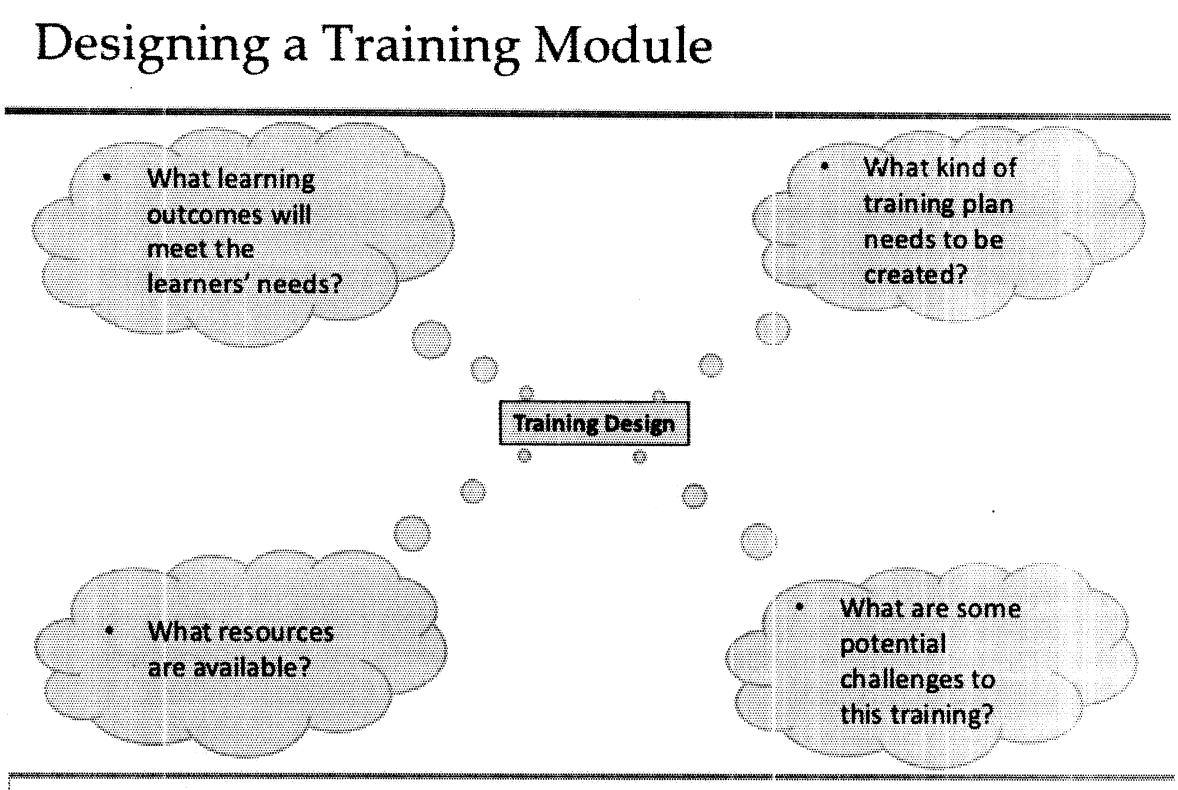
**More difficult to evaluate online.** In vanilla online learning, we can't hold out a "test" set for evaluation because we're making no distributional assumptions — if we picked a set to evaluate, we would be assuming that the test set is representative of the data we're operating on, and that is a distributional assumption. Since, in the most general case, there's no way to get a representative set that characterizes your data, your only option (again, in the most general case) is to simply look at how well the algorithm has been doing recently. But what does it mean if you've gotten a few wrong? Is it just bad luck, or does it mean you should change your hypothesis quite a bit? In batch learning, these questions are pretty easy to answer, but in online algorithms, you usually have to think about it.

**Usually more difficult to get "right".** As we saw in the last point, online evaluation of the learner is hard. For similar reasons, it can be very hard to get the algorithm to behave "correctly" on an automatic basis. It can be hard to diagnose whether your algorithm or your infrastructure is misbehaving.

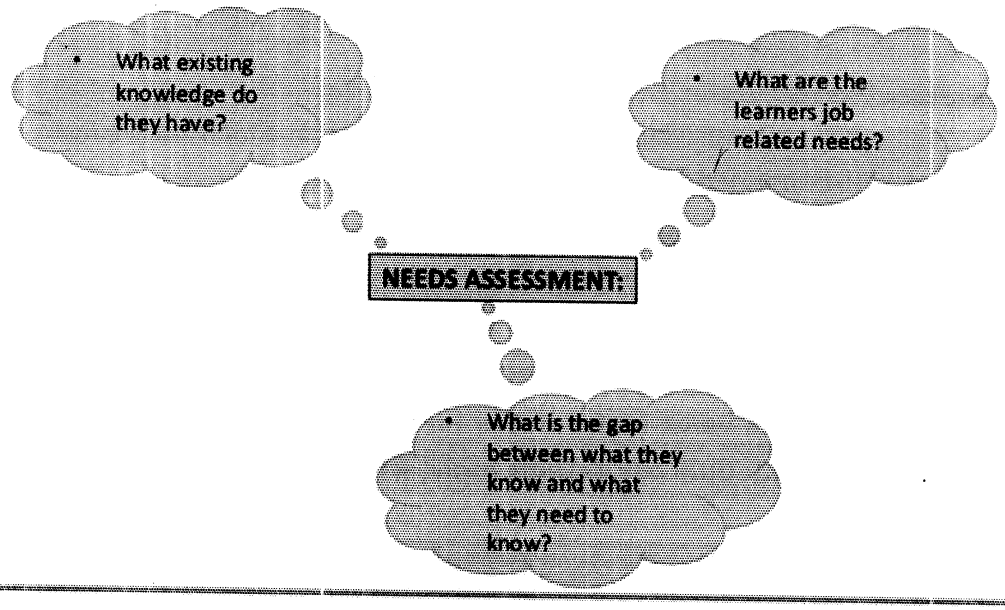
**More difficult to evaluate in an offline setting, too.** If I hand you a series of data points and our system's predictions, it is often useful to have an offline process that spends all the time it needs to find out how our system is *really* doing. In most cases, finding an offline evaluation scheme that does significantly

# Preparation of Training Module

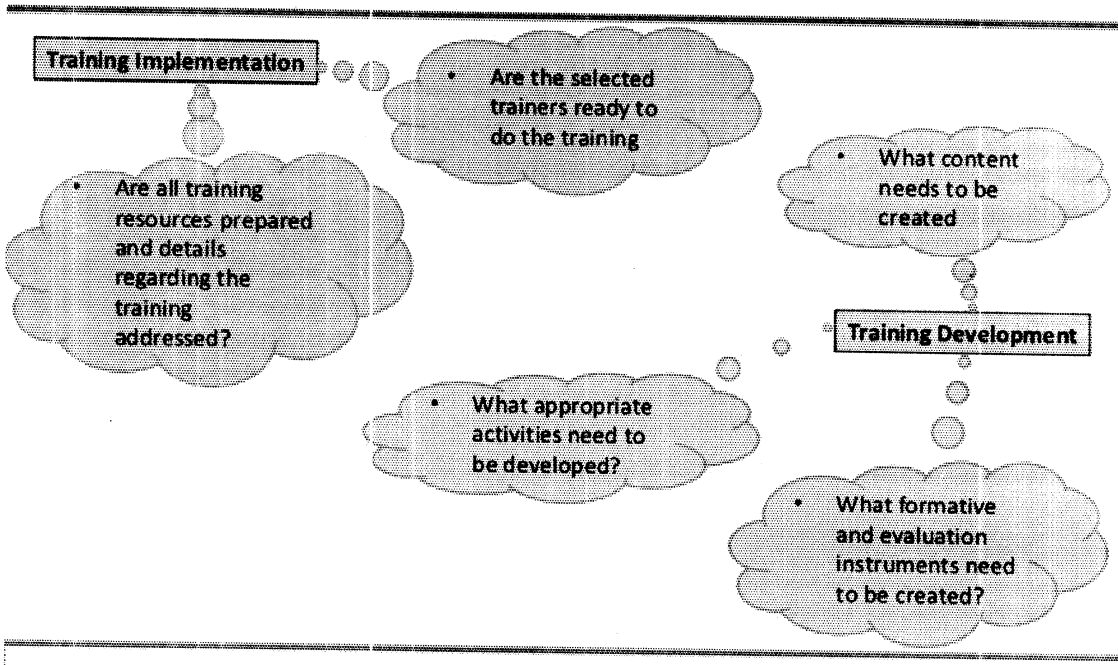
1. Standardized or self-contained segment that with other such segments constitutes an educational course or training program.
2. Prefabricated, self-contained, standard unit that can be combined with other different but compatible modules to assemble a wide range of varied end-products such as buildings, computers, equipment, furniture, plants, shelving, software, and structures.
   **Training modules contain basic texts, model forms, short handouts for workshops, and notes for trainers. Each module has a single topic, with different documents in it for different actors or purposes.**



# Designing a Training Module




# Designing a Training Module



# Designing, Conducting and Evaluation of Training Programme

**Stages of training process**

A typology of training evaluation can be developed based on the stages of training process. This approach appears to be logical and precise than other classification of training evaluation.

If training is perceived as a process, four stages of training process are clearly identifiable namely,

I. The planning stage
II. ii) The implementation stage
III. iii) The stage immediately after termination of training
IV. iv) The impact stage

**Definition**

Corresponding to each of these four stages of training four types of training evaluation can be defined as follows

- **Evaluation for planning**

It provides information for planning a training program.

It consists of two phases namely;

i. training needs
ii. Assessment of training methods and technologies.

The first phase covers job analysis, task analysis, and gap analysis, trainee characteristic, development of training objectives and selection of contents. The second phase covers determination of most appropriate instructional procedures and pilot testing

- **Process evaluation**

Process evaluation say Raab et al is a method of obtaining feedback from trainees and others involved in the training activity. Process evaluation is conducted to detect or predict defects in a procedural design of a training activity during the implementation phase. Key elements of training activity are monitored in a systematic manner with a goal of identifying potential problems before they become serious. It covers a wide range of training activities factors affecting training activities, and interim results of training activities like change in trainee KSAOs knowledge, skills, attitudes and other things, effectiveness of training methods and technologies, performance of trainers, finances and physical facilities.

- **Terminal Evaluation**

Terminal evaluation is used; say Raab et al to determine the effectiveness of a training activity after

it has been completed.

It is method for collecting information on trainee and training activity achievement.

The primary objective of terminal evaluation is to determine the degree to which the intended objectives and goals have been met and to relate these findings to evaluation information collected earlier in the evaluation process.

It also includes interpretation of the outcomes.

The terminal evaluation primarily concerned with learner performance. To be meaningful the learner performance has to be measurable. Two types of terminal evaluations are available I) norm-referenced evaluation ii) criteria-referenced evaluation. In the non-referenced terminal evaluation pre training measurements are compared with post training measurements. Results show up as learning gain. In the criteria-referenced evaluation what has been taught to the trainee is compared with that he has learned.

Apparently training evaluation covers many of the same areas as are covered by training process evaluation like organization, facilities and resources.

Two general methods are used in terminal training evaluation

I) Measurement of change in trainee KSAOs and competence and

II) Measurement of trainee perception about the training activity. These methods use questionnaires, essays, rating scales etc

- **Impact evaluation**

An impact evaluation say Raab et al is a method of assessing changes in on the -the -job behavior as a result of training effort.

It is also a way to get additional feedback from the trainees and their supervisors on how appropriate this new behavior is in the workplace.

*Step 1: Perform a Training Needs Assessment*
*Step 2: Keep Adult Learning Principles in Mind*
*Step 3: Develop Learning Objectives*
*Step 4: Design Training Materials Designing*
*Step 5: Develop Your Training Materials*
*Step 6: Implement the Training*
*Step 7: Evaluate the Training*
*Step 8: Rinse, Lather, and Repeat Any Step When Necessary*

**Exercise-** Student will discuss concepts related to training evaluation and evaluate a training programme

# Human resource development: Concepts

**Definition**

**Human Resource Development (HRD):** It is the total knowledge, skills, creative abilities, talents and altitudes of an organization's worth force as well as the values, attitudes and beliefs of the individuals involved.

**The objectives of human resources development are:**

1. To prevent obsolescence of skills at all levels in an organization in the fast changing environment.
2. To maintain an effective work force in the social and technological changing environment,
3. To prepare present employees to succeed those who leave one organizations for another.
4. To fulfill the career aspirations of the working force.
5. To ensure control of labor costs by avoiding both shortages and surpluses of manpower in the establishment.
6. To avoid all kinds of distortions, lop-sided developments, short fall of performance and waste of national resources
7. To improve workers productivity and firm's profitability.

**Elements of HRD**

1. Employees are to be adopted into the family.
2. Employees welfare should be the foremost of the company's concern.
3. Every individual needs to be developed as a whole person and every person needs to be given opportunities for development
4. Retaining and multi skilling should be an ongoing responsibility of the company.
5. The needs to ensure a fair and reasonable compensation which will secure a decent standard of living for every workman.
6. The reward system should be based on merit and contribution,
7. The workplace should be clean, healthy and congenial to work and the quality of life is to be preserved.
8. Forums should exist for frank and open discussions on work related issues on a continuous basis.

**The commonly used strategies for HRD are**

i. Recruitment, selection and placement.

ii. Training: usually refer to teaching operational or technical employees how to do the

best for which they were hired.

iii. Performance appraisal: A formal assessment of how well an employee is doing his or her job.

iv. Performance feedback: It refers to the giving feedback to subordinate about their performance.

v. Rewards, incentives, punishment and employees welfare.

vi. Counseling and guidance.

vii. Wage system - that it meets the needs of health, education, nutrition, water, sanitation, environment, communication

viii. Manpower planning.

ix. Promotion, transfer and separation.

**Exercise** -Student will discuss concepts related to human resource development

Exercise No. 11

# Analysis of HRD programmes of academic and corporate institutions.

Practical Excercise : Student will discuss about HRD Programmes in Academic / Corporate Institutes and write Report

**Exercise No. 12**

# Interaction with HRD professionals. Presentation of reports.

Student will have intraction with HRD Professionals and present report