# Strengthening the Occupational Health Expertise and Scientific Performance of Public Health Institution of Turkey

# Training-of-Trainers

# PPT C1-5

# Explanation of the program and related materials

## Learning objectives

› have knowledge of the issues relating to adult learning
› be able to conduct a training needs analysis
› be able to identify the different learning strategies and teaching methods which are applicable in participatory training sessions
› be able to design a short training course, using appropriate learning strategies
› be able to develop and deliver training courses
› be able to conduct an evaluation of the training course

**Section1.
Issues relating to adult learning**
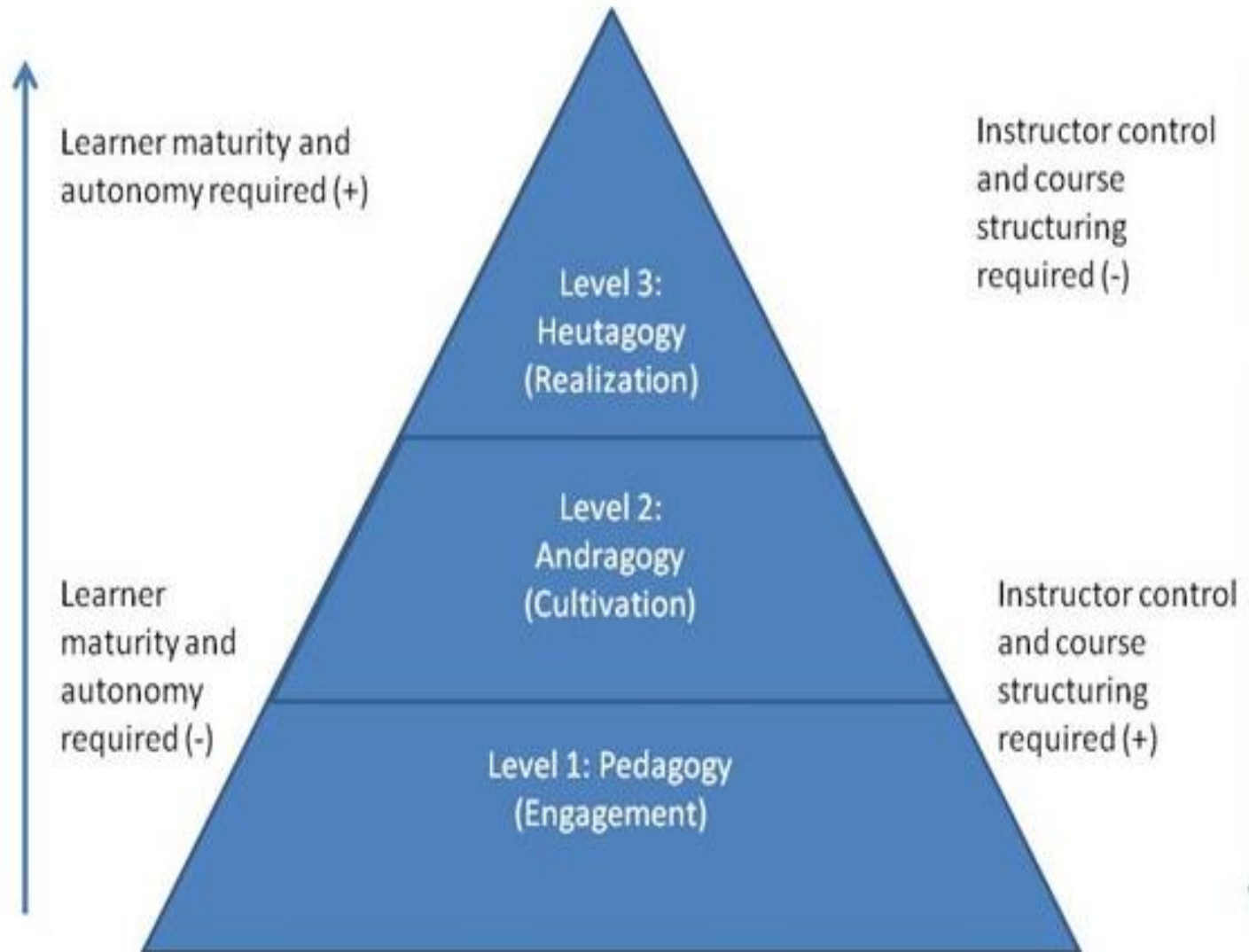
**Learning Objectives**

› Knowing that adults have different attitudes to learning from children and young students

› Be able to identify some of the issues which distinguish adult learning

› Be able to identify and actively address the issues relevant to adult learning in the training session you are going to prepare for your final assignment

Pedagogy

Andragogy
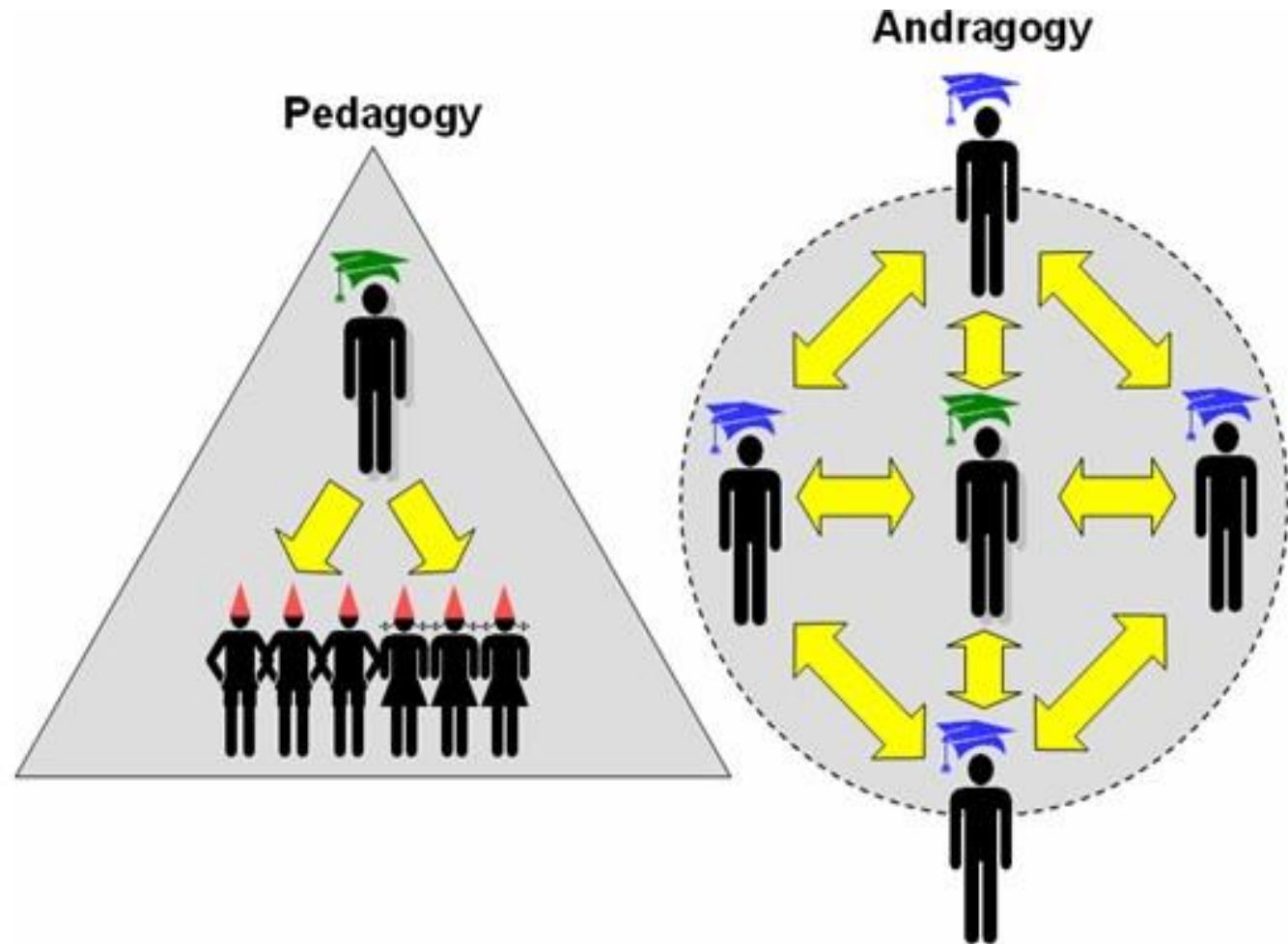
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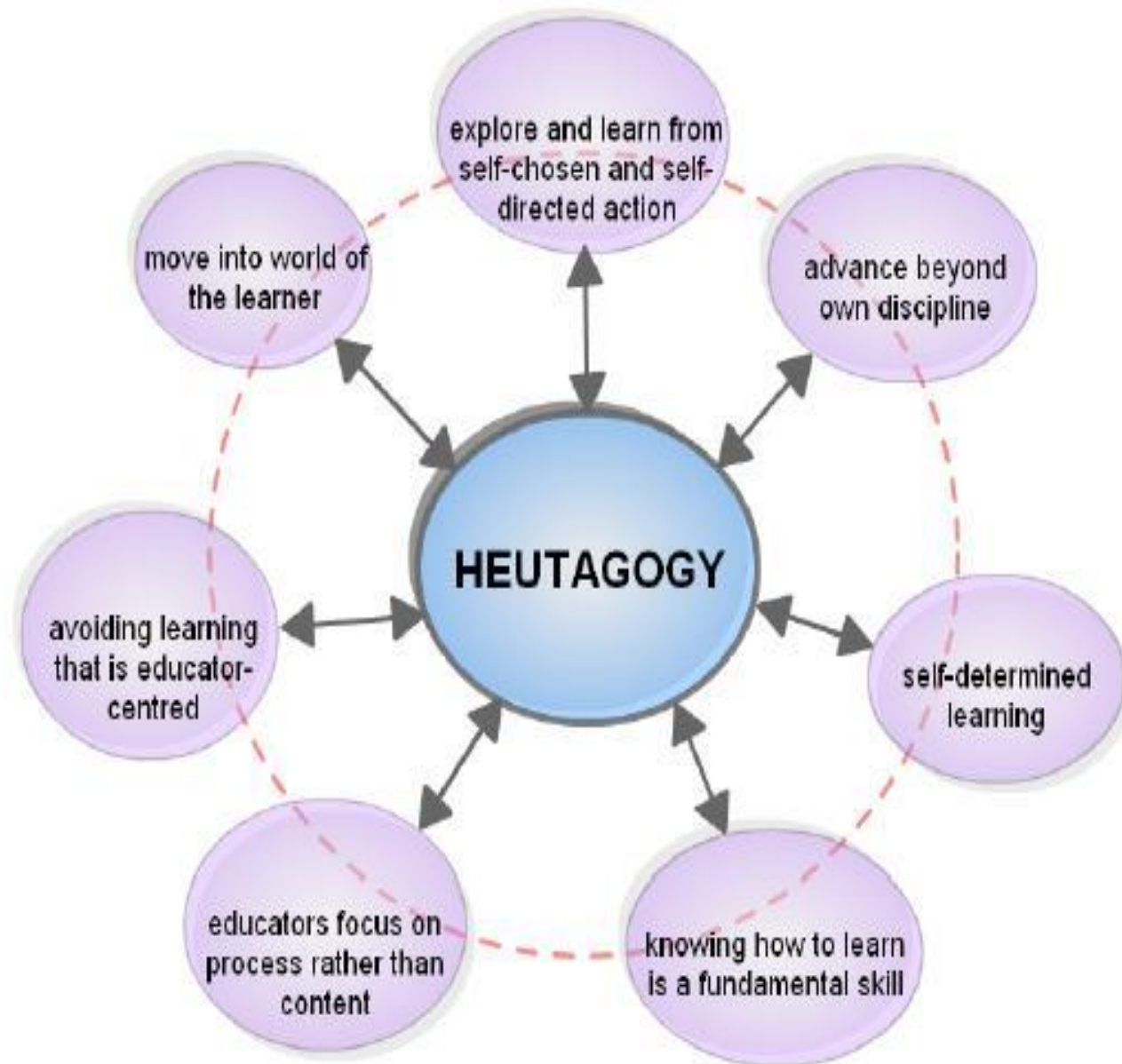
# **Adults want information on the subject**

› prior notification to the program

› Pre-reading sources

# **Adults want to be part of training planning**

❯ Joint planning - decision-making,

❯ Determine the needs and interests of

❯ Clear goals and objectives,

❯ Level in response to needs

# Adults want to be seen as a unique individual

› Calling by name
› Joining activities
› Distribute to everybody written material (hand out)
› Being treated with respect

# Adults want to participate actively

❯ Joint planning - decision-making

❯ Questioning techniques

❯ Feedback

❯ The use of interactive teaching techniques

❯ Brainstorming

❯ Group work

❯ Group discussions

❯ Role play and so on

# **Adults want diversity in education**

❯ Audio-visual tools

❯ class lectures

❯ brainstorming

❯ group work

❯ group discussions

❯ guest speakers and so on.

# They want to have positive feedback

❯ Verbal praise

❯ Supporting statements

❯ Complementary sentences and so on.

# There are personal concerns and adults want a safe environment

› Fear of failure

› Shame, embarrassment

› Compliance concern

› No doubt about the trainer, and so on

## Adults want a suitable environment for learning

❯ The layout

❯ Enlightenment, aeration

## Adults have individual needs

❯ Food, tea, toilet, telephone and so on.

# Adults versus Children

## Children

- Others decide importance
- Accept information at face value
- Expect long-term use
- Little / no experience
- Content centred
- Less actively involved
- Authority oriented

## Adults

- They decide importance
- Validate information versus beliefs
- Info immediately useful
- Much experience
- Problem centred
- Active participation
- Collaboration oriented

## How to create a secure environment to safeguard personal concerns of adults?

❯ Putting the rules and expectations clear at the start

❯ Removing barriers between participants

❯ Treating everyone equally, motivating everybody for participation

❯ Acting naturally

# Always Remember!!!

› the need to learn by doing and discussing, <u>not</u> by just being told

› slower learning

› fear of failure

› having a contribution to make

› dislike of being patronised by class room methods
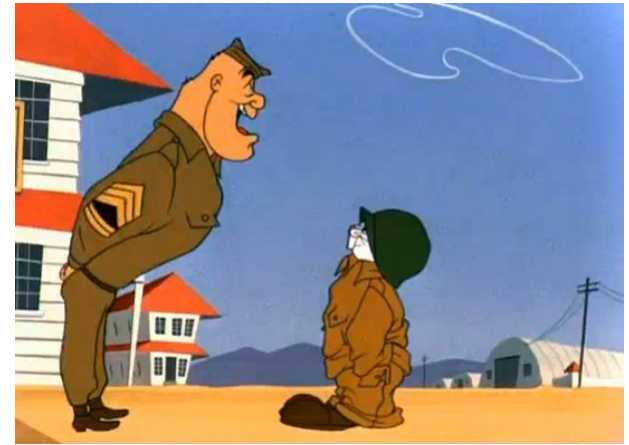
# High expectations to their instructors

❯ Accept that we are knowledgeable

❯ Accept our need for self-promotion and expression

❯ Accept our need to transfer life experiences

# Issues relating to adult learning

Like a conductor, you can orchestrate your educational activity to maximize the learning experience for the participant!

# Reason for attending

Need to Know
(Why you do)

Experience
(including error)

Orientation
(Problem Centered)

Self-concept
(In charge of your
own learning)

Readiness
(Just in Time)

Motivation
(internal)
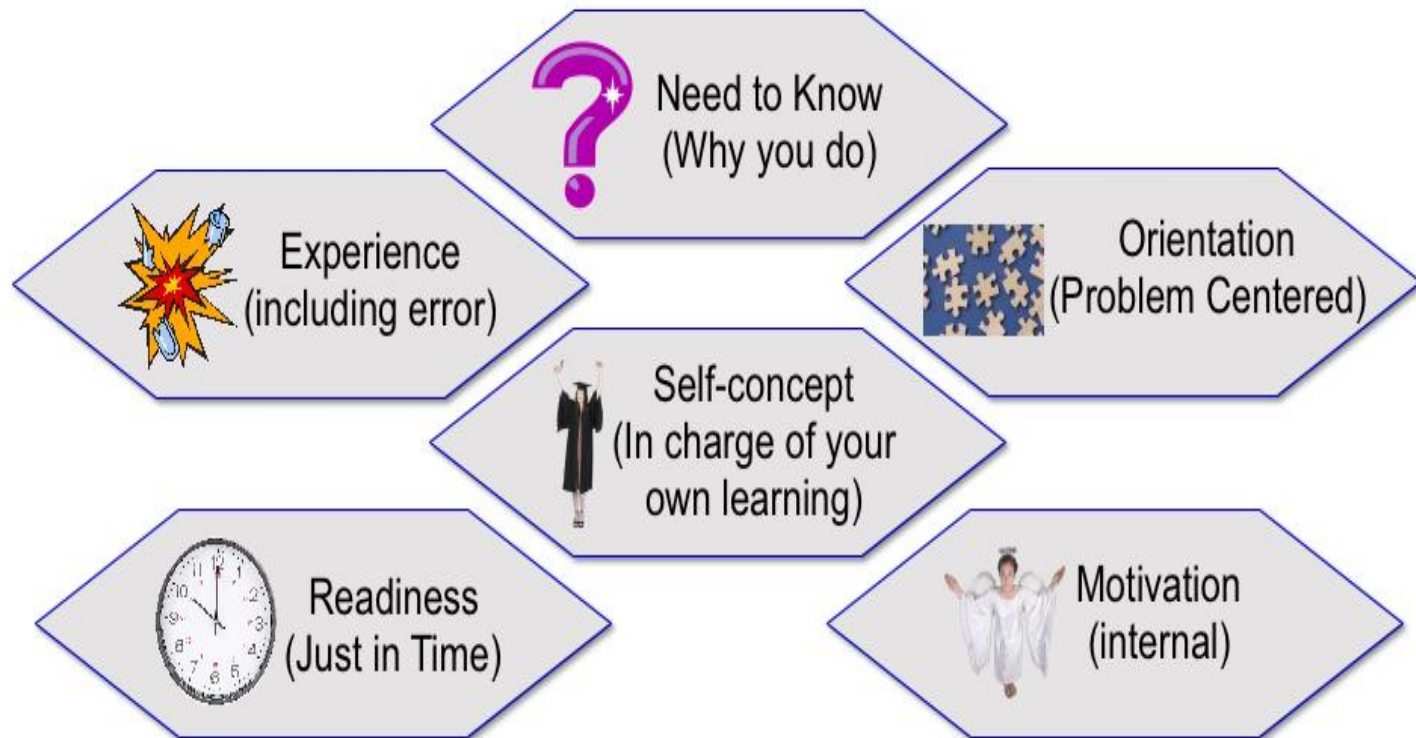
# Maslow's Hierarchy of Human Needs



Self-actualization

Self-respect

Love and belonging

Feeling secure

Physiological
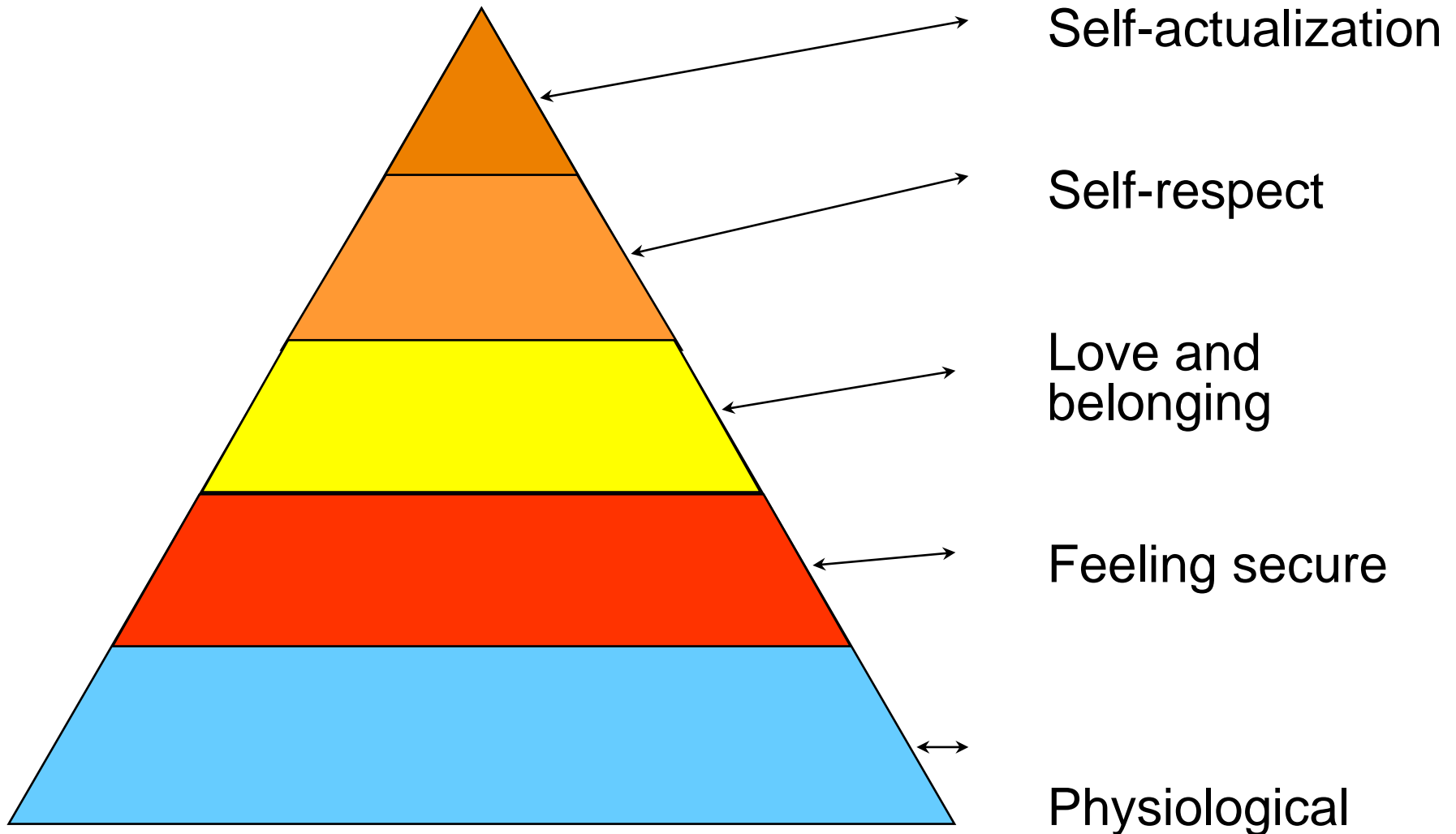
# The Learning Process
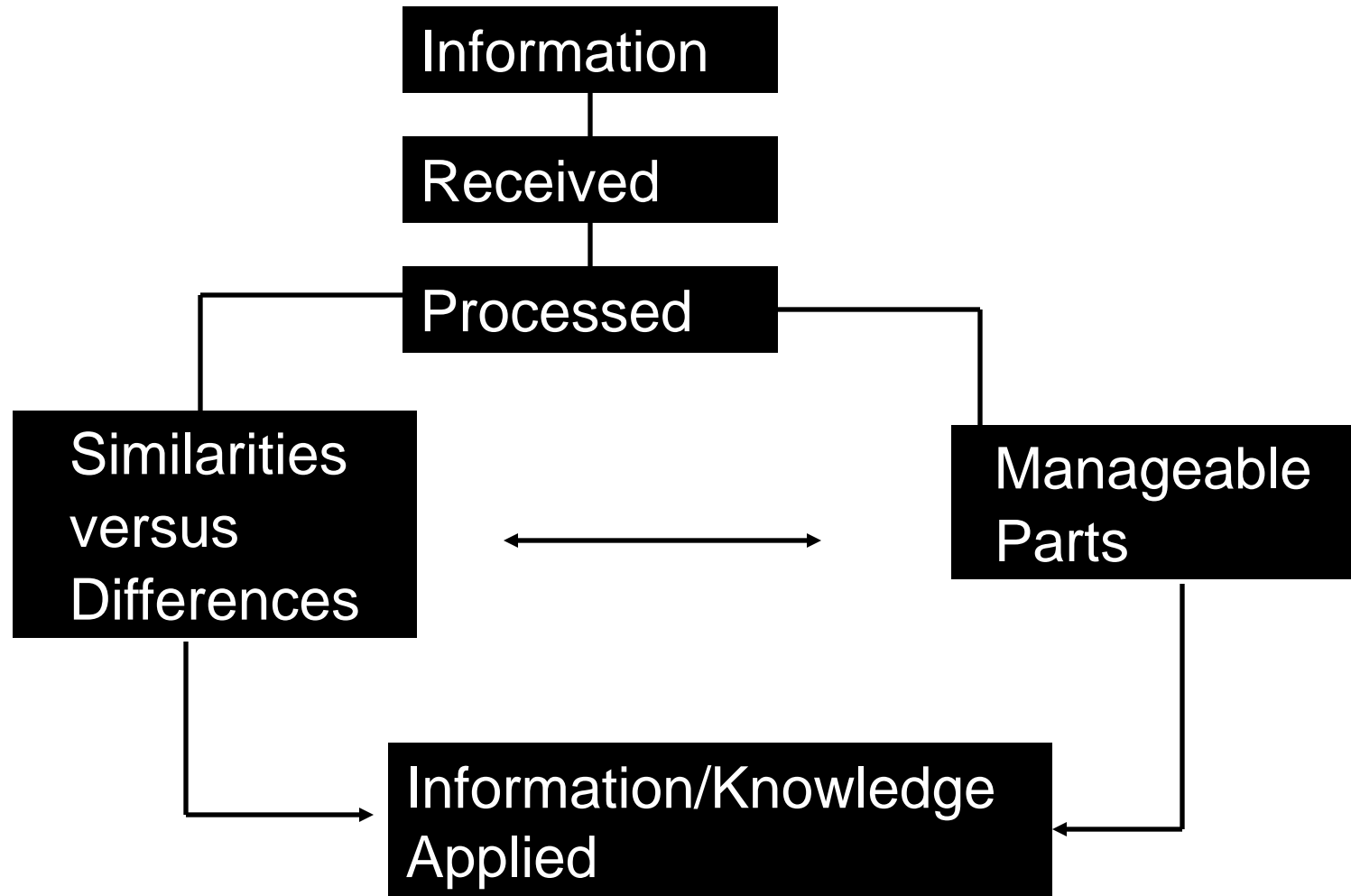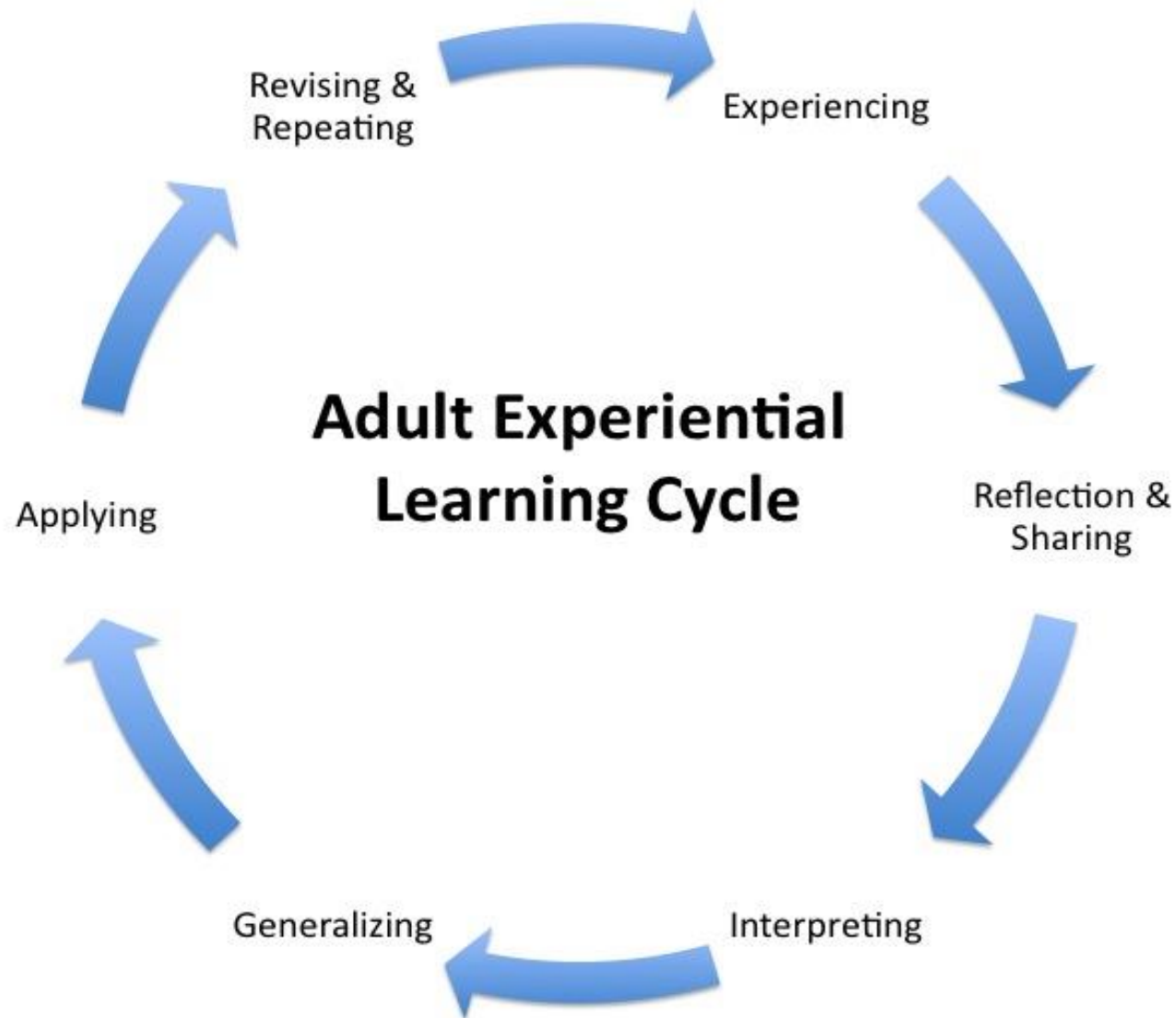
# An old native American saying

› "Tell me and I'll forget. Show me and I may not remember. Involve me and I'll understand"

› This saying captures the potential power of including active learning strategies

› Active learning means developing and implementing planned activities to engage the participant as a PARTNER in the activity.

# What People Remember

**10 % of what is read**

**20 % of what is heard**

**30 % of what is seen**

**50 % of what they see & hear**
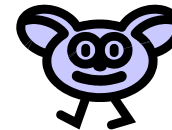
**70 % what they say as they do a task**
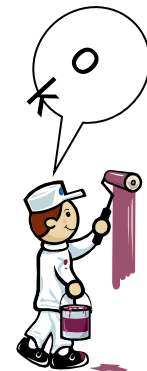
**90% of what they teach**
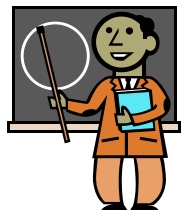
# What is active learning?

- It is a **planned series of actions** to invite the participant to:
  - ➢ Process
  - ➢ Apply
  - ➢ Interact
  - ➢ Share

experiences as part of the educational process

- The interactive components support the goal and the educational objectives for active learning

# **Planning**

❭ Detailed information about participants

❭ Education widgets to review

❭ Prepare Self-training

❭ To organize the physical conditions

❭ Make appropriate arrangements for the needs of the participants

# Composition of the group

❯ homogeneous in age, seniority and experience

❯ heterogeneous group from  a variety of backgrounds and with different levels of experience

# An effective pre-learning strategy

› To help the participant focus on the application of the material, is to have them informally and briefly list their personal **KWL**

› **K**= What the participant already KNOWS about the subject

› **W**= What they WANT to know

› **L**= How they want to use what they LEARN
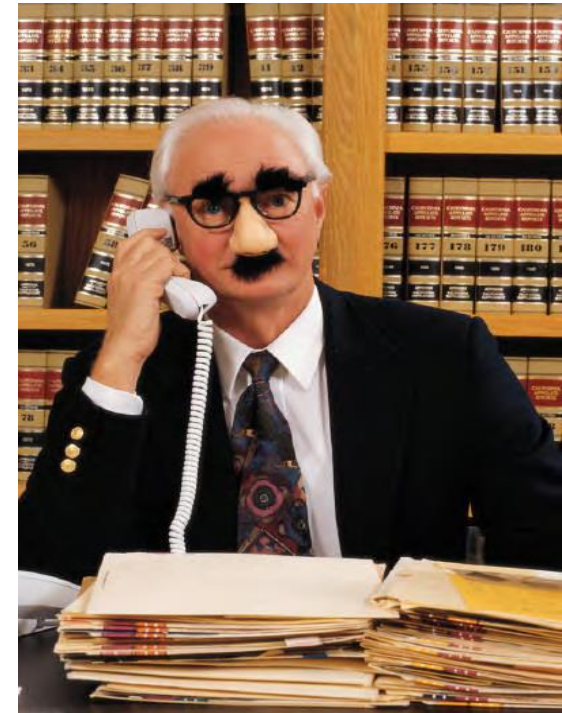
**Key Points**

❯ Adult learners should be addressed as equals by the trainer
❯ Previous experience should be acknowledged and used to advantage
❯ The training session should take into consideration all aspects of the participants' lack of confidence
❯ Knowing as much as possible about the participants will enable you to address as many issues as possible when designing the session(s).

# ❯ END OF SECTION I

**Section 2. Conducting a training needs analysis**

**Learning objectives**

❯ Decide when a training session is the appropriate means to address a problem or need
❯ Define the tasks which can be resolved by training and identify the elements of knowledge, skills and attitude
❯ Derive general objectives for a training session from a task analysis exercise
❯ Identify any factors which might limit the effectiveness of the course and any complimentary ones which will be of benefit

# Is training a solution?

Consultation with the client ( might be a manager, a trade union official or the individual themselves)

# Tasks

› In order to tailor the training to the needs of participants, the **actual tasks to be executed** have to be identified and analysed first.



Planning the Route to Successful Training

Who? What?
When? Where?
How?

Click on a sign to see the types of question you should consider

## **Having identified the tasks, one must consider**

> What should a person know in relation to the task?
> What should a person do with this knowledge?
> What attitude is needed in relation to the task?

# General objectives

❯ Derived from the task analysis

❯ They are the outcomes of the training
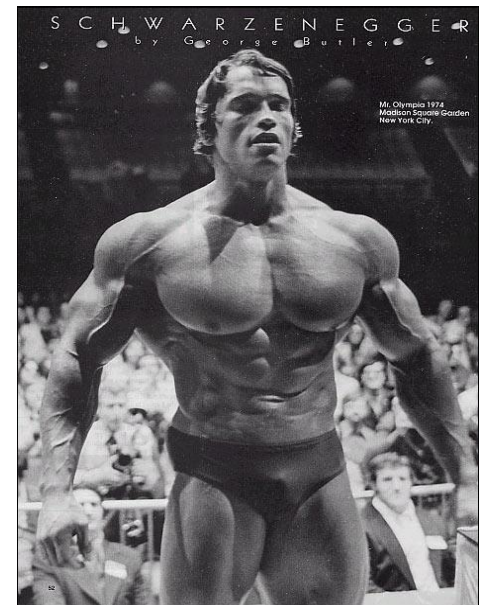
## **General objectives; four essential functions**

› a communication device between client, trainer and participant

› the frame of reference for the contents

› Helper of designing the teaching-learning process

› the frame of reference for the evaluation strategies and criteria

# Different types of objectives

› Objectives referring to knowledge (cognitive skills)

› Objectives referring to social skills

› Objectives referring to psycho-physical skills

› Objectives referring to attitude

**Next step** ➡ **Entry level**

> Compare the results of the task analysis with the entry level of the participant group

> What knowledge, skills and attitudes do participants already possess?

> So far ➡ the personal profiles of participants in relation to their learning styles and experiences

## Limitations and complementarity

Usual constraints are:

❯ Time

❯ Budget

❯ Facilities

❯ and of course **people** !!

# Recognizing dysfunctional behavior

› Saboteur
› Sniper
› Assistant
› Trainer
› Denier
› Quiet
› Anxious

› Dominator
› Side Tracker
› Hand Clasper
› Polarizer
› Attention Seeker
› Clown

Everybody has an opinion....

We want to hear YOURS!

Join us at the
Discussion Forums

## **Key points**

❯ Is training necessary?

❯ What are the actual training needs?

❯ From the task analysis, formulate general objectives

❯ Define entry level knowledge and skills of the group

❯ There will be limiting conditions ☹

❯ and complementary factors which improve motivation ☺

# ❯ END OF SECTION 2

# Section 3. Identifying learning strategies and teaching methods

## Learning objectives

› Recognize that different people learn best in different ways

› Select appropriate teaching methods for a training session

› Select appropriate teaching aids for teaching methods

# Learning Styles

Kolb's 4 learning styles:

1. The diverger (dreamer)

2. The assimilator (thinker)

3. The converger (decision-maker)

4. The accommodator (active worker)

Gagné's Theory of Instruction — was developed by → Robert M. Gagné

is made up of three components

A Texonomy of Learning Outcomes

Conditions of Learning

Nine Events of Instruction

Cognitive Domain — Affective Domain — Psychomotor Domain

are

Cognitive Strategies
Intellectual Skills
Verbal Information

Attitudes

Motor Skills

1. Gaining attention
2. Informing learners of objectives
3. Stimulating recall of prior learning
4. Presenting the stimulus
5. Providing learning guidance
6. Eliciting performance
7. Providing feedback
8. Assessing performance
9. Enhancing retention and transfer

## The Nine Events of Instruction

According to Gagné, learning occurs in a series of learning events. Each learning event must be accomplished before the next in order for learning to take place:

1. Gaining attention

2. Informing learners of objectives: the teacher communicates the desired outcome to the group.

3. Stimulating recall of prior learning

4. Presenting the stimulus: the teacher gives emphasis to distinctive features.

**The Nine Events of Instruction**

5. Providing learning guidance

6. Eliciting performance

7. Providing feedback

8. Assessing performance

9. Enhancing retention and transfer

Concrete
Experience
*Having an
experience*

Activists　　　　　Reflectors

*Continuum*

Active
Experimentation　　Processing　　Continuum　　Reflective
*Putting their theory*　　　　　　　　　　　　　Observation
*into practice*　　　　　　　　　　　　　　　*Reflecting on it*

*Perception*

Pragmatists　　　　Theorists

Abstract
Conceptualisation
*Drawing their own
conclusions*
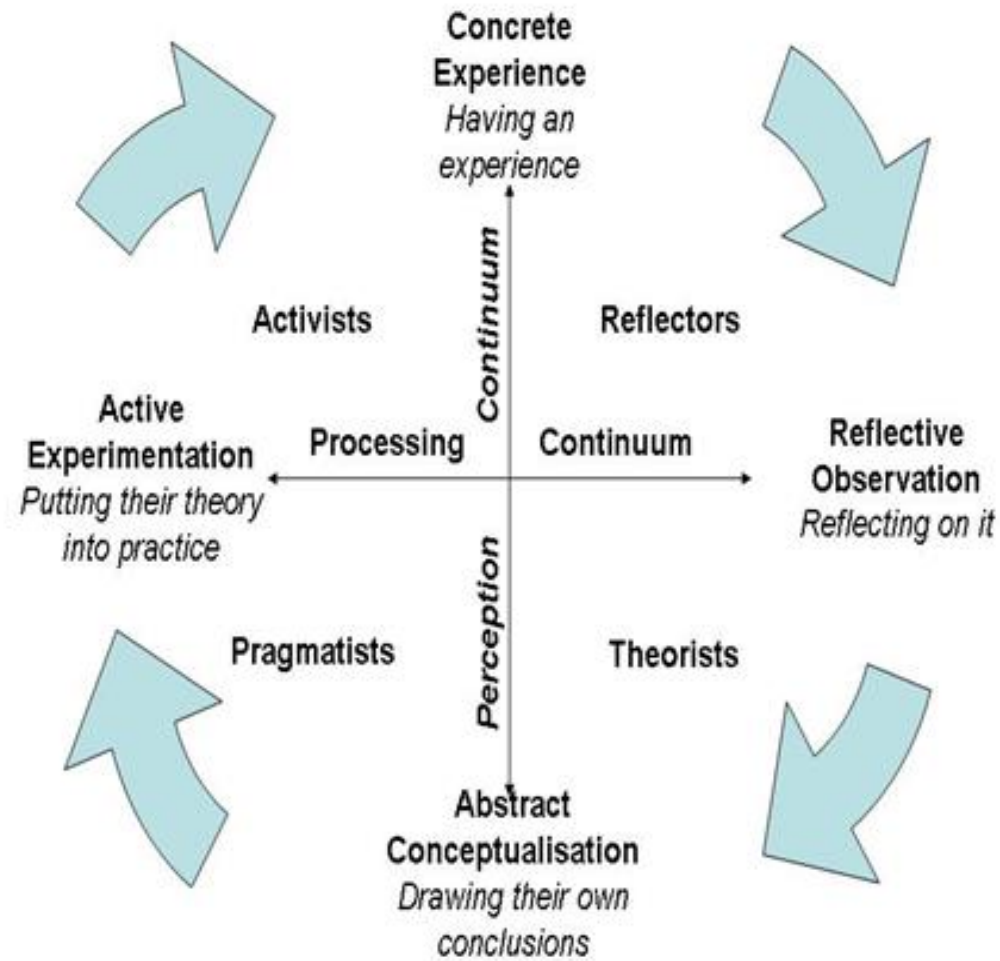
# Honey and Mumford's Learning Styles

1. Theorist - enjoys studying the theoretical concepts

2. Pragmatist  - prefers a practical approach to learning

3. Reflector - analyses situations to determine outcomes

4. Activist - experiments and learns by doing

Honey & Mumford: Typology of Learners

Concrete Experience

Active Experiment-ation

Reflective Observation

Abstract Concept-ualisation

**Activist**: prefers doing and experiencing

**Reflector**: observes and reflects

**Theorist**: wants to understand underlying reasons, concepts, relationships

**Pragmatist**: likes to "have a go" try things to see if they work
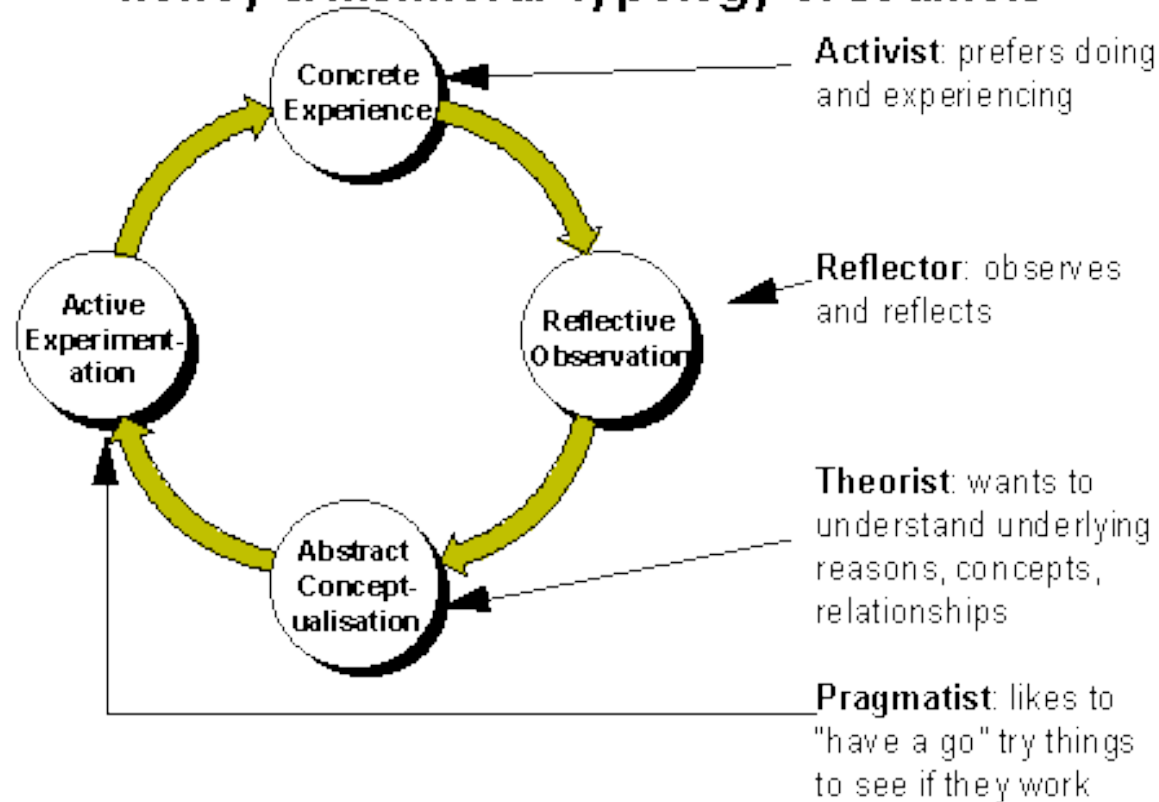
# Teaching methods

Four criteria for selecting teaching methods

1)     Effectiveness

2)     Attainability

3)     Variation

4)     Target group

**"Nothing great was ever achieved without enthusiasm"**

-Ralph Waldo Emerson

# 10 Methods of Delivery

❯ Lecture
❯ Structured discussion
❯ Panel discussion
❯ Reading
❯ Case studies

❯ Role playing
❯ Skill application
❯ Simulation
❯ Games
❯ Call to action
(issuing a challenge)

**People generally
remember...
(learning activities)**

**People are able to...
(learning outcomes)**

10% of what they read

20% of what they hear

30% of what they see

50% of what
they see and
hear

70% of what they
say and write

90% of what
they do.

Read

Hear

View Images

Watch Videos

Attend Exhibitis/Sites

Watch a Demonstration

Participate in Hands-On-Workshops

Design Collaborative Lessons

Simulate, Model, or Experience a Lesson

Design/Perform a Presentation - "Do the Real Thing"

Define     List
Describe  Explain

Demonstrate
Apply
Practice

Analyze
Define
Create
Evaluate

# Teaching Aids

Good teaching aids can function as:
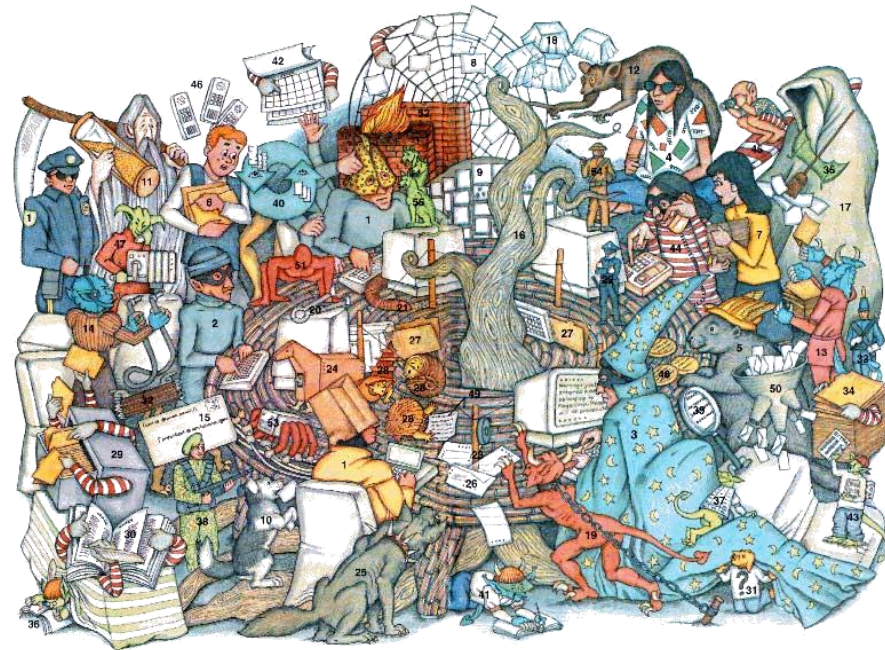
› Support

› Add information

› Add variety

## Audio & Visual Tools

> Videos/DVDs
> Easel pad
> Overhead transparencies
> White boards
> Slides
> PC-based presentations
> Mock ups

# Visual Aids

## 200%

## Improve
## learning
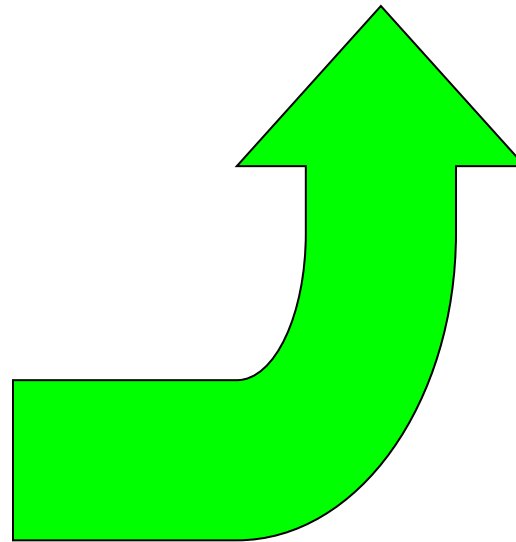
Source: Studies at Harvard & Columbia

# An accident in the USA

› CSB safety <u>video</u> on the 2009 explosion at NDK Crystal in Belvidere, Illinois, which fatally injured a truck driver at a nearby gas station

**Visual Aids**

# 38%

# Improve Retention

Source: Studies at Harvard & Columbia

# Key points

❯ Do not let your own learning style restrict the design of your training course

❯ Choose and use one of the many teaching methods which is appropriate for the task your participants need to perform

❯ Teaching aids can help to make the teaching method more effective.

# › END OF SECTION 3

# Section 4 - designing a short training session

Learning Objectives:

› Formulate operational objectives from general objectives

› Produce a design for a course

› Sequence contents within a design

# Operational objectives are …

› The **individual outcomes** of the training intervention and relate to the outcomes of the task analysis matrix

# Design Process

Needs analysis

General Objectives

Target group - Participant's profile

Limiting conditions

Operational objectives

Content

Learning Process

Methods

Achieving Learning Objectives

Aids

Evaluation
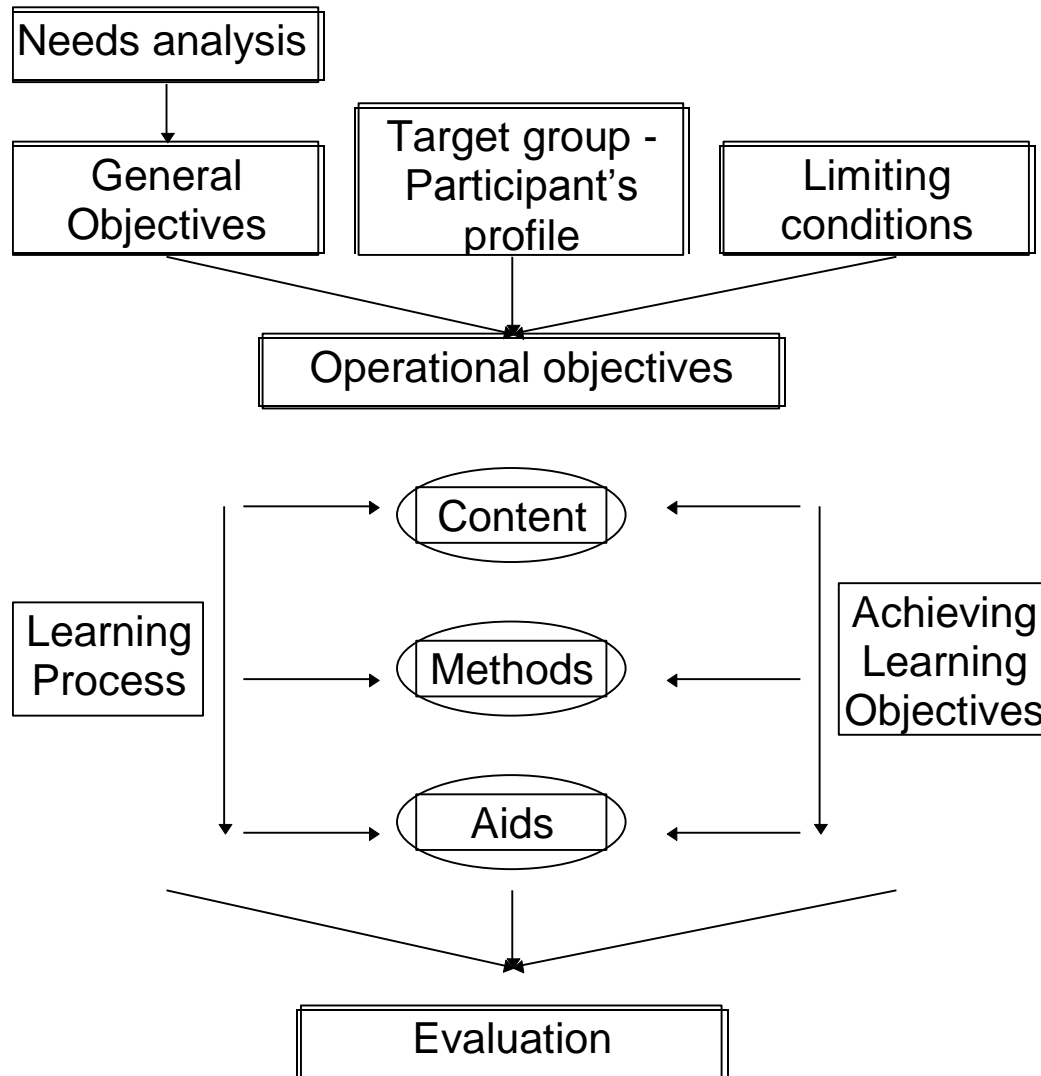
# Macro design

At this stage make choices concerning:

❯ Sequence of the subjects

❯ Relationship between theory and practice

❯ Timing, whether the sessions are consecutive or have days/weeks between them

## Sequence of the subjects

Good structuring ➡️ Efficient learning process

The sequence is determined by:
1. the entry level of the group

2. the operational objective(s) of the course / the course component.

# Sequence of the subjects

**Chronological order**

**Concentric -** where you start with a simplified description of the whole and build  layers of knowledge and skills around this core leading to deepening and elaborating of knowledge and skills

**Exemplary -** the most representative themes are selected and elaborated. The subject matter learned can be applied in similar situations.

# **Sequence of the subjects**

› **Problem-oriented -** where problems derived from the participants' working environment are created for participants to solve

› **Psychological order** - where the course starts with the subject about which the participant has the most questions. This can be the subject the participant likes best, or the very opposite, the subject the participant is most reluctant to address.

› **20 - 80 rule of Pareto** - where 20% of the tasks define 80% of the daily work. By starting with these 20%, the participant can function very quickly in their new role.

# Relation between theory and practice

› Determined by the types of objectives and the learning styles of the target group

› When skills objectives  have to be attained, the practice will make up the majority of the course whereas if the balance of the objectives is towards knowledge and attitudes then theory may predominate

› However practice-oriented assignments are always essential because of the connection with the participants' working situation.

# Time

1. Consecutive course days ➡ More remembering

2. Course days with various length gaps between them ➡ opportunity to apply new skills and see the practical relevance.

## Matrix method

- Enables to plan and organise the course in a flexible way

- Course objectives and ideas for teaching methods are written on different Post its

- Subsequently, they can be arranged and rearranged in a time table

**1.General objectives**

❯ Determine the general objectives which have to be achieved in the programme

❯ Write down each general objective on a 'Post it'

❯ Use a different colour marker for each objective

❯ Give each objective a number.

## 2. Operational objectives

› Formulate operational objectives for every general objective

› Give a code to each of the operational objectives, derived from the number of the relevant general objective

› Write down each operational objective on a Post it (use the same colour as the one you used for the corresponding general objective)

## 3. Teaching methods for each operational objective

› For each operational objective identify the most appropriate teaching methods

› Finalise which method will be used later in the process

› Write down each teaching method on a separate Post it

## 4. Preference for teaching methods

*Make the final choice in selecting a teaching method for each operational objective.*

Evaluation criteria's:
- the effectiveness of the teaching method,
- the degree of similarity between the learning and the working situation,
- whether the method is active or instructional
- the appropriateness of the teaching method with the group/size.

**5. Time estimate per teaching method**

The 'duration' of a teaching method is influenced and determined by:

› the complexity of the assignment.

› quality of the trainer

› group size

## 6. Fixed programme components

› Make a blueprint to the fixed programme components

- Introduction
- Coffee
- Lunch
- Evaluation
-  …………

# › END OF SECTION 4

# Section 5 - developing and delivering training sessions

**Learning objectives**

› Know how to use the design for a training course to develop a practical plan for the training session and identify the materials needed

› Know some of the issues that affect the delivery of a training session

› Be able to develop a micro teaching session

# Refining the operational objectives

› Think about the operational objectives and test

› A useful method for testing operational objectives is to use the  acronym SMART

# Refining the operational objectives

› **S**pecific:  have you distinguished between knowledge, skills and attitude?
› **M**easurable:  how will you know if the objective is achieved?
› **A**ttainable:  do the activities really correspond to the tasks the participants are responsible for in their job?
› **R**easonable:  is it reasonable to expect the participants to achieve the objectives within this course?
› **T**ime based:  How long is the period in which the participants have to attain the objectives?

# Refining other aspects of your course

The selecting and sequencing of content should be reviewed too !!!!!

 * Use the same starting point as before

 but

 * Use a number of additional sequencing principles as well !!!!

**Refining other aspects of your course**

▪ Start by being ruthless.

▪ Obviously the selection of contents has to be
   directed by the objectives.

▪ The course has to contain all the content that is
   required to achieve the objectives,

▪ BUT make a positive effort to leave out content
   which is not required. This is more difficult than you
   might imagine.

**Developing your micro teaching session**

❯ 15 minutes

❯ Choose the topic carefully

❯ You obtain the maximum benefit, you should try and select one operational objective so that you can really go through the whole process and test yourself in each aspect of design, development and delivery.

# Implementation

› Some of the factors you will need to consider to maximise the effectiveness of any course you deliver are:
  › Attendance and commitment

  › Group size and attitude

# I. Attendance and commitment

❯ The participants have to be able to make time for the training
❯ *Publish the time well in advance*

❯ The other factor is location of the training sessions
❯ *Near the workplace = distraction by various job activities*

# The Hierarchy of Commitment

**Level of Commitment**

**Commitment**
I Will Do It!
I Will Lead Others To Do It…

**Compliance**
I Have To Do It!
I Can Do It When I am Told To…

**Complain**
Why Should I Do It?
If Nobody Say So…

**Non – Committal/Condemn**
I Will Not Do It!
I Will Influence Others…

1

# II.  Group size and attitude

❯ Be flexible by preparing for a range of numbers of participants.

❯ The involvement of the participants is of substantial importance

- Too large group for the activities allows some participants to 'hide
- poor motivation caused by  poor presentation of the training

## Key Points

> The macro design is refined during the development phase
> Operational objectives can be refined by applying the SMART test
> Content should be reviewed to ensure only essential topics are covered
> All other aspects should be reviewed in a similar manner
>   ✓be ruthless
>   ✓be careful to ensure that the course can be delivered in the time available
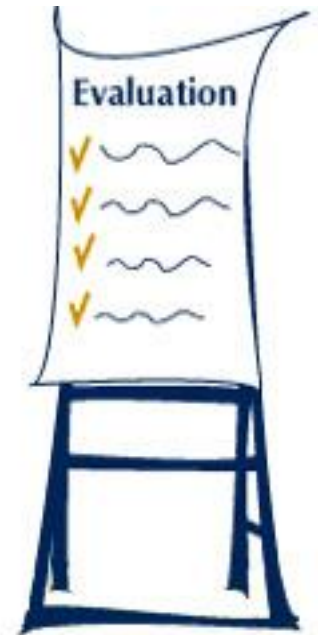>   ✓be prepared for all eventualities.

# ❯ END OF SECTION 5

## Section 6 - Evaluating a training course or session
### Learning Objectives

›Know the purpose and benefits of evaluation
›Be able to identify those elements of a training course which can be evaluated
›Know the points at which a training course can be evaluated
›Know the difference between open and closed questions



Evaluation

# Evaluating a training

› A pilot version is given first, then, evaluation and revision

› A training course has to be updated continuously

› Evaluation should always be linked to the general and operational objectives of a training

# Overview of the evaluation process

Conduct a **needs analysis**

Develop a measurable **learning objectives** and **analyze transfer of learning**

Develop **outcome measures**

Choose an **evaluation strategy**

Plan and **execute** the **evaluation**

# Evaluating a training

› **Process evaluation** is a measure of how well the course enables the participants to meet the objectives.

› **Product evaluation** is similar to assessment since it measures how well a participant is able to demonstrate their ability to meet the learning objectives.

# Process evaluation

❯ accommodation
❯ duration of the training
❯ the contents
❯ the applicability in the workplace
❯ the teaching methods
❯ the quality of the materials
❯ the quality of the trainer
❯ the fulfilment of expectations

# Product evaluation

❯ verbal test
❯ written test
❯ observation of role plays
❯ observation in the work place

true, false
or give up

# Moments for evaluation

## 1.Before the training

A predictive or diagnostic test to determine the current knowledge, skills and attitudes of the participant.

## 2. During the training

Diagnostic tests
Asking the participants to reflect on the training at the end of each session.

# Moments for evaluation

**3. At the end of the training**
It is usual to conduct a formal evaluation of both the process and the product at the end of the training

**4. After the training, on the job**
Participant is back at work

# Evaluation Levels

| | Level | Measurement Focus |
|---|---|---|
| 1 | Reaction & Planned Action | Measures participant satisfaction with the program and captures planned actions. |
| 2 | Learning | Measures changes in knowledge, skills, and attitudes. |
| 3 | Application | Measures changes in on–the–job behavior. |
| 4 | Business Impact | Measures changes in business impact variables. |
| 5 | Return on Investment | Compares program benefits to the costs. |

**Key Points**

› Evaluation is an essential part of the on-going development of a training course
› Process evaluation provides information to facilitate learning,  product evaluation evaluates the learning which has taken place.
› Evaluation can take place before, during at the end of and on implementation of a training course.
› Open questions ask for opinions, reason and suggestions
› Closed questions ask for a quantifiable response

# › END OF SESSION 6

# The Mind is a Wonderful Thing …

It starts working the minute you are born and never stops …
Until you get up to speak!

*Roscoe Drummond*

Congratulations! You are ready
to orchestrate the application of
active learning strategies in your
educational activities!