



Project on Occupational Health & Safety in High-Risk Sectors

GVG (DE), AETS (FR),
NCIST (CN), Saniplan
(DE) & TNO (NE)

EUCOSH



Train-the-trainer





OSH Train-the-trainer Programme - December 2013 for China at TNO Healthy Living, The Netherlands

Version 0.8, December 6, 2013

PARTICIPANTS PROGRAMME

Key facts

Participants: eighteen trainers in occupational safety and health from different levels and regions in China

Interpreters: two interpreters (English-Chinese)

Time: 9:00 – 12:30 in the morning; 13:30 - 17:00 in the afternoon

Moderation: Mr. Jan Michiel Meeuwsen (JM) and Mrs Sühendan Adigüzel van Zoelen (SA), see pen profiles below and their more elaborated résumés

Location: Hoofddorp, The Netherlands

Objectives of the program

On completion of this train-the trainer program, participants should:

- 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 a training courses
- be able to conduct an evaluation of a training course
- have knowledge on state of the art innovation in learning methodologies such as serious gaming
- have experienced and witnessed examples of occupational heath and safety training in Dutch enterprises

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Additional information on the program

This train-the-trainer program follows a proven and well-designed format used earlier by TNO at similar projects. All participants will receive a workbook in which six sections follow the process of designing a training course in a logical way. In the given program the six headings in blue are mentioned and described briefly. These headings relate directly to the workbook. This workbook introduces small and large activities to be performed on the spot by the participants guided by the trainers. The workbook will be translated in Chinese and available to use freely by the participants after their return to China.

A small and concise application form in Chinese will be sent to all participants in advance in order to assess their present role and position and their experience and needs in OSH training.

Furthermore, some guest lecturers on specific topics have been invited and two visits to enterprises are foreseen to see OSH training of workers in practice.

Finally, the participants will be given a small personal log book to collect their main findings and share it with one another and the trainers.

Trainers

Our two trainers who design and deliver the train-the-trainer program are highly experienced OSH professionals working together in several OSH related activities. Both have a thorough background in OSH and ample experience in conducting train-the-trainer sessions for several target groups coming from ministries, inspection authorities or OSH professionals



Jan Michiel Meeuwsen (JM) has a Master's degree on Dutch language and literature and a Bachelor's degree on English language and literature. Later, when joining TNO (a large research institute in The Netherlands), he qualified with additional studies as a senior expert in occupational safety and health (OSH), human resources management, training and learning methodologies and impact assessment and evaluation methodologies, as applied in several projects in new member states and in The Netherlands. Jan Michiel works as an international senior consultant and currently holds a position as manager international affairs at [TNO Healthy Living](#).

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General description

In The Netherlands, Jan Michiel has worked in many projects for individual enterprises and branch organisations in the field of working conditions, health and safety at work and human resources management. As from 1994 he also became active in international projects, mainly in Central and Eastern European countries. In these projects he assisted respective Ministries of Labour and their enforcement agencies with the preparation of accession to the European Union or benchmarking with best practices in the EU.

Recently, Jan Michiel assisted Croatia in a similar pre accession process and he worked with national authorities in Azerbaijan, Turkey and Estonia on OSH policy evaluation and development. In Turkey, Jan Michiel finished a MATRA project (Dutch bi-lateral funding) in 2011. In this project the Turkish Ministry of Labour and Social Security received assistance with a gap analysis concerning health and safety legislation and the position of occupational safety and health services within Turkey. The project outcome contributed to the final adoption of the new Health and Safety Act in Turkey last June 2012.

In Turkey in 2013, Jan Michiel started the so called FERROSH project. A project on occupational health in the Turkish metal sector implemented by MESS (the Turkish metal employer's organisation). In his projects he frequently introduces train-the-trainer approaches as the best proven multiplier effect to assure that new knowledge can be transferred to more target groups.



Sühendan Adigüzel-van Zoelen (SA) is a Medical Doctor and she did her PhD on Medical Pharmacology. She worked as a researcher, trainer and laboratory manager. She gave lectures to Turkish medical doctors to prepare them to the National Medical Board Exams. Later, she qualified as GLP (Good Laboratory Practise) Inspector. During her position at the Public Health Institution of Turkey, she studied as a senior consultant in the field of Public Health. She also worked in several projects including EU and World Bank funded projects. Recently, Suhendan was qualified as an occupational physician and worked as head of OSH department within the Ministry of Health in Ankara. She was the contact person for national and international relationships in the field of OSH and arranged a lot of trainings for workers. Presently she is active as the liaison officer for TNO in Turkey.

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General description

Sühendan is also a certified occupational physician and first aid instructor. She worked as the head of OSH Department at the National Public Health Institution of Turkey starting from 2009 and established an OSH management system for the Institution in line with EU requirements in the field of OSH. She prepared 'Techniques for Safe Working in laboratories' and 'Waste Management', Guidelines for the workers of National Public Health Institution. Those documents were used also as additional materials during interactive trainings of personnel.

In February 2013 she attended the 3rd International Strategy Conference on Occupational Health and Safety in Dresden, Germany. Together with Jan Michiel Meeuwssen she recently published an [article](#) in *MERCEK* (2013/01) *Yürütmeden Yönetime; Kurululardaki Salk ve Güvenlik artlarnn yiletirilmesini Etkilemenin Yollar*. In this magazine of the Turkish metal employer's organisation a more integrated approach is suggested to adapt national policies on OSH to the EU *acquis communautaire* in health and safety at work. She also conducted OHSAS 18001- Occupational Health and Safety Management System and ISO 14001:2004 - Environment Management System inspections at hospitals and Public Health Institution of Turkey.

She is also active in the FERROSH project. A project on occupational health in the Turkish metal sector. In her projects she frequently introduced train-the-trainer approaches as the best proven multiplier effect to assure that new knowledge can be transferred to more target groups. Moreover, she was qualified as a trainer specifically for train-the-trainer courses.

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<i>Time</i>	<i>Topic</i>	<i>Method</i>	<i>Outcome</i>	<i>Trainers</i>
Day 1, December 9, Monday				
09.00-09.10	Opening Welcome at TNO	Presentation	An impression of hospitality amongst the participants creating an open and friendly atmosphere in order to perform substantial and constructive work during the coming two weeks	JM + SA
09.10-09.45	Introduction of participants (role, responsibility)	Questions & Answers; interactive dialogue	All participants and trainers are more acquainted to one another	SA
09.45-10.30	Inventory of expectations from the participants Definition training ground rules	Inventory on one flip	Agreement on joined expectations that are viable and the rules on which we will work together	SA
10.30-11.00	Coffee/tea break			
11.00-11.45	Explanation of the program and related materials	Presentation and interactive dialogue	All participants fully understand the program and what is expected from them	JM
11.45-12.30	Introduction TNO, its role on occupational safety and health in The Netherlands	Presentation and Questions & Answers	All participants understand the scope of work of TNO in the field of OSH in the Netherlands and abroad	JM + Paulien Bongers (Innovation Director TNO)
12.30-13.30	Lunch			

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13.30-14.15	Communication skills	Practical demonstration and exercises	The participants realise the differences in verbal, non-verbal communication and the peculiarities of intercultural communication	SA, 30 slides
14.15-15.00	<i>Issues relating to Adult Learning (section 1)</i> Differences between adults' and children's attitude and backgrounds in learning	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	The participants understand the differences of adult learning as opposed to learning processes of children and adolescents	JM, activity 1 + 2, slides 1-15
15.00-15.30	Coffee/tea break			
15.30-16.15	<i>Issues relating to Adult Learning (section 1)</i> Identification of issues which distinguish adult learning	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	The participants realise the most important issues to take into account when performing a training for adults	SA, activity 3 + table, slides 16-30
16.15-17.00	<i>Issues relating to Adult Learning (section 1)</i> The issues relevant to adult learning in the micro training session to be prepared for the final assignment	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	The participants realise the consequences of adult learning issues to take into account when designing their final assignment of this train-the-trainer program	JM, activity 4,

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Time	Topic	Method	Outcome	Trainers
Day 2, December 10, Tuesday				
09.00-09.10	Warming-up activity	Physically activating exercise, Tai Chi	The participant's metabolism, blood flow and endocrine glands have been activated to start a new day full of energy☺	One of the Chinese participants
09.10-09.45	<i>Issues relating to Adult Learning (section 1)</i> Self-assessment	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	All participants have tested their understanding of the workbook section that has been closed	SA, self-assessment test
09.45-10.30	<i>Conducting a training needs analysis (section 2)</i> Is training always a solution?	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants realise that not in all situations training is a solution and other measures are more appropriate to solve a problem	JM, activity 5, slides 32-33 + video
10.30-11.00	Coffee/tea break			
11.00-11.45	<i>Conducting a training needs analysis (section 2)</i> Task analysis matrix method	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants have become more acquainted with a well know method to design training courses	SA, activity 6, slides 34-35

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11.45-12.30	<i>Conducting a training needs analysis (section 2)</i> The difference between knowledge, skills and attitude in needs analysis	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants understand the differences between knowledge, skills and attitude to be taken into account when making a training needs inventory	JM, activity 7
12.30-13.30	Lunch			
13.30-15.00	Guest lecturer on serious gaming for use in OSH training	Presentation and interactive learning with serious gaming	Participants have become aware of the opportunities for learning by serious gaming	Dr Annerieke Heuvelink, TNO
15.00-15.30	Coffee/tea break			
15.30-17.00	Guest lecturer on serious gaming for use in OSH training	Presentation and interactive learning with serious gaming	Participants have become aware of the opportunities for learning by serious gaming	Dr Annerieke Heuvelink, TNO
Day 3, December 11th, Wednesday				
09.00-17.00	Visit to: The Shell trainings Centre, Rijswijk, The Netherlands	Demonstration, presentation and interactive learning discussions	Participants have witnessed and reflected upon the usefulness of a practical example in The Netherlands regarding OSH training in an enterprise	Several trainers, coordinators Monique Zandvliet and Steven van Rooij, Global Training Manager, Shell
Day 4, December 12th, Thursday				

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09.00-09.10	Warming-up activity	Physically activating exercise, Tai Chi	The participant's metabolism, blood flow and endocrine glands have been activated to start a new day full of energy☺	One of the Chinese participants
09.10-09.45	<i>Conducting a training needs analysis (section 2)</i> Deriving general objectives from a task analysis	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants have practised and understand the importance of deriving general objectives in designing a training course	JM, activity 8, 9 + 10, slides 36-40
09.45-10.30	<i>Conducting a training needs analysis (section 2)</i> Factors influencing the effectiveness of a training course Self-assessment	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants can list important factors that influence the effectiveness of a training course All participants have tested their understanding of the workbook section that has been closed	SA, activity 11, slides 41 +42, self-assessment test
10.30-11.00	Coffee/tea break			
11.00-11.45	<i>Identifying learning strategies and teaching methods (section 3)</i> Different people learn best in different ways	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants can identify the different learning styles of people	JM, activity 12 + 13, slides 44-55

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11.45-12.30	<i>Identifying learning strategies and teaching methods (section 3)</i> Selection of appropriate teaching aids for teaching methods	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants know how to select appropriate teaching aids for teaching methods	SA, activity 14, 15 + 16, slides 56-60
12.30-13.30	Lunch			
13:30 – 15:00	Guest lecturer MOSHE	Demonstration, presentation and interactive learning discussions	Participants have witnessed and reflected upon the usefulness of virtual reality in training	Assistant professor Mrs. Simone Sillem TU Delft / Safety Science Group
15.00-15.30	Coffee/tea break			
15.30-17.00	Guest lecturer on European Legislation	Presentation and discussions	Participants have learned about European OSH legislation	Mr. Jan Harmen Kwantes, TNO
Day 5, December 13th, Friday				
09.00-09.10	Warming-up activity	Physically activating exercise, Tai Chi	The participant's metabolism, blood flow and endocrine glands have been activated to start a new day full of energy☺	One of the Chinese participants
09.10-09.45	<i>Identifying learning strategies and teaching methods (section 3)</i> Selection of appropriate teaching aids	Workbook study mixed with practical activities/exercises and interactive learning dialogues to	Participants know how to select appropriate teaching aids for teaching methods	SA, activity 17, slides 61-63

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	for teaching methods	reflect upon the reading.		
09.45-10.30	<i>Identifying learning strategies and teaching methods (section 3)</i> Self-assessment	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	All participants have tested their understanding of the workbook section that has been closed	JM, self-assessment test
10.30-11.00	Coffee/tea break			
11.00-11.45	<i>Designing a short training session (section 4)</i> Formulation of operational objectives from general objectives	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants can formulate operational objectives to help them designing a training course	SA, activity 18, slides 65-67
11.45-12.30	<i>Designing a short training session (section 4)</i> Production of a design for a course	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants have produced a first rough design of a training course	JM, activity 19 + 20, slides 68-71
12.30-13.30	Lunch in bus			
12.30-17.00	Visit to Rijksmuseum in Amsterdam and dinner			
Day 6, December 16th, Monday				

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09.00-09.10	Warming-up activity	Physically activating exercise, Tai Chi	The participant's metabolism, blood flow and endocrine glands have been activated to start a new day full of energy☺	One of the Chinese participants
09.10-09.45	Wrap up of last week; what have we learned?	Interactive learning discussion based on participant's notes in their personal logbooks	Participants realise what is useful for them to use in their own work	JM + SA + participants
09.45-10.30	<i>Designing a short training session (section 4)</i> The sequence of contents within a design	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants know how to put the different contents in a training course in a most effective order	SA, activity 21 + 22, slides 72 + 73
10.30-11.00	Coffee/tea break			
11.00-11.45	<i>Designing a short training session (section 4)</i> The sequence of contents within a design Matrix method	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants can work with the matrix method to sequence the content of their training program	JM, activity 23 + 24, slides 74-83
11.45-12.30	<i>Designing a short training session (section 4)</i> Self-assessment	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	All participants have tested their understanding of the workbook section that has been closed	SA, activity 25 and self-assessment

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12.30-13.30	Lunch			
13.30-15.00	<i>Developing and delivering training sessions (section 5)</i> A practical plan for the training session and identification of materials needed	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants have the skill to work with a practical plan for their training sessions	JM, activity 26, slides 82-84
15.00-15.30	Coffee/tea break			
15.30-17.00	Industrial hazard management (SEVESO)	Lecture and case study	Participants are aware of the SEVESO regulation in the European Union and know how this works in practice	Koos Ham, guest lecturer from TNO
Day 7, December 17th, Tuesday				
09.00-09.10	Warming-up activity	Physically activating exercise, Tai Chi	The participant's metabolism, blood flow and endocrine glands have been activated to start a new day full of energy☺	One of the Chinese participants
9.10-9.45	<i>Developing and delivering training sessions (section 5)</i> Issues that affect the delivery of a training	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants are aware of the issues that influence the delivery of trainings	SA, activity 27, slides 85 +86

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9.45-10.30	<i>Developing and delivering training sessions (section 5)</i> Development of a micro training session	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants have been introduced to their core final assignment, i.e.: to design and present a micro teaching session at the end of this train-the-trainer program	JM, activity 28, 29 + 30, slide 87
10.30-11.00	Coffee/tea break			
11.00-11.45	<i>Developing and delivering training sessions (section 5)</i> Self-assessment	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	All participants have tested their understanding of the workbook section that has been closed	SA, activity 31, 32 and 33 and self-assessment test, slides 88-91
11.45-12.30	<i>Evaluating a training course or session (section 6)</i> The purpose and benefits of evaluation	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants understand the purpose and benefits of evaluation of training courses	JM, activity 34, 35, slides 94-98
12.30-13.30	Lunch			
13.30-15.00	<i>Evaluating a training course or session (section 6)</i> Identification of elements of a	Workbook study mixed with practical activities/exercises and interactive learning dialogues to	Participants know which elements of a training course can be evaluated and the usefulness of that	SA, activity 36, slide 99

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	training course which can be evaluated	reflect upon the reading.		
15.00-15.30	Coffee/tea break			
15.30-17.00	Guest lecturer on virtual reality which can be used in training	Demonstration, presentation and interactive learning discussions	Participants have witnessed and reflected upon the state of the art in serious gaming	Prof. Michiel de Looze, TNO
Day 8, December 18th, Wednesday				
09.00-17:00	Visit to: BAM Infratechniek Telecom which provides services for the realisation of cable networks for telecommunication. A demonstration in practice on how OSH training is designed, planned and organised within a company.	Demonstration, presentation and interactive learning discussions	Participants have witnessed and reflected upon the usefulness of a practical example in The Netherlands regarding OSH training in an enterprise	Berend Brinkhuis, Safety Manager of BAM Infratechniek
Day 9, December 19th, Thursday				
09.00-	Warming-up activity	Physically activating exercise,	The participant's metabolism, blood flow	One of the Chinese

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09.10		Tai Chi	and endocrine glands have been activated to start a new day full of energy☺	participants
09.10-09.45	<i>Evaluating a training course or session (section 6)</i> The points at which a training course can be evaluated	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants know at what points a training course can be evaluated	SA, activity 37 + 38, slides 100-106
09.45-10.30	<i>Evaluating a training course or session (section 6)</i> The difference between open and closed questions	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	Participants have practised and know the difference and usefulness between open and closed questions	SA, activity 39,
10.30-11.00	Coffee/tea break			
11.00-11.45	<i>Evaluating a training course or session (section 6)</i> Self-assessment	Workbook study mixed with practical activities/exercises and interactive learning dialogues to reflect upon the reading.	All participants have tested their understanding of the workbook section that has been closed	JM, self-assessment test
11.45-12.30	Preparation of micro training session by participants	Self-study and preparation of the participants for their final assignment. Trainers assist them while walking around	Finalised micro training session	JM + SA

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12.30-13.30	Lunch			
13.30-14.15	Preparation of micro training session by participants	Self-study and preparation of the participants for their final assignment. Trainers assist them while walking around	Finalised micro training session	JM + SA
14.30	Visit to Amsterdam, options: canal tour and city tour			
Day 10, December 20th, Friday				
09.00-09.10	Warming-up activity	Physically activating exercise, Tai Chi	The participant's metabolism, blood flow and endocrine glands have been activated to start a new day full of energy☺	One of the Chinese participants
10.00-10.30	Presentations of the participants	Depending of what the participants have designed and prepared in their micro training sessions	Participants have presented and received feedback on their micro training sessions	Chinese participants + JM + SA
10.30-11.00	Coffee/tea break			
11.30-13.00	Presentations of the participants	Depending of what the participants have designed and prepared in their micro training sessions	Participants have presented and received feedback on their micro training sessions	Chinese participants + JM + SA
12.30-	Lunch			

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13.30				
13.30-14.15	Presentations of the participants	Depending of what the participants have designed and prepared in their micro training sessions	Participants have presented and received feedback on their micro training sessions	Chinese participants + JM + SA
14.15-15.00	Presentations of the participants	Depending of what the participants have designed and prepared in their micro training sessions	Participants have presented and received feedback on their micro training sessions	Chinese participants + JM + SA
15.00-15.30	Coffee/tea break			
15.30-16.00	Evaluation Are the expectations realised?	Reflection and interactive learning discussion on the flip that was produced the first day and see if expectations have been met.	Participants realise what they have gained from this program and can use in their own practice	Chinese participants + JM + SA
16.00-17.00	CLOSING Hand out of certificates			
17.30	Farewell dinner in the evening			



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EUCOSH

Training

Introduction to the unit

The final assignment for EUCOSH Train-the-trainer requires you to identify, design and develop a short training course for delivery within your organisation.

In this unit you will learn about the theory and practice of using a training session to develop the knowledge and skills of your participants. You will then use your skills to plan, design and deliver your own training session in one or more aspects of Occupational Safety and Health.

The unit takes the form of a work book in which there are 6 sections in the book, each one corresponding to one of the learning objectives for the Unit. This is Part 1 of the Unit with the first 3 sections.

If you attempt all the activities as you work through the book, you will acquire the skills you need to plan, design and deliver your own training course. Each section has been designed to build on the previous one. Some of the activities will provide you with the work you need to discuss at the train-the-trainer program.

The activities in this workbook are your opportunity to use the skills from each section to begin work on the training course you have to design and deliver for your final assignment. At the Train-the-trainer program you will be able to share your experiences with other participants. This will help you to broaden your understanding of both training and Occupational Safety and Health.

Throughout the work book feedback is provided for the activities so that you will know if you are gaining the knowledge and skills as you study. At the end of each section there are some self-assessment questions which will allow you to test yourself. If you cannot answer any of the self-assessment questions, you should go back and work through the section again. If you still don't understand you can contact your tutor or discuss your questions with them at the Train-the-trainer sessions.

Throughout the Unit the activities use very general examples. Most relate to the use of computers or to basic aspects of Health and Safety. You should be able to understand the principles from these activities and apply them to your own experiences and your own training course.

This Unit has been designed to take an **average** of 21 learning hours. Not everyone learns at the same pace, so don't be surprised if you finish sooner or take a lot longer. The important thing is that you do undertake the activities because you will learn much more than if you just read through the text like a book.

Do not forget that throughout EUCOSH **you** are the learner. Always try and reflect on your experiences as you progress through your learning about Occupational Safety and Health and apply the best of your experiences in your design of the course you are preparing for others.

Learning objectives

On completion of this unit, participants should:

- 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



Section 1 - Issues relating to adult learning

Learning Objectives

On completion of this section you should;

- Know 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

Introduction

You are going to be designing a training session for your colleagues. Your course will be most effective if you make sure you know your target audience and anticipate their preferences with respect to the way you treat them throughout the course.

Adult learning

It is possible that many of your participants will not have been involved in formal learning for some time. The last formal learning for some may well have been at school. They will not appreciate as adults, the experience they had in a classroom as a child. Throughout this section you will undertake activities which help you to identify these issues as one of the important features of the design you will undertake for your own training session(s).

Activity	1
----------	---

By examining your own experiences this activity will help you to identify those features of classroom teaching which may be unacceptable to an adult. Use the space below to write down 5 things about your own school experience which you think you would not like to experience as an adult

- | |
|----|
| 1. |
| 2. |
| 3. |
| 4. |
| 5. |



Feedback

There are many things you might have identified. Examples are: having to sit in rows facing the teacher, not being able to ask questions, being afraid to answer questions in case you were wrong, not having time to finish work, not understanding the lessons or not being able to see the relevance of the curriculum.

When you are designing a training session you must avoid your participants having any of the concerns you have just identified. Your participants may be employed at a lower level in the organisation than yourself, but they may be your equals or even employed in more senior positions than you. Training is about helping people to learn. Making them comfortable and confident about the process is very important.

Activity 2

This activity will identify more of the things which might make your participants feel uncomfortable in a training session and limit the effectiveness of your course.

Imagine that you are the participant in a training session which is being facilitated by a junior colleague who happens to be an expert in a particular skill. It might be the use of computers or a new telephone system which has been installed. Write down some of the things which would make you feel uncomfortable about learning from a junior colleague.

-
-
-
-
-
-
-

Feedback

The most common response in this situation is that you might be afraid of failing and being embarrassed. More junior colleagues might be patronising in their attitude to you,



deliberately using technical language you don't understand. You might find that you cannot work quickly enough as you try to understand the new information and skills you need. You might want to discuss your grasp of the situation with other participants and see if you are on the right track before the group moves on to the next stage or ask for help if you are the only one who doesn't understand. All of these things can and do happen in poorly designed training sessions and they all result from a lack of understanding of the issues facing adult learners.

Participants' profile

It is very important to know as much as possible about your target group before you design a course.

Activity	3
-----------------	----------

Look at the application form which you completed to join this course and identify 3 things that the course team knew about participants for ECOSH and 3 they did not ask for.

<p>Known facts</p> <ol style="list-style-type: none">1.2.3. <p>Unknown facts</p> <ol style="list-style-type: none">1.2.3.

Feedback

We asked for several facts about you but the most relevant for the design of the course are, competence in English, competence in Information technology, position in the organisation, areas of responsibility and role in Occupational Safety and Health. Knowing these facts and using them as criteria for selecting participants has helped us to design a course which is both relevant and at a level with which all participants can engage.

Things we did not consider relevant were age, other qualifications and type of organisation for which you work. Some of these might be relevant for other courses but not for this one.

The following table summarises some of the things you will need to know about your group of participants before you can begin to design your training course.

Table 1

Issue	Examples
Composition of the group	You may have a group which is homogeneous in age, seniority and experience, but it is more likely that you will have to design a course for a heterogeneous group from a variety of backgrounds and with different levels of experience. Find out all you can.
Practical experience of participants	Your group may contain senior people who have little practical experience but who have responsibility for managing an activity or process. Some may be very skilled in practical aspects, but lack theoretical knowledge. In a well-designed course you can turn this diversity into a very positive aspect of the course.
Adult learning	These are the issues we have identified in the first 2 activities and include; <ul style="list-style-type: none"> • the need to learn by doing and discussing, not just being told, • slower learning • fear of failure • having a contribution to make • dislike of being patronised by class room methods
Reason for attending	This is very important. If your participants have been required to attend they will have a very different attitude from those who have volunteered. We will consider motivation at a later stage.
Relevance	One of the most demotivating factors is not understanding why you are doing something and what its relevance is to your work situation. This is why you need to know about your participants' role in the organisation



Activity 4
seminar

Train-the-trainer

In this activity you can begin to plan the training session for your final assignment.

Discuss with your line manager or your client what the target audience for your training session will be. Use Activities 1, 2 and 3 together with the table to create a participants' profile.

Participants	Issues
Possible number of participants	
Different roles undertaken by participants in the organisation	
Responsibilities for OSH	
Past and present experience of OSH	
Volunteers or conscripts?	
Other factors	

Feedback

You will discuss this table at the train-the-trainer seminar so that you can share it with the tutors, but if you can discuss it with other participants, it will help you to focus your ideas.



Summary

In this section we have considered some of the issues which you should consider before you even begin to design a training programme or session. They relate to the dynamics of a group of participants and not directly to the content which we will consider in the next section which is on training needs analysis. Adult learners have particular needs and attitudes to learning which are frequently based on their personal experiences. They often fear failure or displaying a lack of knowledge and understanding. At the same time they will resent any approach by a trainer which they perceive as patronising. The challenge is to ensure that all participants know what they will learn, appreciate that their experience will be recognised and feel that they are being addressed as equals. The best way to ensure that you reach the right balance is always to consider whether you feel you would enjoy being one of the participants.

Key learning 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).

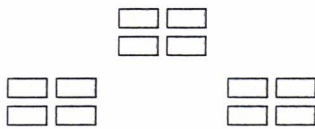
Attempt the self-assessment questions before you move on to section 2

Self-Assessment Questions

1.

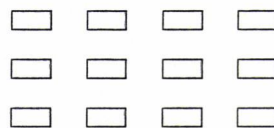
Which of the following diagrams best illustrates the layout you would use for a training session and why?

Layout a)



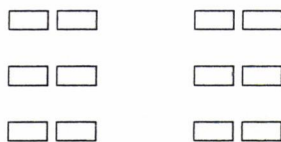
[Trainer]

Layout b)



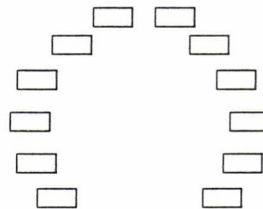
[Trainer]

Layout c)



[Trainer]

Layout d)



[Trainer]

2.

List 3 concerns adult learners might have about their ability to participate in a training session.

3.

Rate the following aspects of a training session as essential (E), desirable (D) or unimportant (U) to the establishment of an appropriate relationship with adult learners;

- Being older than the participants,
- Knowing what the participants' roles are in their organisation(s) before the event,
- Having clear learning outcomes for the session,
- Treating participants as equals,
- Using an appropriate seating layout,
- Having a schedule and sticking to it

Answers to Self-Assessment Questions

1. No good trainer would consider using layout b). It is very like a traditional class room and definitely conveys the message that the trainer is going to 'deliver' information to a predominantly passive and subservient audience.

Layouts a) and c) have the advantage that participants are grouped ready for participation in activities designed for groups or pairs, but the groups are preformed and don't allow flexibility.

Layout d) gives an inclusive impression and suggests that the session will be active, participative and is preferred by most trainers.

2. You could have included;

- Lack of background knowledge
- Lack of practical experience
- Inability to work fast enough
- Inability to remember facts
- Overall fear of failure

- 3.

	Rating	Explanation
Being older than the participants,	U	This will only assume importance if you let it. If you have a well-designed session and know the content, age is irrelevant.
Knowing what the participants' roles are in their organisation(s) before the event,	D	It is desirable to have this information, but if it is not available to you, you can begin your session by finding out.
Having clear learning outcomes for the session	E	This is essential. If the outcomes are not clear, your participants will be confused and may deduce that you don't know what you are doing. They must have confidence in you.
Having a schedule and sticking to it	D	It is essential to have a schedule. However, one common failing of trainers is to be too ambitious about what can be covered in a session. A schedule should not be so ambitious as to prevent flexibility and sticking to your schedule is desirable not essential, but you should always have alternative plans in case you over run the time.
Treating participants as equals,	E	This is essential. In another situation, your participants may become your trainer! Learning should be an enjoyable activity which a trainer facilitates not dictates.
Using an appropriate seating layout,	D	As you have seen in question 1 some seating arrangements are better suited to a training session than others and an appropriate arrangement is highly desirable but a good trainer can work with most



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High-Risk Sectors**

GVG (DE), AETS (FR),
NCIST (CN), Saniplan
(DE) & TNO (NE)

		situations and adapt the arrangement to suit the activities.
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Section 2 - conducting a training needs analysis

Learning objectives

On completion of this section you should be able to:

- 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, ability 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

Introduction

In section 1 we considered what the profile of participants might be and the issues which relate to them as learners. We will now consider why they need to be trained and how the outcomes of the training are identified. This is known as **Training Needs Analysis** and follows directly from the points made about relevance in section 1.

Is training a solution?

As a trainer you will have to be careful not to offer training courses for problems which either cannot be solved by training or could be solved more simply by another approach.

Activity	5
----------	---

Here are 2 scenarios which might occur in an office. Write down what you think the appropriate action might be to resolve the problems

An operator is given a computer to replace a type writer and there is a technical problem with the computer. The computer technician is called to fix the problem but cannot.

Appropriate action:

The same operator has been trained to use the software on the computer but still has a problem formatting documents.

Appropriate action:



Feedback

In the first example there is no point in training the operator if a technician cannot solve the problem. You would have to investigate more fully to see if the technician needed training. It might be that he or she needs some training on this model of computer. In the second example, the operator certainly needs to know how to format documents and will probably have been shown how to do this during the initial training. In circumstances like this a job-aid such as an instruction sheet or a manual, may be more effective than training.

The central question to be asked is: Is training the best option to solve the problem, or are there better alternatives? If training is the best solution, you can start examining the training needs more thoroughly.

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. Training needs analysis should be done in consultation with the client who might be a manager, a trade union official or the individual themselves.

It is important to identify each main task and then to consider whether there are any additional tasks or activities to be considered.

Activity 6

If we return to the example of the computer technician from activity 5. Suppose that your organisation has just installed new computers for all its office workers whereas before there were only a small number of old computers for the accounts department. Clearly the computer technician would need to be trained to maintain all the new computers. If you were the operator of one of the new computers, what do you think you might want the technician to be able to do for you? Write down two main tasks and two additional tasks or activities?

Main task 1

Main task 2

Additional task 1

Additional task 2

Feedback

The two main tasks are likely to be repair any hardware faults and supporting users with the software. Additional tasks might be to exchange parts or return them for repair in the case of hardware and know how to use software packages and install updates in the case of software.

Having identified the tasks, three very important questions must be considered:

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

Identifying the tasks and answering these questions can be achieved with the help of documents such as policies, manuals and questionnaires about roles and responsibilities, observation of working practices and interviews with managers and employees.

The answers to the three questions a), b) and c) can be written down in a **task analysis matrix**, which will function as a simple task profile.

Activity 7

Again using the example of computers and the 2 main tasks which we have identified, complete the following table

Tasks		Knowledge	Skills	Attitudes
Main Task A	Repair hardware faults			
activity	Return parts for repair			
activity	Replace faulty parts			
Main Task B	Support software users			



Tasks		Knowledge	Skills	Attitudes
activity	Use software packages			
activity	Install updates			

Feedback

Your suggestions may differ from those given below, but these illustrate some of the outcomes which may be required of any training programme.

Tasks		Knowledge	Skills	Attitudes
Main Task A	Repair computer hardware	Know the component parts of the computers Know the symptoms of faults in each component	Identify the faulty component Remove faulty parts Install replacement parts	Attention to detail Positive approach to safe working practices
activity	Return parts for repair	Know which parts can be mended and which need replacing Know general terms of guarantees and service contracts	Use supplier information to return parts and order repairs	
activity	Replace faulty parts	Identify the model or serial number of a component Know the suppliers of parts	Compare prices Place orders	
Main Task B	Support software users	Know details and specifications of all software loaded on the computers Know the common mistakes	Be able to demonstrate features of the software	Patience with users Helpful approach rather than superior attitude
activity	Use software packages	Know the features of the software	Be able to use all the software packages	



		<i>packages</i>		
<i>activity</i>	<i>Install updates</i>	<i>Know how to find out about updates</i> <i>Know how to purchase updates</i>	<i>Be able to install updates to replace existing packages</i> <i>Be able to demonstrate updates to users</i>	

This type of table is called a **task analysis matrix** and you can use it when you conduct your own needs analysis for the course you are going to design.

When you are identifying tasks and composing the task profile, always try to take into account future developments. In the example we have been working with this might be upgrading hardware in anticipation of new software issues as well as repairing it by replacing components.

General objectives

The next stage in the process of designing a training course is to define the general objectives. These are the outcomes which your course must deliver. The general objectives derive from the task analysis and will be the frame of reference for the identification of the operational objectives and the selection of the contents and the teaching methods. They should be in consultation with the client.

General objectives perform four essential functions in the development and implementation of the course:

- they are a communication device between client, trainer and participant.
- they are the frame of reference for the contents of the lessons;
- they help in designing the teaching-learning process;
- they are the frame of reference for the evaluation strategies and criteria:

As with tasks, distinctions can be made between different types of objectives.

1. Objectives referring to knowledge (cognitive skills): reproducing facts or procedures, applying procedures or analysing and solving problems
2. Objectives referring to social skills, e.g. working in a team or chairing a meeting;
3. Objectives referring to psycho-physical skills, e.g. designing or operating;
4. Objectives referring to attitude, e.g. being motivated or recognising the



importance of something.

An example of a general objective is:

The participant can apply first aid effectively in case of an accident in the plant.

Activity 8

Go back to the example of the computer technician and identify the general objectives of an appropriate training programme. Remember to look at the tasks to help you decide.

-
-

Feedback

In the case of our computer technician there are 2 general objectives:

The participant can repair hardware faults in the new computers

The participant can support users of the software packages adopted by the organisation

The operational objectives will be derived from these general objectives when we come to look at designing your course in section 4

Entry level

The next step is to 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 we have considered the personal profiles of participants, but in relation to their learning styles and experiences not their experience in relation to the tasks they are to perform.

Activity 9

For the two main tasks we have identified for our computer technicians, think of 4 questions you might ask to try and determine the entry level of participants.

- 1.
- 2.



3.

4.

Feedback

For the first task, you might have considered asking:

about participants' experience of taking a computer to pieces or building one from parts,

whether participants can list the component parts and their functions,

about any computing qualifications participants may have.

For the second, you would need to know if they have:

any information technology qualifications

attended any previous training and at what level

ever installed software on a computer and if so what packages

Limitations and complementarity

When you have identified the general objectives of the course and established the entry level of participants you need to consider any limits or constraints which might apply to the course you want to design. The usual constraints are time, budget, facilities and people. The next activity will help you to identify and begin to quantify some types of constraints.

Activity 10

Write down some of the reasons why you might be constrained in the design of your training programme by the factors of time, budget, facilities and people.

time

budget

facilities



people

Feedback

You may well be constrained in the development of your course because of the time participants are able to devote to the training and when they can be available. For example, could they attend for 6 consecutive days or 1 day each week for 6 weeks. Alternatively, the training may require intermittent sessions so that participants can research information or implement skills before the next session. If you are not able to facilitate the training yourself then the number, experience and availability of the trainers will be a factor you will need to consider. What is the budget for the training? It is unlikely to be as much as you would like. Do you need any special equipment, furniture etc. In the case of the computer training, we have been considering, up to date computers and software would be essential.

There may be some complimentary conditions which support your designs. Examples include direct links to other courses for more advanced skills, certification to demonstrate competence for promotion purposes, legal requirements for specific roles etc. These can all help to motivate your participants if they are presented as positive attributes of your course.

Activity	11	Train-the-trainer
seminar		

You should now be in a position to conduct a training needs analysis with your line manager or client. You can use the following proforma to help you.

You should bring this with you to the train-the-trainer seminar for discussion with your peers and tutors.

Project title	
Background information: <ul style="list-style-type: none"> organisational context, reason for the initial training demand target group 	
Main tasks	



Additional tasks	
General objectives	
Type of objective for each of the above	
Entry level of the participants	
Additional information about the target group	
Limiting conditions and complementarity	

Summary

Having all the relevant information before you start to design a training course is very important. It is very frustrating for you and demotivating for your participants if you fail to take notice of some of the points we have discussed in this section. Running a training session for something which could be dealt with by means of an aid such as a series of Help Cards for instance will be a waste of time and resources. Similarly, failure to identify entry levels may lead to some participants being lost and others bored. Being as specific as possible about the tasks the participants will need to be able to undertake, will increase the effectiveness of the training. Knowing the general objectives of the training course and the type of objective will enable you to be most effective as a trainer. Be sure to make detailed plans before you start designing your course.

Key learning points

- The first thing you need to establish whether the training is necessary.
- Next, you have to find out what the actual training needs are by conducting a task analysis
- From the task analysis you can formulate the general objectives of your training



course

- The entry level knowledge and skills of the group is also very important
- There will be limiting conditions relevant to your course, but there may also be some complementary factors which improve motivation.

Attempt the self-assessment questions before moving on to the next section.

Self-Assessment Questions

1.

Do you think Health and Safety training would be appropriate for the following:

- a) How to find the fire escape from a building
- b) How to use a fire extinguisher
- c) Writing Health and Safety plans
- d) Risk analysis
- e) Safe use of electrical plugs and sockets

2.

A laboratory worker is going to be transferred to work in a chemistry laboratory where they will handle chemicals which are Dangerous Substances according to the regulations. The role will involve practical tests using the chemicals and disposing of them after the tests.

Answer the following questions:

- a) What are the two main tasks?
- b) What is the most important knowledge for each and the skills and attitude for both?
- c) What would you need to know about entry level?
- d) What restrictions might there be on a training session for these people?
- e) What complimentary conditions might exist?

3.

Write a general objective for an appropriate training course for the employee in question 2

Answers to Self-Assessment Questions

- 1
 - a) No - The most common solution to this problem is to display prominently notices which show in visual form how to leave the building and where to assemble. However, it is always good practice to announce this information to all users of rooms which could be considered as an informal training session.
 - b) Yes - It is usual to run short practical training sessions on how to use a fire extinguisher.
 - c) Yes - Writing Health and Safety plans needs a good understanding of the issues and a training course is likely to be necessary
 - d) Yes - Risk analysis is usually addressed with both theoretical and practical training sessions
 - e) No - A code of practice displayed in notice form usually suffices for everyday use of electrical plugs and sockets but training is necessary for portable appliance testing to ensure that plugs are wired safely and have not been misused.
- 2 A laboratory worker is going to be transferred to work in a chemistry laboratory where they will handle chemicals which are Dangerous Substances according to the regulations. The role will involve practical tests using the chemicals and disposing of them after the tests.
 - a) What are the two main tasks?
 - How to handle chemicals safely
 - How to dispose of chemicals safely
 - b) What are the most important knowledge and skills for each and the attitude for both?

	Knowledge	Skills	Attitudes
Handling	Nature of the chemicals to be used. Are they hazardous and does their use constitute a risk?	Manipulative skills and accuracy	Responsible and careful
Disposal	As above plus any environmental regulations for the safe disposal of the chemicals to be used	As above	As above



- c) You would need to know of any previous training in chemistry or health and safety with respect to dangerous substances to determine the entry level
 - d) Training sessions for these people might be restricted by money but safe facilities and properly trained trainers may also need to be taken into consideration
 - e) It is possible that a certificate of competence might be important for promotion or legal compliance which would be motivating for participants.
3. The participants will be able to work safely with dangerous chemicals

Section 3 - identifying learning strategies and teaching methods

Learning objectives

On completion of this section you should be able to:

- recognise that different people learn best in different ways
- select appropriate teaching methods for a training session
- Select appropriate teaching aids for teaching methods

Introduction

In this section you will begin to consider learning and the different teaching methods you can use during your training session. In the train-the-trainer seminar you will be able to observe some of these methods as your tutors identify them at the beginning of each element of the seminar. You can decide for yourself how effective they are and how well they might suit your purposes.

Learning Styles

Research carried out over many has shown that we don't all learn most effectively in the same way.

Kolb's work published in 1975 suggests that there are 4 learning styles:

The 'diverger' (dreamer)

These participants prefer a learning environment, in which their opinions are shared. They like to experience new situations and to view these from different angles.

The assimilator (thinker)

These participants prefer learning situations in which problems can be discussed. The aim of the discussions is to form and think through (new) ideas.

The converger (decision-maker)

These participants prefer a structured programme of an informative nature. They like to learn terms and concepts, in order to apply them later in a practical situation.

The accommodator (active worker)

These participants immediately want to see the practical applicability of the matter learned. They want to try things out and therefore should be provided with the opportunity to practice their new knowledge and skills.

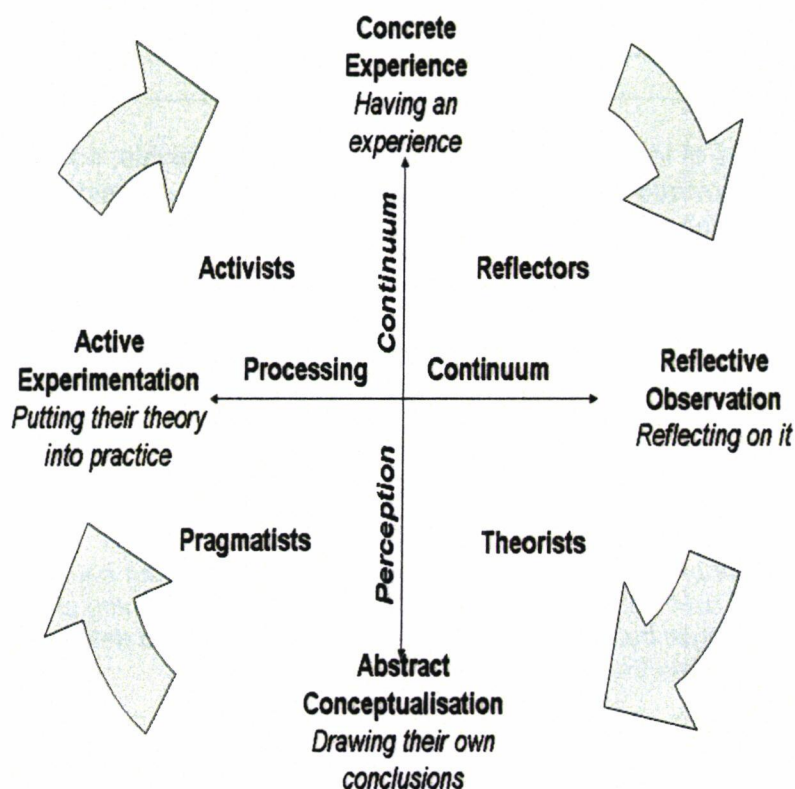
Another approach was described by Honey and Mumford in the 1980s who used Kolb's as a basis for designing their questionnaire. Their four learning styles are;

Theorist - enjoy studying the theoretical concepts

Pragmatist - prefer a practical approach to learning

Reflector - analyse situations to determine outcomes

Activist - experiment and learn by doing



If you are interested in learning more about this subject and the work of Kolb, Honey and Mumford you can look at this [website](#).



However, now that you know different people have different learning styles, you need to consider how it could affect your training session. Answering the following questions will help you to remain aware of this issue.

Activity 12

Identify the two players in a training environment who might be affected by the existence of different learning styles?

- 1.
- 2.

Feedback

The obvious answer is the participants but don't forget that you as the course designer and developer will have a favourite learning style or a combination of learning styles.

Activity 13

We have identified the profiles of learners and conducted a needs analysis, so how do you think that this new information about learning styles can help the design of a training course? Give two reasons why it is important.

- 1.
- 2.

Feedback

It is important to ensure that your preferred learning style does not influence your course design and that you incorporate activities in your course which cover all the learning styles. Everyone may have a preferred style but it is important to enable participants to develop the other styles to give an holistic experience.

Teaching methods

We are now ready to consider the teaching methods you can use to construct your course. You need to understand the possibilities before you can embark on course design. This is the final tool which you will combine with the skills you have already developed in analysing your participants' profiles and conducting a training needs analysis. Together these three form the basis of your course design.



There are four criteria which can be used to select teaching methods as you design your course:

a) Effectiveness

You should always choose the most effective teaching method for the outcome to be achieved.

Activity 14

Without even considering the variety of teaching methods available you can identify appropriate methods for some skills.

Which of the 4 teaching methods listed below is the most appropriate for teaching someone how to drive a car.

Lecture	
Video	
Practical tuition	
Distance learning workbook	

Feedback

The obvious answer is practical tuition. The notion of telling someone how to drive a car and expecting them to drive safely appears to be absurd. However there may be other factors involved as you will see.

b) Attainability

The teaching method has to be appropriate for the circumstances and therefore may not be ideal. Factors which may influence the choice of teaching methods include for instance, time, place, space and the equipment available.

Activity 15

Using the same 4 teaching methods given in Activity 12, select the method which you think would be most appropriate to train a doctor in the outback of Australia about a new surgical technique.

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Feedback

Video is the usual method in this case. Obviously practical tuition would be best, but often it is not possible and with someone who knows the general principles, new techniques can be demonstrated visually perhaps with a written guide. This technique using video conferencing, on line video or broadcast technology is the basis of the field of Tele - Medicine and is becoming increasingly popular.

c) Variation

Repetition becomes boring. A teaching method is only effective for a limited period of time. If you over use one technique you will demotivate your participants and not give them practice at developing all their learning styles. This is especially important when teaching adults.

d) Target group

Each group of participants is different. Some people are not used to sitting in a classroom. They need a very active programme. An open discussion should not be offered to a group where people don't trust each other. A group of beginners should not have to start with a complicated assignment. They will need information first. In client-oriented courses, you should choose teaching methods in which you can make use of the practical knowledge available in the group.

The following table gives you information about a variety of teaching methods together with their advantages and disadvantages

Teaching method	Description	Advantages	Disadvantages
<i>Case Studies</i>	A case study is a description of a working situation. The students have to analyse the situation and solve problems, answer questions etc. working individually or in groups.	<ul style="list-style-type: none"> -Link to the working situation -Practising/experimenting in a 'safe' environment -Exchanging of ideas -Motivating 	<ul style="list-style-type: none"> -Time consuming
<i>Coaching</i>	Form of guidance and support during task performance, in which the role of the trainer varies from showing how to do it to leaving it completely to the participant.	<ul style="list-style-type: none"> -Eliminating blocks to learning -Reflection 	<ul style="list-style-type: none"> -Poses high demands on the trainer (coach)
<i>CAI</i> <i>CBT</i> <i>CAL</i>	Computer Assisted Instruction. The participant independently acquires knowledge and skills. Computer Based Training Computer Aided Learning	<ul style="list-style-type: none"> -The participant determines time, place and pace himself 	<ul style="list-style-type: none"> -Transfer to working situation -Development costs are high, and therefore not suitable for a small number of participants
<i>Demonstrating</i>	The trainer demonstrates a certain skill; for instance, how to operate a machine. It is also possible to provide a demonstration through a film or an instruction video.	<ul style="list-style-type: none"> -Provides a visual image -Motivates the participants more than teaching -Through a film/video you can create a representation of something which is usually hard to see (for instance in terms of location, frequency, danger) 	<ul style="list-style-type: none"> -The learner may not have the opportunity to practice and the demonstrated subject will be forgotten
<i>Discussion</i>	During the discussion, the conversation does not run solely from trainer to participant, but from participant to participant as well. The participants ask each other questions, complement each other, respond, etc. The essence is that participants invite each other to think about subjects, opinions, points of view and experience.	<ul style="list-style-type: none"> -Concentration of knowledge and skills in searching for a solution to a problem. -Bad solutions are rejected during the group process. -Enhancing motivation and creativity. -Through working in a group, social learning takes place. -Participants stimulate each other. -Particularly suited for affective objectives. 	<ul style="list-style-type: none"> -The atmosphere determines the course of the discussion. -Demands a lot of time. -A good discussion assumes a number of conditions: a) listening well, b) asking good questions and c) willingness to discuss your own opinions.

Teaching method	Description	Advantages	Disadvantages
<i>Lecturing</i>	The trainer explains something to the participant. The trainer is active, the participant more or less passive. The trainer must take into account that participants have a limited ability to listen to and store information; after 15 to 20 minutes attention drops and people 'lose contact'.	<ul style="list-style-type: none"> -Relatively cheap. -Relatively small demands on facilities. -Particularly appropriate for objectives regarding knowledge and insight. -Quickly passing on up-to-date information. -Group size is not a limiting factor. -Can be planned well. -Much information can be provided within a short time. 	<ul style="list-style-type: none"> -Little participation. -Chance of mental passiveness of the participants. -Participant is hardly invited to link the subject matter to practice. -It is hard to take into account differences in level.
<i>Teaching-learning session</i>	A teaching-learning session is a conversation in which the trainer lets the participants gain insight into certain knowledge and understanding, through a step-by-step approach. During the session, both trainer and participant are active. The trainer determines the direction and contents of the conversation. He or she asks the questions, redirects questions to others, sometimes gives comments or complementary information or explains something again. The trainer predominantly asks questions regarding understanding and application. Of course participants can ask questions as well.	<ul style="list-style-type: none"> -By asking questions, thinking processes are stimulated -Participants are involved -The trainer can assess the level of the participants understanding and adapt to this 	<ul style="list-style-type: none"> -Demands a lot of preparation time of the trainer.
<i>Observation (by participants)</i>	Participants observe fellow-participants with the intention of drawing conclusions regarding the appearance of certain behaviour or not. Observing someone in an exemplary function is also possible.	<ul style="list-style-type: none"> -More tasks can be looked at more specifically. -High involvement. 	<ul style="list-style-type: none"> -Quality of feedback depends on the openness of the group -Reviewing is very time consuming
<i>Practical exercise</i>	The practical exercise can be applied, when acquiring practical skills is essential. Through practising these skills, the participant learns the skills. The trainer provides instruction, assigns the exercises and organises the review	<ul style="list-style-type: none"> -Link to working situation. -Possibility for repetition. 	<ul style="list-style-type: none"> -Logistic conditions cannot be realised everywhere



Teaching method	Description	Advantages	Disadvantages
	(e.g. individual feedback or learning discussions)		-Time consuming -It is hard to directly check the execution of the assignments
<i>Role play</i>	In a role play a number of persons attempt to enact a problem situation within a given framework and according to prescribed roles. The information in a role play consists of a general situation outline and a description of a number of different parts ("you are the action leader of and you would like to see..."). Additionally, there are several observers. They observe the role play on the basis of an assignment. Their information is important for the review.,	Provides insight into one's own actions and those of others. Experimenting with possible approaches. Appropriate for practising, social skills. Practical situations are easily imitated and convenient to practise (transfer). Situations which do not occur very often can be practised.	Not appropriate for controversial subjects. Time consuming. Ability to identify oneself with a part and enthusiasm is required from the participants.
<i>Simulation</i>	Experimenting in an imitated situation which strongly resembles reality or is an intentional simplification.	-Safety. -Possibility for repetition and availability. -Training for situations which do not occur very often in practice -Degree of difficulty or complexity can be changed -Highly transferable. -Also appropriate for management training. -Application of the theory can be tested. -Motivating.	-Hard to determine the results (criteria must be realistic). -Time consuming.
<i>Self-study</i>	The participants independently acquire knowledge and skills. This can, for instance, be achieved through: studying a book, following an audio-visual presentation without further guidance or complete a CAI-programme	-Participant can determine, time, place and pace themselves.	-Little opportunity to adapt to current developments. -Some participants find it difficult to work individually.



Teaching method	Description	Advantages	Disadvantages
<i>Group work (general)</i>	The participants work together in a group. Either they work on the same task or on complementary tasks.	<ul style="list-style-type: none"> -Concentration of knowledge and skills in searching for a solution to a problem. -Social learning takes place. -Participants stimulate each other. -People feel more secure when they are alone (group decision). -Bad solutions are rejected in the group process. -Participants exchange experiences in the group. 	<ul style="list-style-type: none"> -The composition of the group is of major importance; a wrong composition can negatively influence the learning process. -It is difficult to coach and supervise several groups at the same time. -It is difficult to discover what the knowledge, skills and attitudes of the individual participants are.



You can use this table when you come to design and develop the training course which forms part of the assessment for ECOSH. Each course you design will be different and may involve a variety of teaching methods. The next activity will help you to practice choosing appropriate teaching methods for a variety of tasks.

Activity	16
----------	----

Use the table to choose an appropriate teaching method for each of the following tasks

Risk analysis	
Instruction about the European Union or the new legislation on health and safety	
Laboratory techniques	
Strategic planning	
Operational planning for implementation at national, regional or company level	

Feedback

You can use a variety of teaching methods, but some appropriate ones might be, case studies, demonstrations or simulations for risk analysis, a short lecture for instruction about the EU or the Framework Directive, Practical exercises, coaching or demonstrations for laboratory techniques, role play focusing on the different roles in a decision making arena for the strategic planning and case studies as the basis for group discussions when planning for implementation of OSH policy.

Teaching Aids

As well as choosing the most appropriate teaching method, a training session can be made more effective by the use of teaching aids. Good teaching aids can function as



support, add information and add variety. The following five teaching aids are most widely used.

Power Point slideshow

This is the regular slideshow we see often made on a computer and projected on screen through a beamer. Slides can easily be produced, prior to a session. They are not suitable for details and the most common mistakes users make are to put too much information in too small writing.

Hand-outs

Hand-outs are short informative texts usually on a single sheet of paper. They are suitable for providing information e.g. tables, sets of conclusions, sets of leading questions and schemes. Hand-outs can be prepared prior to a session. Examples of hand-outs are:

- a complicated scheme;
- a short article;
- a text of more than ten lines;
- the text of a presentation.

Flip chart

A flip chart consists of a board on a stand to which large sheets of paper are attached. The sheets can be flipped over one by one. It is suitable for key points, key words and simple schemes. It can also be used to make lists of points. The papers can be prepared in advance but the most common use for flip charts is to record participant input during a session. These can then be transcribed at a later date and circulated to all participants. They are a very good way of letting participants see that their contributions are relevant and valued.

Black- or white board

These boards are found in the front of most classrooms. They are suitable for demonstration of calculations, for making lists of points and for putting down notes or schemes that are important to remember. They would usually require participants to copy down the information at the time as they will normally be cleaned at the end of each session. Nowadays also digital blackboards become fashion. The writing can then easily be copied, printed and distributed.

Video

There are many uses for videos, but they should be used sparingly. Short clips as case studies are good. Video demonstrations of good practice and as visual reinforcement work well, but long video presentations reduce interactivity and should be avoided.



Activity 17

In what capacity might you use teaching aids during a case study activity of risk analysis?

Feedback

You could prepare a hand-out describing the situation, use a flip chart to collect participants opinions about solutions to the problems posed and a video to demonstrate good practice. There will be many other possibilities and their worth should be judged by how much value they add to the activity.

Summary

There is a lot more to learning than you might imagine and personal learning styles may well determine the effectiveness of your sessions. When the learning is not your own, but someone else's, it is not easy to plan what will be most effective for them without allowing your own preferences to influence you. You will need to consider your preferred learning styles as well as those of your participants. You need to understand the range of teaching methods available to you in order to match the most appropriate teaching method to the tasks your learners need to be able to accomplish. A variety of visual aids can be used to add value to the teaching method and enhance your training sessions.

Key learning points

- Your participants will have different learning styles
- You must not let your own learning style restrict the design of your training course
- There are many teaching methods you can use and you should choose one which is appropriate for the task your participants need to perform
- Teaching aids can help to make the teaching method more effective.

Attempt the self-assessment questions before you move on to the next section



Self-Assessment Questions

1.

Match each of the following teaching methods to the learning style for which it would be most suitable.

Practical tuition

Group work

Discussion group

Lecture

2.

List 6 factors which might influence your decision as to which teaching method to use.

3.

Identify one appropriate teaching aid for each of the following situations and give a reason for your choice:

A lecture to 60 people

A group discussion

A teaching and learning session

A role play

Answers to Self-Assessment Questions

1.

Practical tuition	Accommodator
Group work	Assimilator
Discussion group	Diverger
Lecture	Converger

Look back at the definitions to see how closely they fit.

2.

You should have listed 6 from:

Participants' profile, group profile, trainer's preferred learning style, learning styles of participants, effectiveness, attainability, variation, target group, availability of suitable teaching aids

3.

Power Point slides are the most common teaching aid in this situation although many staff choose to give hand-outs so that participants don't have to copy notes and can give the lecturer their full attention. Short video clips are also suitable in some lectures.

A topic for a group discussion can be presented on a hand out and key points noted on a flip chart. Videos are unlikely to be used and a black or white board is less flexible than a flip chart, but could fulfil the same function if the latter was not available.

A flip chart, black board or white board would be appropriate for making notes of the points arising from the interaction between tutor and participant.

The scenario may be given to participants in a role play in the form of a hand-out. Observers might use a flip chart to record points, but players in role play would not normally use teaching aids.



Conclusions

You have now completed Part 1 of this Unit on training.

You should have the knowledge and skills to complete the tasks for the train-the-trainer seminar and to contribute to the activities your tutors will lead.

As you study the other unit of EUCOSH and take part in the activities at the train-the-trainer seminar, always reflect on your own learning. What have you enjoyed? What have you found easiest? What did you not like? Try to be objective because your own experiences are invaluable when you come to design a training course for other people. Talk to as many people as you can. Constructive comments on your ideas from fellow participants and tutors will help you to produce a good training programme.

In Part 2 you will learn how to design a short training course, develop and deliver it and then evaluate its effectiveness. You will undertake the preparation for your micro teaching activity by working through the activities in Part 2.



Project on Occupational Health & Safety in High-Risk Sectors

GVG (DE), AETS (FR),
NCIST (CN), Saniplan
(DE) & TNO (NE)

EUCOSH



Train-the-trainer Part 2



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Training part 2

Learning objectives

On completion of this unit, participants should:

- 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

Introduction

In this second part of the unit on Training you will learn about the theory and practice of using a training session to develop knowledge and skills for the participants, specifically in Occupational Safety and Health. The unit takes the form of a work book which you can study after you have completed the other units or in parallel with them. You will need information contained in other Units in order to complete some of the activities in this one.

The final assignment for the course requires you to identify, design and develop a short training course for delivery within your organisation. The activities in this unit use very general examples and will enable you to develop the requisite skills.

There are 3 sections in the second part of this Unit, one corresponding to each of the learning outcomes. You will be required to take the work you undertake in some of the activities of this unit to the train-the-trainer seminar where you will be able to share your experiences with other participants. This will help you to broaden your understanding of both training and Occupational Safety and Health.

The activities which provide input for the Train-the-trainer Seminars are your opportunity to use the skills from each section to begin work on the training course you have to design and deliver for your final assignment.

Do not forget that throughout EUCOSH you are the learner. Always try and reflect on



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your experiences as you progress through your learning about Occupational Safety and Health and apply the best of your experiences in your design of the course you are preparing for others.



Section 4 - designing a short training session

Learning Objectives

On completion of this section you will be able to:

- formulate operational objectives from general objectives
- produce a design for a course
- sequence contents within a design

Introduction

So far we have looked at the tools you will need to design and develop your training course, but now we are going to look at the process. Operational objectives are the component parts of a general objective and are the outcomes which will be achieved during a training session. They will depend not only on the general objective itself but also on the participants' profile and the limiting factors. Only when the operational objectives have been formulated can the contents, teaching methods and teaching aids be incorporated into the design of your course. As you will see in section 6 the evaluation criteria which allow us to measure how successful the training has been will include aspects of the whole process as well as the achievement of the operational objectives. We need to know if the training was successful and if an appropriate process was designed to achieve this outcome.

Operational objectives

While the general objective is what the participants should be able to undertake in the work place as a result of the training, the operational objectives are the individual outcomes of the training intervention and relate to the outcomes of the task analysis matrix we discussed in section 2

Activity	18
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In this activity you will practice formulating operational objectives from a general objective.

Using the general objective:

The participant can apply first aid effectively in case of an accident at work



suggest 2 operational objectives for an office worker and 2 additional operational objectives for a worker in a factor using cutting tools and heavy equipment.

An office worker

1.

2.

A factory worker

1.

2.

Feedback

For an office worker the operational objectives might be:

The participant will be able to:

wash and dress a small wound,

administer resuscitation following a heart attack

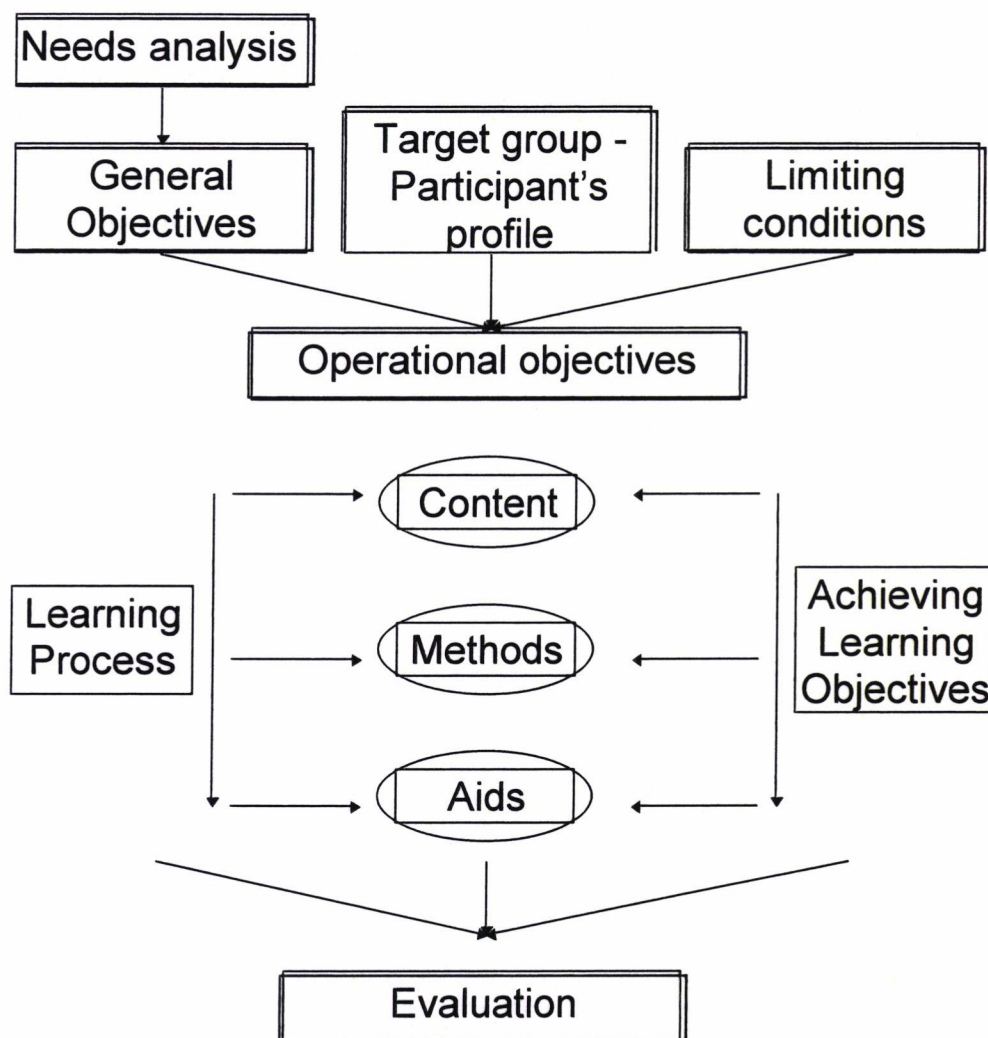
A factory worker might have the same 2 operational objectives plus 2 which relate to the specific nature of their work such as:

reduce blood loss following accidents involving rotating blades

take appropriate action to support employees with broken limbs following accidents with heavy machinery

The design process

The relationship between all the elements of training course design can be expressed in the diagram below:





Macro design

You are now ready to start designing an outline of the course. At this stage you have to make choices concerning:

- sequence of the subjects,
- relationship between theory and practice,
- timing, whether the sessions are consecutive or have days or even weeks between them.

Sequence of the subjects

Good structuring of the learning contents can provide a more efficient learning process. The sequence will be determined by the entry level of the target group and the operational objective(s) of the course or the course component. There must be a logical coherence between the different elements of the subject matter.

Activity	19
----------	----

Using the examples of the knowledge elements identified in the feedback to the first task in Activity 7, arrange the 6 elements in the order you think appropriate.

- | |
|----|
| 1. |
| 2. |
| 3. |
| 4. |
| 5. |
| 6. |

Feedback

An appropriate order for contents would be; the component parts of the computers, the symptoms of faults in each part, model or serial number of a components, parts which can



be mended, parts which need replacing, terms of guarantees and service contracts and identifying suppliers of parts

This example follows a *chronological* order in terms of the tasks you would need to perform to repair the computer, but this is just one of the principles which can be used to put elements of content into a sequence. Others include:

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. A training course in word processing on a computer might start with basic features and then move through increasingly complex functions to high order desk top publishing and internet mark-up knowledge and skills.

Exemplary - where the most representative themes are selected and elaborated. The subject matter learned can be applied in similar situations. This course on developing a training session is an example of an exemplar since you should be able to design other sessions when you have completed this Unit and designed the course for your final assignment.

Problem-oriented - where problems derived from the participants' working environment are created for participants to solve. In the first aid course we have mentioned this might involve presenting participants with a reconstruction of someone with a heart attack and working through how to deal with the situation.

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. Experience in the European Union has shown that the publicity given to the internet has led to this type of course where participants want to know how to use the internet but don't know how to use a computer. Carefully designed courses can achieve both.

20 - 80 rule of Pareto - where 20% of the tasks define 80% of the daily work. By starting with these 20%, the participants can function very quickly in their new role. An example of this type of subject sequencing might be an induction course for a new job in a factory where the participants need to know how to use new equipment straight away so that they perform their job and then move on to other factors such as maintenance and other related tasks.

Activity	20
----------	----

Someone has showed you how use the computers in a study centre and search the internet for relevant web pages. Which sequencing principles do you think apply in this example?

--



Feedback

This is an example of exemplary since you will be able to transfer your skills to other computers and other web pages.

Relation between theory and practice

The relationship between the amount of theory and practice is 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.

Activity 21

Think about EUCOSH. What do you think is the balance of theory and practice across the whole course?

Feedback

The objectives of EUCOSH are very practical ones. You should learn to find information on the internet and use it to run training courses to enable others to use the information in their decision making processes. The course team have not produced a highly theoretical course which teaches you the OSH legislation in force, but rather one which gives you the practical skills to find, interpret and teach.

Time

One can choose consecutive course days or course days with various length gaps between them. There will be many factors which influence your choice in this

respect. In training sessions on consecutive days participants will remember more of what they have learned, but if there is a gap of several days between the sessions they may have had an opportunity to apply their new skills and see the practical relevance.

Activity	22
----------	----

Looking back at the limitations you may have to work with when designing your course, what do you think will be the advantages and disadvantages of a consecutive model as opposed to one with gaps between training sessions?

Consecutive

Advantages

Disadvantages

Intermittent

Advantages

Disadvantages

Feedback

A consecutive course is 'compact'. The participants can really concentrate on the learning. However, many employers will not or cannot give blocks of time for attendance at courses. The advantage of a course with gaps between session is that participants have the opportunity to apply the subject matter they have learned in their working practice. This learning experience in turn can be applied to the subjects learned during the course days that follow. However, the sessions may be difficult to plan if separate days or half days have to be planned. You will need to keep all of these things in mind when designing your own sessions.

Matrix-method

The Matrix-method is a very useful aid in course design. It enables you to plan and organise your course in a flexible way. Course objectives and ideas for teaching methods are written on different Post-its. Subsequently, they can be arranged and re-arranged in a time-table (the matrix).

Before you start using the Matrix-method, it is convenient to have the following materials available:

- Post-it self-adhesive note paper or other similar material
- a number of rather thick markers
- flip chart paper, a blackboard or a white board

To use the Matrix-method undertake the following steps:

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 and maintain this colour scheme in the subsequent steps
- Give each objective a number. This will help you to be clear which teaching methods go with which objective in the matrix, when you start to arrange the Post-its.

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. This means that connected to general objective 1 are operational objectives 1.1., 1.2, 1.3, etc.
- Write down each operational objective on a Post-it. Again, 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. Do not try to be too critical in doing so and give as many ideas a chance as possible. You can finalise which method you are actually going to use later in the process
- Write down each teaching method on a separate Post-it. Give a code to each teaching method, for example: connected to operational objective 1.1. are the teaching methods 1.1.1, 1.1.2, 1.1.3, etc.

4 Preference for teaching methods

Now you have to make the final choice in selecting a teaching method for each operational objective. A good way of making a choice is to weigh the advantages against the disadvantages of each method for enabling a participant to achieve a particular objective. Your criteria should include:

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

Look back at section 3 if you are unsure about the advantages and disadvantages of the methods you have selected.

Use this information to decide how 'attractive' this method is for the programme by scoring it on an arbitrary scale e.g. 5 is excellent and 1 is least appropriate. You can use a table to do this and the next activity will enable you to practice this technique.

Activity	23
----------	----

Returning to the example of first aid, one of the operational objectives was administer resuscitation following a heart attack. Use the table to identify 3 possible teaching methods, identify advantages and disadvantages and score them using the 1 to 5 scale.

Method	Advantages	Disadvantages	Score



Feedback

You might have identified, video, practical demonstration and role play as possible teaching methods. The advantages of a video are that lots of people can see it at once and the correct technique can be demonstrated. The disadvantages are that it might be difficult to film all aspects of the technique and participants would have no reassurance that they could actually repeat the technique correctly.

In the case of a practical demonstration the advantages are that a dummy can be used so that individual actions can be demonstrated and participants can try the technique for themselves with the tutor watching to support the development of their skills. The disadvantages are that only a small group could participate at any one time and you would need the appropriate teaching aid, in this case a lifelike dummy.

In role play, individual actions could be demonstrated and there would be no need for a dummy. The disadvantages include that small groups only could participate and the actual technique cannot be practised by the participants, since it is dangerous to administer this technique to a conscious, healthy person and few participants would like the idea of being the patient in this situation! You might have scored video 3, practical demonstration 5 and role play 1 because it is unsafe.

5 Time estimate per teaching method

Only general guidelines can be provided. The 'duration' of a teaching method is influenced and determined by a number of factors including: group size, quality of the trainer and the complexity of the assignment. The next step in the matrix method is for you to indicate, for each teaching method you have selected, your estimate of the time it will take and write it down on the appropriate Post-it. It is common for inexperienced trainers to be over ambitious and allocate insufficient time for activities, so be very careful when you do this.

Activity	24
----------	----

If you had decided on the practical demonstration for resuscitation following a heart attack and you had a group of 12 participants, how long would you allow for this activity in your course? Suggest 4 factors that might influence your decision?



Time	Factors considered
1.	
2.	
3.	
4.	

Feedback

You would need to allow a long time for this activity, possibly a whole session. The factors which you would need to consider include; the number in the group (which is quite large for a practical session), the fact that each participant will need to see clearly the demonstration and then practice for themselves, the provision of an opportunity for participants to ask questions, but probably most of all as this is a lifesaving technique the participants would need to be fully confident and proficient. If they were not, they could either harm patients rather than save them and the effect on their conscience and confidence could be devastating. This is an extreme example, but it does illustrate the point that you must consider all aspects thoroughly.

6. Fixed programme components

These are the things which must be included and although there may be a little flexibility, they will ultimately determine the format of your session(s). Make a blueprint or a matrix of the course for each session or day and fill out the matrix with what you are already sure about regarding the fixed programme components such as introduction, coffee, lunch and evaluation, etc. For example:

Time	Fixed component
9 - 9.30	Welcome, introduction and explanation of course objectives
10.30 - 11	Coffee



1-2	Lunch
3.45 - 4.15	Tea
5 - 5.30	Evaluation

As you can see, you could have tea earlier or coffee later for instance to balance sessions and match teaching methods with time, but the elements remain the same.

7 Completing the matrix

You will now be in a position to put all your information together in the matrix and produce the design for your training course.

Activity	25	Tutorial Seminar 2
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Draw a large matrix in the form of a plan of the session on a flip chart sheet, blackboard or white board . Don't forget that all the Post-its have to fit onto the sheet so you may need to use one for each of your sessions.

Fill out the matrix by placing the Post-its in the appropriate places on the sheet and include only the teaching methods you selected in step 3 and step 4 of the Matrix Method. In this way you can visualise the composition of the course before you write up the final design.

Try to compose a balanced programme, which takes into account aspects, such as the importance of operational objectives, appropriate sequencing of content, attractiveness and variation of teaching methods, time available and the profile of the participant group.

When you are satisfied with the result, you can write up your design. The advantage of using Post its over black or white board is that you can just keep the flip chart sheets and you don't actually need to write it up further.

You will use this design in the next section to develop the micro teaching session you will deliver during the train-the-trainer seminar and you should bring your matrix plan with you to discuss with the tutor and other participants.



You are now well on the way to preparing the training session which forms part of the final assessment for the EUCOSH programme.

Summary

The general objectives which we discussed in Section 2 are used to formulate the operational objectives. Operational objectives state what the participants should be able to do on completion of the training course and should be directly related to the tasks identified in the training needs analysis. Once the operational objectives have been agreed, you can start designing the outline of the course by deciding on the sequence of the content by using appropriate sequencing principles. The balance between theory and practice elements must be relevant to the performance of the tasks in the work place and the timing of the sessions as well as timing within them may be constrained by a number of factors such as availability of participants, trainers or within a session by fixed elements such as refreshment breaks. The matrix method is one very convenient way of bringing all the elements of a course design together in a flexible format allowing for refining adjustments, such as choosing the appropriate teaching method, before the design is finalised.

Key learning points

- Operational objectives are derived from the general objectives and describe the outcomes of the training. They relate specifically to the tasks participants will perform in the work place.
- Sequencing content is undertaken using one of a number of sequencing principles.
- The relationship between theory and practice will depend upon the tasks to be performed in the work place and whether the operational objectives are knowledge or skills based.
- There are a number of factors which must be considered before the final decision as to which teaching method is chosen for delivering each operational objective. These include effectiveness, attractiveness, availability of teaching aids and safety.
- Timing of sessions should be relevant to participants needs and delivery of the operational objectives
- Timing within the training sessions will depend upon fixed elements including introduction, evaluation and refreshment breaks.
- The matrix method allows consideration of all aspects with opportunity for refinement before formalisation of the design.

Try the self-assessment questions before you move on to Section 5



Self-Assessment questions

1.

Rewrite the elements of the main task A in activity 7 as operational objectives.

2.

Where would you find the general objectives and operational objectives for this unit on training of EUCOSH?

3.

Which principle would you apply when sequencing the content for each of the following:

- a) Training provided for new managers who will appraise the performance of employees?
- b) An employee who spends most of their working week operating machinery with dangerous rotating blades and the rest cleaning and repairing the machinery when it is stationary.
- c) Training commissioned by a company which decides that it can provide computers for its work force most cheaply by training operators, who would otherwise be made redundant, to assemble machines from their component parts.

4.

Why is the matrix method a preferred method for designing a training course?

Answers to Self-Assessment Questions

1.

General objective

On completion of the course the technician will be able to repair computer hardware.
(Agreed with the client or manager)

Operational objectives

On completion of the course the participants will;

Know the component parts of the computers	knowledge
Know the symptoms of faults in each component	knowledge
Be able to identify the faulty component	skill
Be able to remove faulty parts	skill
Be able to install replacement parts	skill
Pay attention to detail	attitude
Have a positive approach to safe working practices	attitude
Know which parts can be mended and which need replacing	knowledge
Know general terms of guarantees and service contracts	knowledge
Be able to use supplier information to return parts and order repairs	skill
Be able to identify the model or serial number of a component	skill
Know the suppliers of parts	knowledge
Be able to compare prices	skill
Be able to place orders	skill

2.

The general objectives precede the introduction at the front of each work book and the operational objectives are given at the beginning of each section.

3.

- a) You would probably use psychological sequencing. These are new managers and may think appraisal is going to be easy or, on the other hand, they may realise that good appraisal is a very high order skill. Some research through the participants' profile will be useful in this case.



- b) Pareto's rule would apply here. Not only because the majority of time is spent operating the machinery but also because it is very likely to be more dangerous when operating than when at rest.
- c) The content would need to be sequenced chronologically so that the operators could fit the components together in the most effective sequence. The training would probably follow a step by step approach.

4.

The matrix method has several advantages. However, the main one is the ability to move the Post Its around to refine the design in the light of any constraints or criteria used to select elements such as teaching methods. This allows all elements to be considered together before the design is finalised.

Section 5 - developing and delivering training sessions

On completion of this section you should:

- 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 which can affect the delivery of a training session
- Be able to develop a micro teaching session for the train-the-trainer seminar

Introduction

The results of the activities you have undertaken so far should have resulted in the design of your training session for the final assessment. This design can be used as a blueprint for further development of the course. As you develop your ideas, you will have to consider whether the choices you made are going to contribute to the realisation of the general objectives. It may be that you will have to re-arrange the general framework as you begin to face the practicalities of delivering the course yourself. Course development is not a linear process, although the diagram might suggest this.

Refining the operational objectives

The first stage in the development phase should be to revisit the operational objectives and test them to see if they need changing or refining as you develop your course.

A useful method for testing operational objectives is to use the acronym SMART. Do your operational objectives fulfil the following conditions. Are they:

Specific: have you distinguished between knowledge, skills and attitude?

Measurable: how will you know if the objective is achieved?

Attainable: do the activities really correspond to the tasks the participants are responsible for in their job?

Reasonable: is it reasonable to expect the participants to achieve the objectives within this course?



Time based: How long is the period in which the participants have to attain the objectives?

Be sure to check the operational objectives you have formulated, against these five conditions. If your objectives fail on any aspect of these tests, you may end up with dissatisfied participants or clients.

Activity	26
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In this activity you are going to practice applying the SMART test. Using the first aid example again, we might have an operational objective which states that;

on completion of the session, participants can give mouth-to-mouth resuscitation according to the First Aid protocol.

Apply the SMART test to this objective and make a note of any conditions which might apply.

S
M
A
R
T

Feedback

It is specific since it is a skill indicated by the phrase 'be able to'. It is measurable if you adopt an appropriate teaching method since your participants could demonstrate their technique on an approved dummy during the session. It will be attainable if first aid is part of the participants job as it will enable them to perform that role better. It is reasonable to expect the participants to achieve this, again, if an appropriate teaching method is used. The time will have to be considered carefully. Has enough time been allowed for the participant to understand the procedure and practise the skill? Look again at your response to activity 24. You will see that in some cases a test can be passed or failed, but in others the conditions which allow it to pass may be things you need to note for further consideration for instance in the timing within the sessions.

Refining other aspects of your course

Now that the operational objectives have been refined, the selecting and sequencing of content should also be reviewed. You can use the same starting point as before but in addition, a number of additional sequencing principles can be used which are useful when developing your course on *micro*-level.

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.

Activity	27
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In this activity you will select those elements of content which are necessary and reject those which are not.

Use the same operational objective as before:

‘on completion of the session, participants can give mouth-to-mouth resuscitation according to the First Aid protocol’

Indicate which of the following content you would include and which you would leave out.

Topic	In or out
Parts of the body	
The respiratory process	
How to open the airways	
How to close the nose and breath into the patient's mouth	
How to locate the heart	
How to administer heart massage	
How to sequence events	
How to test for resuscitation	



When to stop	
How to apply the recovery position	
How to send for an ambulance	

Feedback

You would need to include: how to open the airways, how to close the nose and breath into the patient's mouth, how to sequence events, how to test for resuscitation and when to stop. Some of the other items on the list may be applicable to another operational objective such as applying heart massage as well as mouth to mouth resuscitation, but not to this one. Some are interesting background knowledge, but not necessary to acquire the skill described by this particular operational objective.

The same refining process should now be applied to the other choices you had to make in the macro design of your course. You are really testing to see if what you originally designed is practicable when considered in the context of actually delivering your course. If you have not been involved in designing and delivering training before, you will tend to be over ambitious, so this refining process is a very important one.

Remember to be ruthless. It is all too easy to design and develop a beautiful course which is impractical when you try to deliver it. You are now working with the detail and developing on *micro*-level and you can go through this refining process a number of times. However, the best way to refine your course is to obtain some feedback and this is why the train-the-trainer seminar provides an opportunity for each participant to deliver a micro teaching session. For the rest of this section we will go through the process of preparation for your micro teaching contribution to the train-the-trainer seminar.

Developing your micro teaching session

At this point in the course, you should have the macro design for the training course you are going to submit as your final assignment from Activity 25. The activities in section 5 should have helped you to develop that design further, but now you must choose a small part of it to deliver as your micro teaching session in the train-the-trainer seminar.

Choose the part of your course you are going to deliver very carefully. You can practice developing your design and delivering it to other participants and your tutor. You will receive feedback on both the design and delivery. This kind of feedback really is the most valuable you can have and the tutors will make sure it is



constructively critical so that you can improve your whole course before you submit it for assessment. It is not a competition, so helping each other will give the whole group insights into many different approaches and let you exchange ideas with participants who have different perspectives and interests.

You will have a maximum of 15 minutes for your micro teaching session so 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.

Each of the remaining activities in Section 5 takes you through one step of the process, but you will obtain the feedback during the train-the-trainer seminar.

Activity	28
----------	----

Select the operational objective you hope to achieve with your participants (your peers at the train-the-trainer seminar). At this stage you might like to choose two or three and make a final choice at a later stage.

- | |
|----|
| 1. |
| 2. |
| 3. |

From the design you produced using the matrix method in Activity 25 look again at your three operational objectives and the teaching and learning method you selected. For this exercise you need to choose an objective and teaching method which can be delivered in 15 minutes but which will allow you to demonstrate all aspects of design, development and delivery. Bearing in mind the outcome of Activity 24, a practical demonstration might not be a suitable one to choose.

Use the table below to focus your ideas for each of your operational objectives and then make your final selection.

Objective	Number of participants	Teaching method	Teaching aids	Can this be completed in 15 minutes?
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The objective I will deliver is:

Activity 29

Next, you should go through the refining process for your micro teaching session. Use the tables to take you through the process step by step.

Question	Answer	Comments or reasons
Is the objective SMART?		
S M A R T		
What are the topics I must cover?		



What is the most appropriate sequence?		
1		
2		
3		
Is the teaching method I have selected the most appropriate?		
Will it work with the number of participants I have - and any additional ones?		
What teaching aids will be most effective?		
Can I still deliver it in 15 minutes?		
What do I need to have available when I prepare my micro teaching session?		

You should now have undertaken all the preparation so the next stage is to actually prepare your micro teaching session. Before you begin preparation, just think back, look through the workbook of this Unit on Training and attempt Activity 30.

Activity	30
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In this activity you will check some of the points we considered in the early sections of this Unit. Try to answer the following questions:



Have you considered your preferred learning style and those of your participants in making your decisions?	
Have you given any thought to the special needs of adult learners?	

Feedback

Remember not to let your preferred learning style influence your design. You will have met your group of participants at the train-the-trainer seminar, so you may know a little of their preferences. Don't think back to your school days. Many people think a lecture is the best way to teach because that is what happened when they were at school, but a lecture is not interactive and you should enable interaction and opportunity for discussion and asking questions.

Activity	31	Tutorial Seminar 2
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You should now prepare your micro teaching session.

Implementation

By the time you complete EUCOSH, you will have designed a training course of your own and delivered part of it in a micro teaching session, but the actual delivery of your own full course will depend on a number of other local factors if it is to be as effective as possible.

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

Attendance and commitment

When carrying out a training session or programme, it is important to plan the timing of the session very carefully. The participants have to be able to really make time for the training. It is always best to publish the time well in advance so that participants can commit fully to the course.

The other factor which can affect attendance and commitment is the location of the training sessions. When the training is carried out near the workplace, there is a danger of the participants not being able to concentrate fully. Often they are distracted by various job activities which interrupt the training.



Group size and attitude

In training practice, it is common for the group size to change without notice. This can mean that you will have to adapt teaching methods and activities accordingly. Try and be flexible by preparing for a range of numbers of participants.

The involvement of the participants is of substantial importance for the success of a training programme. Sometimes, during the training it becomes evident that participants are not motivated to participate actively in the training. There can be several reasons for this. One can be the group size which is too large for the activities allowing some participants to 'hide'. Another cause of poor motivation is the way in which the course has been presented to prospective participants

Activity	32
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Consider the following three ways in which a manager presented a training opportunity to his employees and use your own reactions to identify the effect each will have on a trainee.

1. My boss says all my staff should go on this training course.
2. There is a training course running next week. I know you're busy but it's probably a good idea to cover the company's OSH commitments
3. It's very important for all staff to attend the OSH training course. You will learn about your personal responsibilities for OSH at work and the company's responsibilities with respect to your employment.

Feedback

The manager is bored by the whole thing in the first example and no employee is going to be enthusiastic about attending. In the second example, the case is presented for the employers' benefit not the employee's, whereas in the third scenario, good reason is given with the benefits presented in a balanced way. Of course basing attendance on appraisal, identifying real development needs of the individual is the most appropriate way of agreeing training opportunities. If this negative attitude is encountered, you may face the task of



identifying the problem and proposing or discussing solutions either with participants or with the management.

Activity 33

Now that you have planned your course very carefully the participants are bound to achieve their objectives- or will they? How will you know if you have been successful and your participants have found the course effective and enjoyable?

I think ...

Feedback

You will get some feel for how successful you have been from participants during the session. However, developing a course is a continuous process and involves evaluating all aspects, making appropriate adjustments before the next session. The final section of this work book deals with evaluation which you must build into the course you submit for your final assignment

Summary

The macro design for a training course is used to develop a practical plan for a training session and to identify the materials you will need. There are many issues which need to be considered during this development phase which will affect delivery. These include refining the operational objectives using the SMART acronym, ensuring that the session only covers essential subject material and similarly refining other aspects of the course. Micro teaching is a way of ensuring that the process of development produces a course which is appropriate in practical terms for delivering in the specified time and obtaining feedback from tutors and colleagues. Identifying motivational factors will help to ensure successful training sessions and evaluation is essential to find out if the training has been successful.

Key learning 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 that only essential topics are covered



- All other aspects should be reviewed in a similar manner - be ruthless
- Care must be taken to ensure that the course can be delivered in the time available
- Micro teaching is a way of developing and delivering a small section of a course and receive feedback which will reflect the process as well as the content.
- There are some factors which will be out of your control and which you may only discover at the beginning of the session. You should try to be prepared for all eventualities.

Try the self-assessment questions before moving on to the last section



Self-assessment questions

1.

How would you test for each aspect of SMART for an operational objective?

2.

Which of the following aspects of a training course are likely to result in over running the allocated time?

Teaching method

Content

Teaching aids

Age of participants

3.

What are the distinctive features and the purpose of a micro teaching session?

4.

What are the essential differences between a macro and micro design of a training course?

5.

Suggest 3 things which can affect your training course, but which are outside of your control and about which you may not be notified until the actual session.

Answers to self-assessment questions

1.

<i>Specific:</i>	have you distinguished between knowledge, skills and attitude?
<i>Measurable:</i>	how will you know if the objective is achieved?
<i>Attainable:</i>	do the activities really correspond to the tasks the participants are responsible for in their job?
<i>Reasonable:</i>	is it reasonable to expect the participants to achieve the objectives within this course?
<i>Time based:</i>	How long is the period in which the participants have to attain the objectives?

2.

Teaching methods and content are the two most likely to affect timing. In the case of content, it is easy to include more than is necessary. A very participative teaching method may involve each participant practising a skill and that is very time consuming. Teaching aids may well make a session more efficient and the age of participants wouldn't have a significant effect, although you will find that some groups ask more questions and this can affect your timings.

3.

A micro teaching session is an opportunity to select a small part of a course and deliver it to a group of participants so that you obtain feedback on the content, design and delivery.

4.

The macro design is broad in its scope beginning with deriving the operational objectives from the general objectives. The development or micro design is a refining process in which the assumptions you have made in the macro design are tested and refined to focus on the most effective and relevant strategy for each component of the course. Each element of the course should be subjected to the same rigorous review.

5.

Timing with respect to the availability of participants



Location of a training session near to or at work can result in distractions for participants

More or fewer participants may actually attend the session, so be prepared for variations in your group size

Poor motivation can be because of poor managerial communication of relevance. This may need to be addressed with participants or managers.

Attitudes are often affected by the position an individual holds within the organisation and this can influence the effectiveness of a training session.

Section 6 - evaluating a training course or session

On completion of this section you should:

- 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

Introduction

The first time you run a training course, you are really conducting a pilot. No matter how well you plan, you will not actually know how effective it will be until you actually deliver it to a group of participants. Micro teaching helps, but is usually conducted with a group of your peers, not participants. It is therefore essential that you find out how effective and well received the session is during this pilot. Evaluation and revision in the light of feedback from evaluation of the pilot are an essential part of the development process. So, ideally, a pilot version is given first, after which the final version can be developed. And even then, evaluation and revision remains important. A training course has to represent the latest insights and innovations and therefore has to be updated continuously.

Evaluation should always be linked to the general and operational objectives of a training. Its purpose is primarily to find out if the objectives have been achieved although other very useful information can also be obtained by well conducted evaluation

Activity	34
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Suggest three things you would like to be asked about a training course other than the achievement of the objectives.

- | |
|----|
| 1. |
| 2. |



3.

Feedback

Sometimes it is the detail such as the location, the catering or even the heating which can ruin the best planned training session. These factors affect the social aspects of a course, but years later a participant may remember a course because it was freezing cold or the food was terrible, rather than how well the objectives were addressed.

Evaluation methods can be divided into two types, process evaluation and product evaluation.

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

The objective of process evaluation is to evaluate elements of the learning process which contribute to the learning experience.

Questions can be asked about:

- 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.

To carry out process evaluation, interviews or questionnaires can be used.

Generally speaking process evaluation is subjective. This means that it depends on the attitudes and opinions of the individual participant. What one participant finds to be very good, another may think is poor. It is usual to use a set of statements and ask participants to say to what extent they agree or disagree. An alternative is to ask them to score a component, say out of 5. These methods can apply to questionnaires or interviews.

Activity 35

Use the process elements listed above to complete the design of the following questionnaire:

	Strongly agree	Agree	Disagree	Strongly disagree
The accommodation was appropriate for the training session				
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.				

Feedback

In the same way as - accommodation becomes the statement, 'The accommodation was appropriate for the training session' so - duration of the training becomes 'The duration of the training session was just right'. Similarly - contents could be expressed as 'The content of the course covered the knowledge objectives'. It is important to have some negative



statements so that participants have to think before answering so - the applicability in the workplace could become 'The course dealt exclusively with theory about the subject'. If the course was very practical, then the participant would have to strongly disagree. The teaching methods allowed you to practice the skill, the quality of the course materials was very high, the trainer was able to involve everyone and the course fulfilled all my expectations - are suitable statements for the other elements.

Product evaluation

The product of training can be evaluated as well as the process.

The objective of product evaluation is to evaluate the learning of the participants or, in other words, the degree to which the objectives have been met.

To carry out a product evaluation, the following evaluation-instruments are useful:

- verbal test;
- written test;
- observation of role plays;
- observation in the work place.

If the outcome of this type of evaluation is used to measure the participants' performance, then it is the same as assessment. Formative assessment is used to provide participants with a measure of their performance and explanation of their degree of understanding, whereas summative assessment is used to judge performance and rank or grade performances.

It is important to define the evaluation criteria before the course starts. The product evaluation criteria have to be derived from the objectives.

Activity 36

Using the operational objectives from Activity 18, suggest a means for evaluating each.

The participant will be able to:

1. wash and dress a small wound,
2. administer resuscitation following a heart attack



3. reduce blood loss following accidents involving rotating blades
4. take appropriate action to support employees with broken limbs following accidents with heavy machinery

Feedback

A simulation might be the best 'test', but a written test requiring a description would be possible, though a less satisfactory alternative. Requiring participants to demonstrate the technique on a dummy would be most appropriate. Again a demonstration with a hypothetical injury is really the only practical way of assessing both the treatment of wounds and broken bones. A course such as this would be a very practical one, so demonstration is the usual method. The outcomes are frequently used as assessment and certificates awarded to successful participants.

Moments for evaluation

There are several points during a training course at which evaluation can take place.

Before the training

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

Activity	37
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Suggest three things you think could be achieved by testing participants before they join a training session?

1.
2.
3.



Feed back

The sort of things it is possible to ascertain include: whether the participant can participate in the training, whether the participant needs to acquire additional knowledge and skills before they can join the course, whether the training is appropriate for the participant and whether the training should be modified to meet the participants needs. A test may be sent by post or participants may be asked to attend a centre prior to the training.

Another type of diagnostic approach would be to conduct an interview with the participant and/or their manager to find out:

- the current knowledge, skills and attitudes of the participant;
- the training need(s);
- the expectations about the training.

During the training

A sensitive trainer will be aware of undertaking evaluation during the session by looking for signs of engagement and acquired learning in their participants. Diagnostic tests can be used during a course to determine the acquired knowledge, skills and attitudes. These can be formal or informal, for instance by observation.

Process evaluation during training can be conducted by asking the participants to reflect on the training at the end of each session. The outcomes can be used to modify the training to improve the extent to which the course meets the needs of participants. This is usually a very informal process.

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. In some cases the product evaluation is a test possibly taking the form of asking the participant to demonstrate competence in a skill. A more formal example might be a driving test following training through driving lessons. This would be assessment unless the outcomes of many driving tests were used to modify the way in which the training takes place. Knowledge, skills and attitudes are tested during a driving test.



Process evaluation: the participants are asked to reflect on the training at the end of the training. The results are used to modify the training.

Activity 38

Look carefully at the questionnaire which is provided at the end of this section. Do you think it is evaluating the process, the product or both?

I think ...

Feedback

The questionnaire addresses many aspect of the process. Only question 8 attempts to ask what the learner will be able to do after the course

The questionnaire demonstrates the two types of questions which can be asked. Closed questions have a response which is measurable, definite right or wrong. Open questions can be answered in many ways and often depend on opinions or attitudes.

Activity 39

Which questions on the questionnaire are open and which are closed?

Open

Closed

Feedback

The questions prefaced by a letter are open with the exception of question d) since they are asking for a description of your opinions. The questions prefaced by a number are closed since they ask you to give a measured response on a scale which is given to you. Question



d) is also closed since it asks for a yes or no answer.

After the training, on-the-job

Probably the most useful form of evaluation takes place after the training when the participant is back at work. If a company has an appraisal scheme and the training need has been identified during an appraisal interview then a follow up interview or the next appraisal round should identify the extent to which the outcomes of the training have improved performance of the job and hence the applicability of the acquired knowledge, skills and attitudes.

A questionnaire concerning the performance and the applicability of the acquired knowledge, skills and attitudes, which has to be filled out some time after the training is another alternative.

Summary

Evaluation is the process by which the effectiveness of the training is investigated or determined.

Evaluation methods can be divided into process evaluation and product evaluation. The objective of process evaluation is to evaluate the learning experience including essential components such as methods and materials as well as some of the social aspects such as location, catering and timetable for the session. The objective of product evaluation is to evaluate the outcomes of the learning. The latter can take the same form as assessment if a mark, grade, pass or fail is awarded.

There are different moments for evaluation including: before the training; during the training; at the end of the training and after the training.

Questionnaires usually evaluate process, but carefully constructed questions can evaluate product. Product is often best evaluated by appraisal after the training since it considers how well the participant is applying the knowledge skills and attitudes acquired during training. Open questions ask for opinions whereas closed question ask for a response which can be measured in some way.

Key learning points

- Evaluation is an essential part of the on-going development of a training course allowing the course to be improved on an evolutionary basis in response to the comments and performance of participants.
- Process evaluation provides information about the training process and its ability to facilitate learning, whereas product evaluation, which is the same as or similar to assessment, 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 whereas closed questions ask for a quantifiable response such as right or wrong, true or false or a measure on a scale.



A sample questionnaire

We would like your views and opinions about this training course as part of our quality monitoring process. We will use your comments to review aspects of the course so please help us by taking the time to answer the following questions.

Please tick the box which represents your view on the scale indicated for each question

- | | | | | |
|---|--|------------|--|--------------|
| 1 | What's your impression of the general organisation of the course? | excellent | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | poor |
| 2 | Did the training meet your expectations? | completely | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | not at all |
| 3 | What's your opinion of the contents of the course? | excellent | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | poor |
| 4 | What's your opinion on the course materials? | excellent | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | poor |
| 5 | Does the training contain sufficient variation? | sufficient | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | insufficient |
| 6 | Did you have sufficient opportunity to practise? | sufficient | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | insufficient |
| 7 | What is your opinion on the duration of the course? | too long | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | too short |
| 8 | Do you think you will be able to apply what you have learned during this course in your working situation? | completely | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | not at all |
| 9 | What's your opinion on the quality of the course? | excellent | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | poor |



Please answer the following questions:

a) What parts of the training do you consider to be most valuable to you and why?

b) What parts of the training do you consider to be least valuable to you and why?

c) What's your impression of the trainer (expertise, performance, etc.)?

d) Would you recommend this training to others?



Self-assessment questions

1.

Why is it important to evaluate a training session and what are the benefits for:

- the trainer
- the learner
- the employer?

2.

Name and explain the two elements of a training course which can be evaluated

3.

At which points can a training course be evaluated and why would appraisal be arguably the best form of evaluation?

4.

Rewrite question c) of the questionnaire as closed questions

Answers to self-assessment questions

1.

You will only know how effective a course is by evaluating it. This involves obtaining information about opinions and performance of the participants.

Benefits for:

- the trainer include better information about the structure, context and effectiveness of the course
- the learner are a better understanding of their performance, but also the knowledge that their input has influenced the effectiveness of the course for future participants
- the employer sometimes include a better understanding of the outcomes of training, but should always be improved performance of the employees on future courses

2.

The two elements are process and product. The process involves the component parts of a training course and any social and organisational aspect which might affect a participant's performance, engagement or attitude to the training. The product is the outcome of the training and this can be the same as assessment. The performance of the participant can be established by the trainer before during and after the sessions or by the employer by observation or at appraisal.

3.

A training course can be evaluated before, during, immediately after and later on return to the work place. Appraisal be arguably the best form of evaluation, because it actually considers the application of the new knowledge, skills and attitudes to the work. It truly establishes whether the general objectives determined during training needs analysis have been met.

4.

Please give your opinion of the following aspects of the trainer 's performance on the scales indicated below



		Strongly agree	Agree	Disagree	Strongly disagree
1	The trainer was expert in the subject				
2	The trainer was a good facilitator				
3	The learning materials enabled participants to be active in the session				



Conclusions

You have now completed Part 2 of Unit on Training of EUCOSH. We have dealt with all aspects of designing, developing and delivering a training session. This Unit should enable you to train others in aspects of OSH. However, it should also have provided you with the basic skills to design training courses on other topics and subjects or to develop your skills further if you choose to pursue training as a role within your employment. If you are already an experienced trainer this Unit should have provided you with a different perspective or more ideas.

Hopefully you will have observed the elements of structure within this EUCOSH course. Although you will be delivering a face to face training session as the final assignment for EUCOSH, you will have observed the structure of the course and will be able to embed some of the ideas and activities into your training course. No one delivery methods is completely different from all others and opportunities to see how others develop and deliver learning is always a positive experience.



COMMUNICATION SKILLS



Sühendan ADIGÜZEL van ZOELLEN



Objectives

After this activity you are able:

- * to describe the communication process**
- * to explain the role of perception in communication**
- * to describe important communication skills that are needed for senders and receivers of messages**

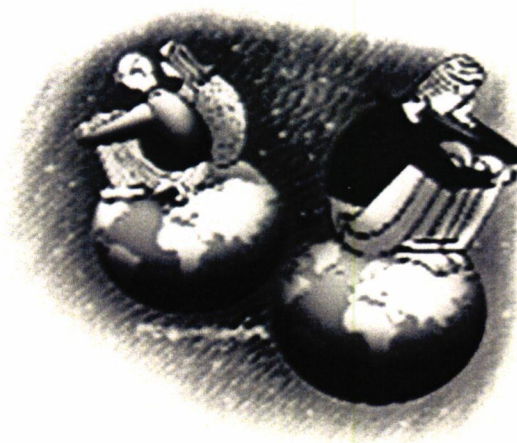


Communication

sharing of feelings,
thoughts and knowledge
with others in different ways



Communication makes big differences in life...







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for life

Everything starts with communication ...






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for life

Communication starts when two people
become aware of each other

- Talking
- Being silent
- Doing something
- Not doing anything

everything means something





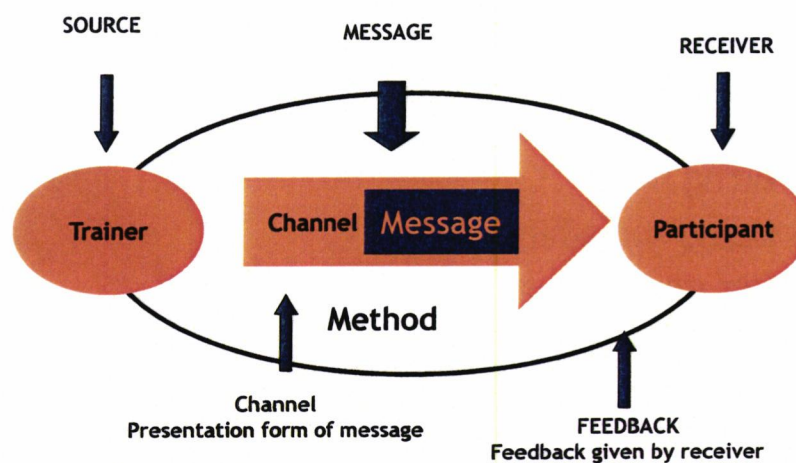
OBJECTIVES OF EFFECTIVE COMMUNICATION

- to express a message
- to be understood
- to be able to get what you want
- to make people to do what you want 😊

If you notice people have a difficult time understanding you, consider evaluating your ability to send messages effectively



COMMUNICATION PROCESS



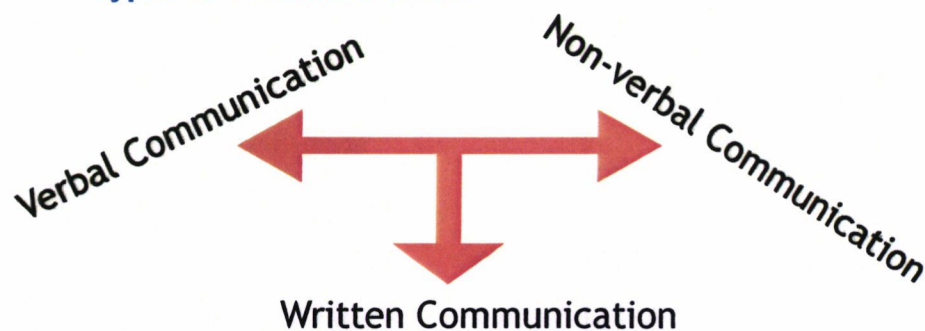


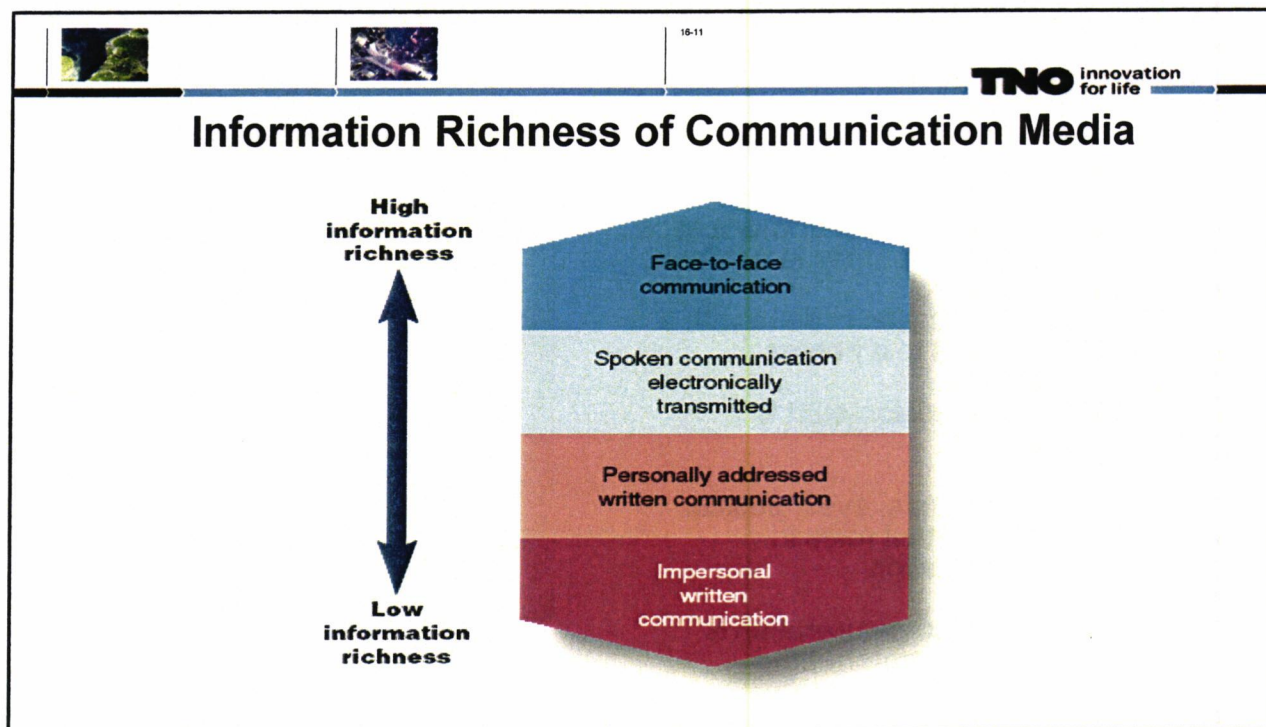
Features of Communication

- › There will be no communication if one of the parties is not ready
- › Communication is done with a person not to a person
- › First impression-start is important
- › Words, hands, eyes, position play important roles in communication
- › Basic for communication is trying to comprehend



Types of Communication





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- Verbal
- Non- verbal

The slide includes two photographs. The top photograph shows a man and a woman sitting on a bench outdoors, engaged in a conversation. The man is wearing a dark shirt and jeans, and the woman is wearing a dark dress and sandals. The bottom photograph shows a man and a woman in a close embrace, with the man whispering into the woman's ear, illustrating non-verbal communication.



DURING COMMUNICATION

- › Body language 60%
 - › Voice 30%
 - › Words 10%
- matters !!**

- **What** we say is not important,
- **How** we say it is important



NON-VERBAL COMMUNICATION

- Body language
- Face "smiling face, eye contact"
- Mimics
- The way of sitting
- Posture





SMILE !

Even if you are in a bad mood,



YOU STILL LOOK NICE ...

AND



YOU WILL FEEL NICE ...



Non-Verbal Communication

- The other should be met with a smile in a polite way
- Be interviewed face to face with eye contact

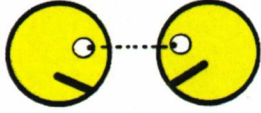


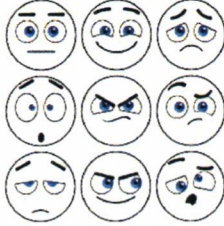





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- * Eye contact
- * Facial Expressions
- * Head movements
- * Gestures
- * Posture
- * Touching
- * Appearance

Eye-Contact



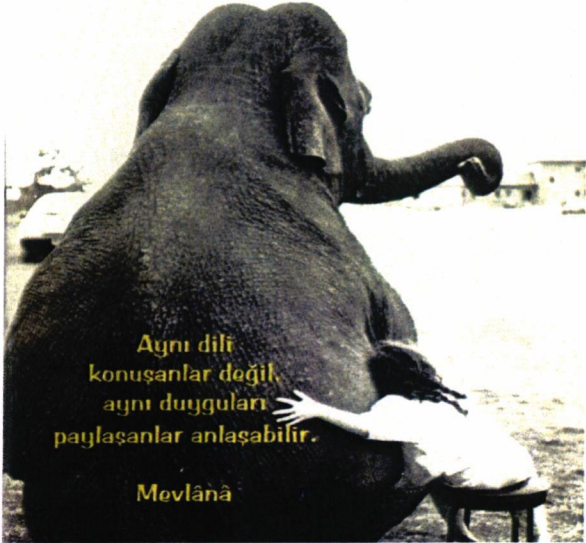


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Not the ones who speak
the same language
understand each other,
but the ones that share
the same feelings.

Rumi (Sufi poet, 1207-
1273)



Aynı dili
konuşanlar değil,
aynı duyguları
paylaşanlar anlaşabilir.

Mevlânâ



VERBAL COMMUNICATION

- › Voice
- › Listening

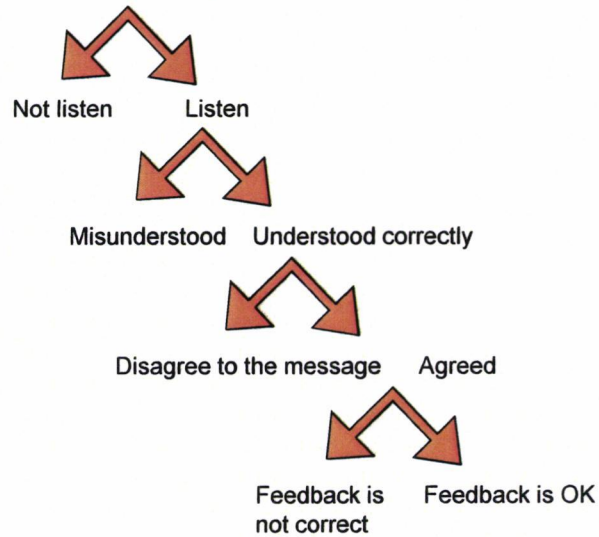


VOICE

- › Neither loud nor too silent
- › Important parts of the message should be emphasised



Relationship Between the Recipient and Delivered Message



LISTENING TYPES

- › Pretended listening
- ›
- › Selective listening
- › Stucked listening
- › Defensive listening
- › Trap planner listening
- › Superficial listening
- › **Effective Listening**



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Business Coach

Effective Communication

Understand People's Perceptions

Map is not the Territory

"We see the things not as they are, but as we are." ~ H.M. Tomlinson

Reality

Believing is seeing

Beliefs

Values

Your mental map of reality

your prospect's mental map of reality

Beliefs

Values

Area of Good Understanding

NLP Solutions

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-Balığı çok severim

I love fish

-Beni del

Me too



EFFECTIVE LISTENING

- Listener really understands the speaker
- He enters the world of the speaker and replies verbally



EMPATHY

- › Empathy is the capacity to recognize emotions that are being experienced by another person.



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*"Before you judge a man, stroll through his shoes
until sunrise to sunset"*



Saying of Indians



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Empathy

There is no need
to brake. I am
sure he will run.



There is no need
to run. I am sure
he will brake.



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for life



There are differences between :

What you are thinking,

What you want to say,

What you thought that you said,

What you said,

What the person wanted to hear,

What she/he heard,

What he wanted to understand ,

What he thought that he understood,

What he understood....

Therefore, there are at least nine reasons for people to misunderstand !!!!





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"LET'S HAVE A BREAK"


Sühendan












Train-the-trainer Occupational Safety and Health













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



3

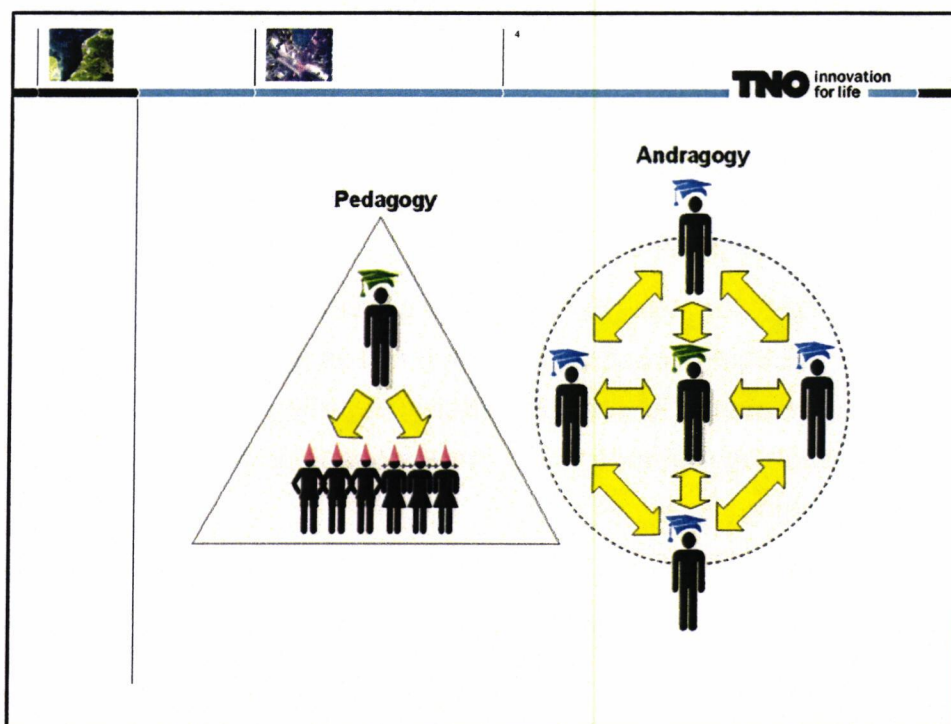


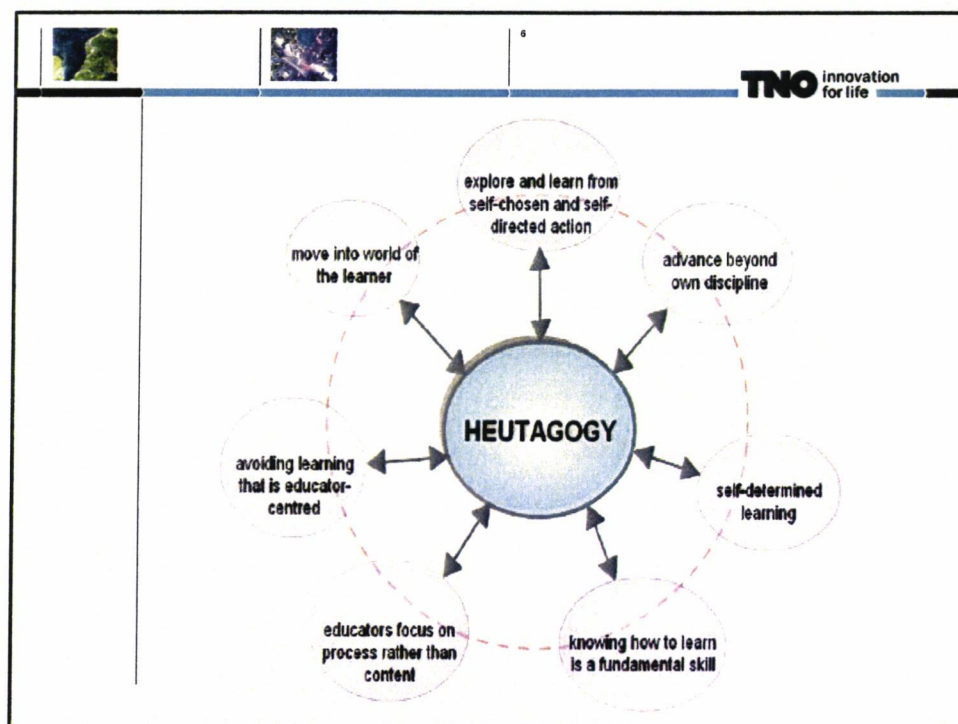
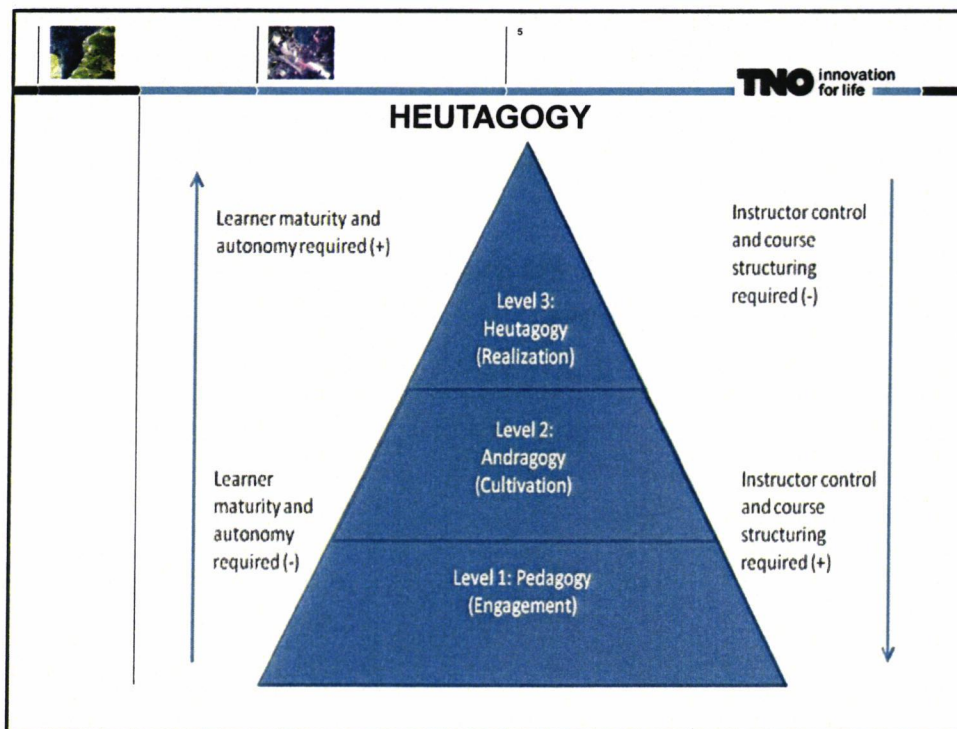
Section1.


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





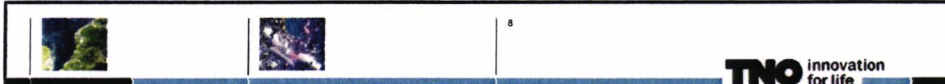


7

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Adults want information on the subject

- › prior notification to the program
- › Pre-reading sources






8

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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,
- › Should be carried out.

9




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

10




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

11




Adults want diversity in education

- › Audio-visual tools
- › class lectures
- › brainstorming
- › group work
- › group discussions
- › guest speakers and so on.

12




They want to have positive feedback

- › Verbal praise
- › Supporting statements
- › Complementary sentences and so on.

13

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




14

Adults want a suitable environment for learning

- › The layout
- › Enlightenment, aeration




Adults have individual needs

- › Food, tea, toilet, telephone and so on.

15



Adults versus Children

Children	Adults
<ul style="list-style-type: none">› Others decide importance› Accept information at face value› Expect long-term use› Little / no experience› Content centred› Less actively involved› Authority oriented	<ul style="list-style-type: none">› They decide importance› Validate information versus beliefs› Info immediately useful› Much experience› Problem centred› Active participation› Collaboration oriented

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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







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Always Remember!!!

- › the need to learn by doing and discussing, not by just being told
- › slower learning
- › fear of failure
- › having a contribution to make
- › dislike of being patronised by class room methods








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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







19




Issues relating to adult learning

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

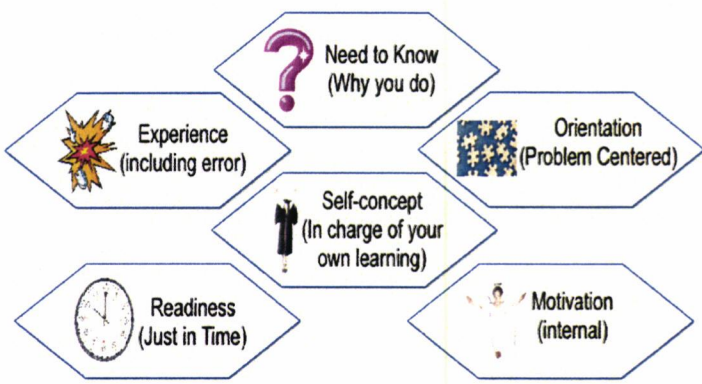


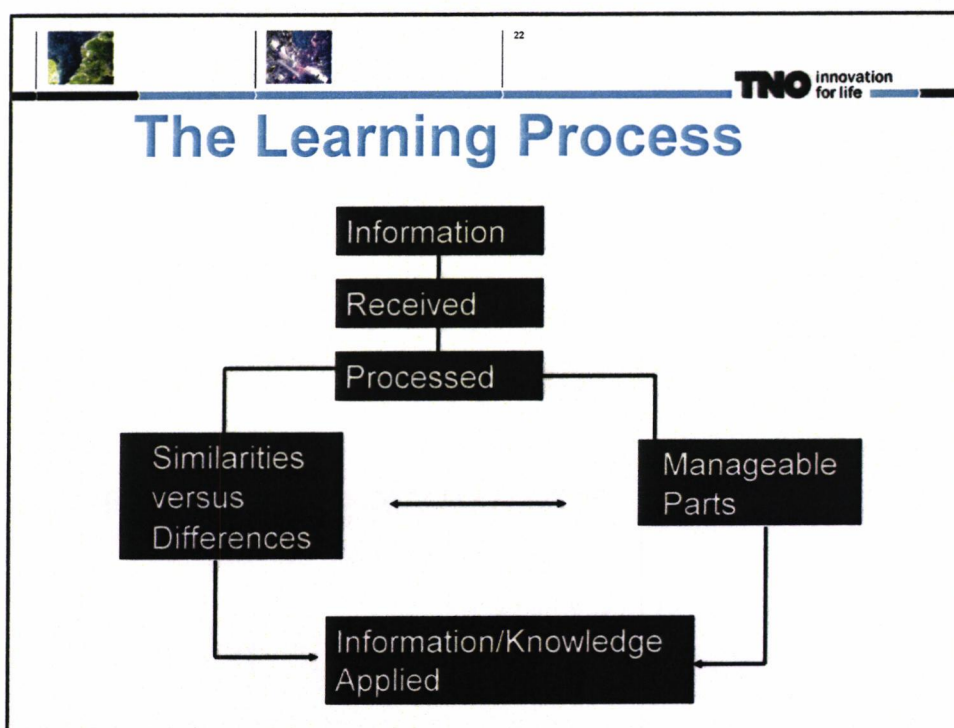
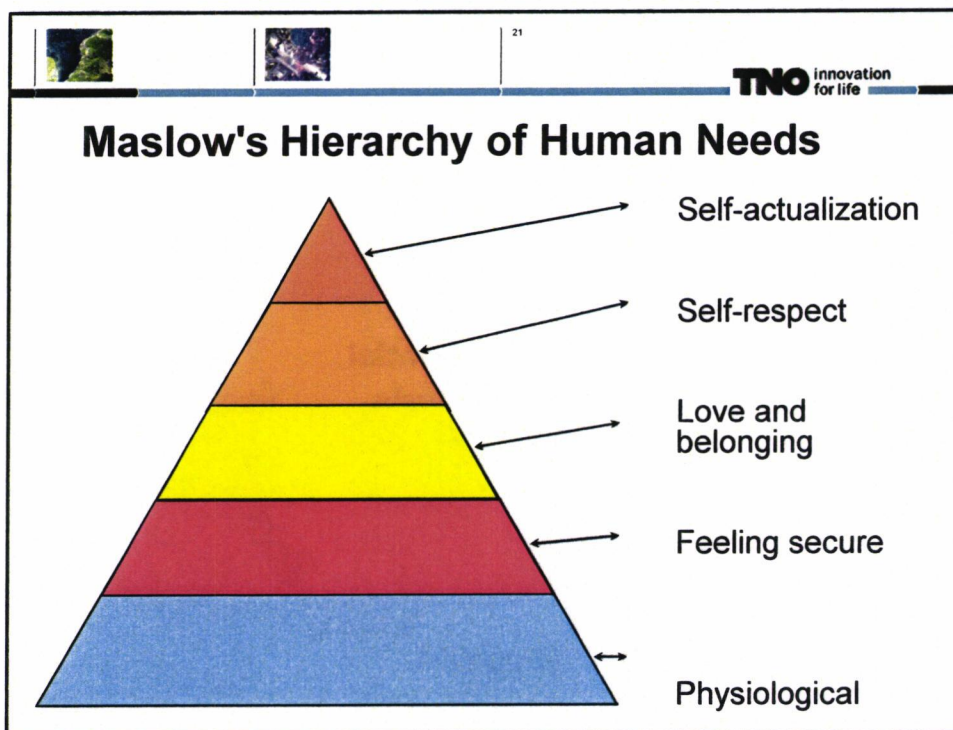



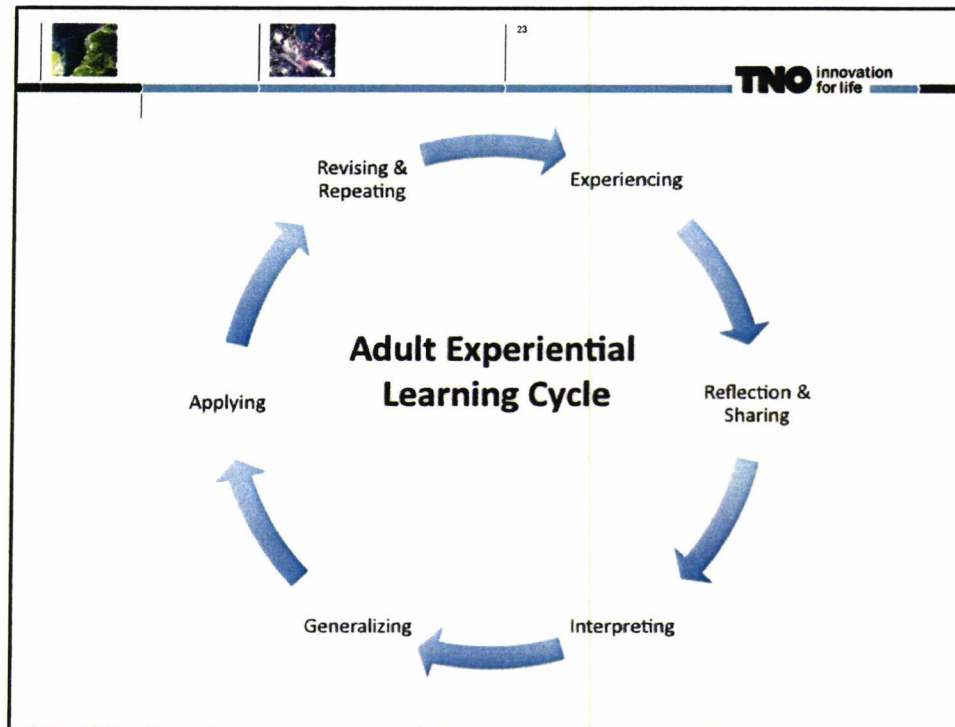
20



Reason for attending

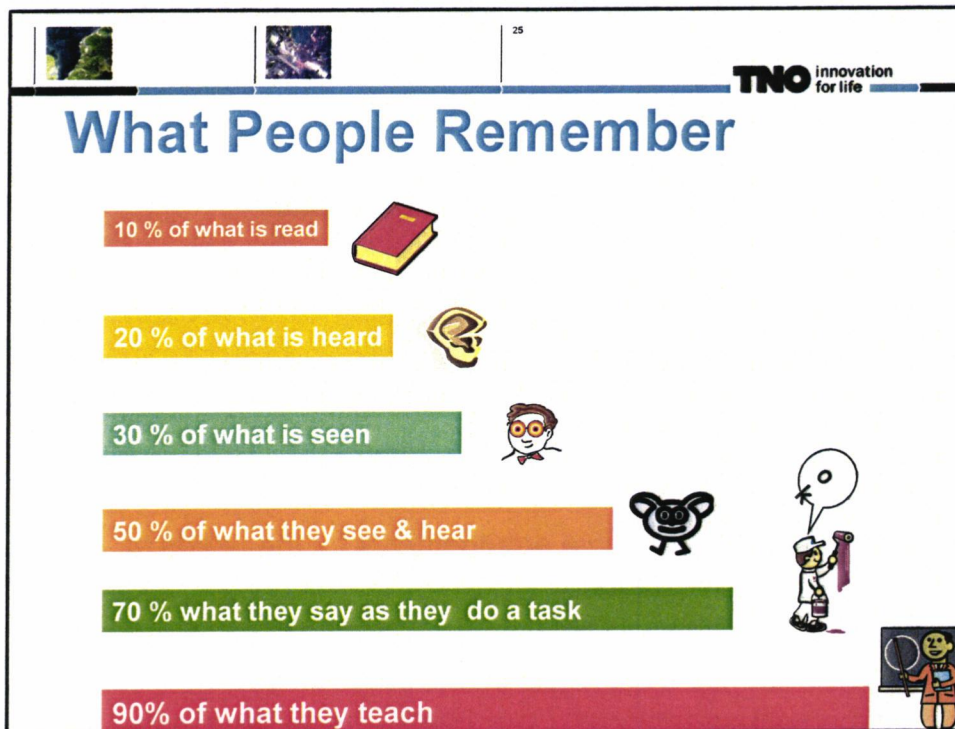






An old native American saying

- › “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.






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What is active learning?

- It is a **planned series of actions** to invite the participant to:
 - Process
 - Apply
 - Interact
 - Shareexperiences as part of the educational process
- The interactive components support the goal and the educational objectives for active learning

27




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

28

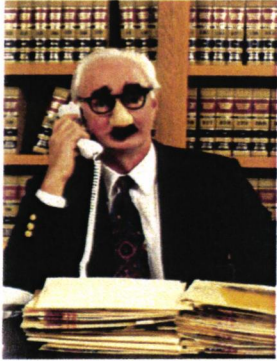
Composition of the group




- › homogeneous in age, seniority and experience
- › heterogeneous group from a variety of backgrounds and with different levels of experience

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An effective pre-learning strategy

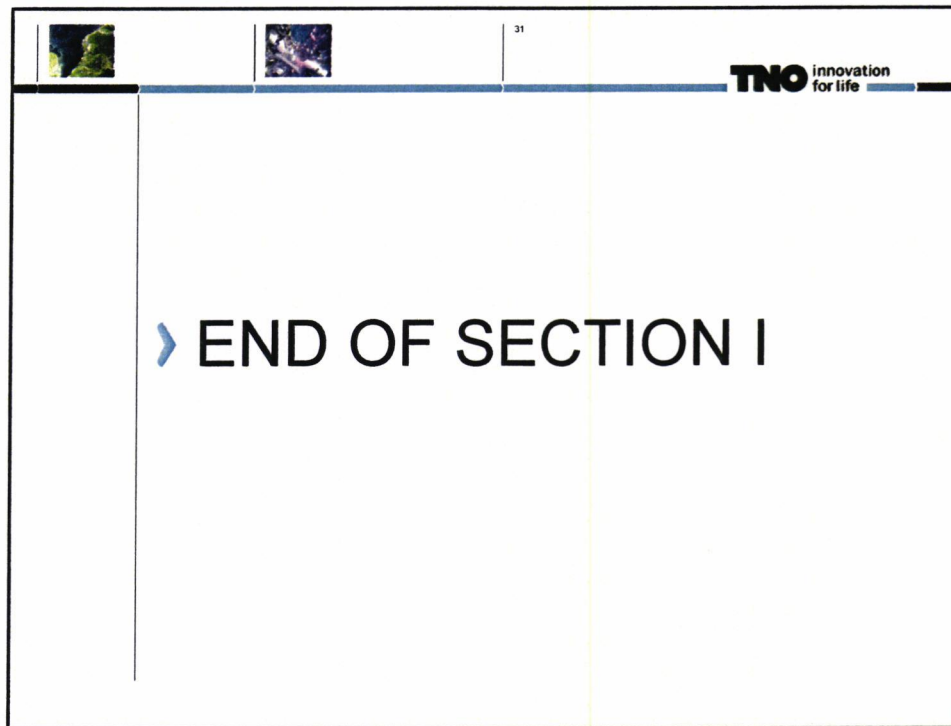
- › To help the participant focus on the application of the material, is to have them informally and briefly list their personal **KWL**
- › **K**= What the participant already **KNOWS** about the subject
- › **W**= What they **WANT** to know
- › **L**= How they want to use what they **LEARN**



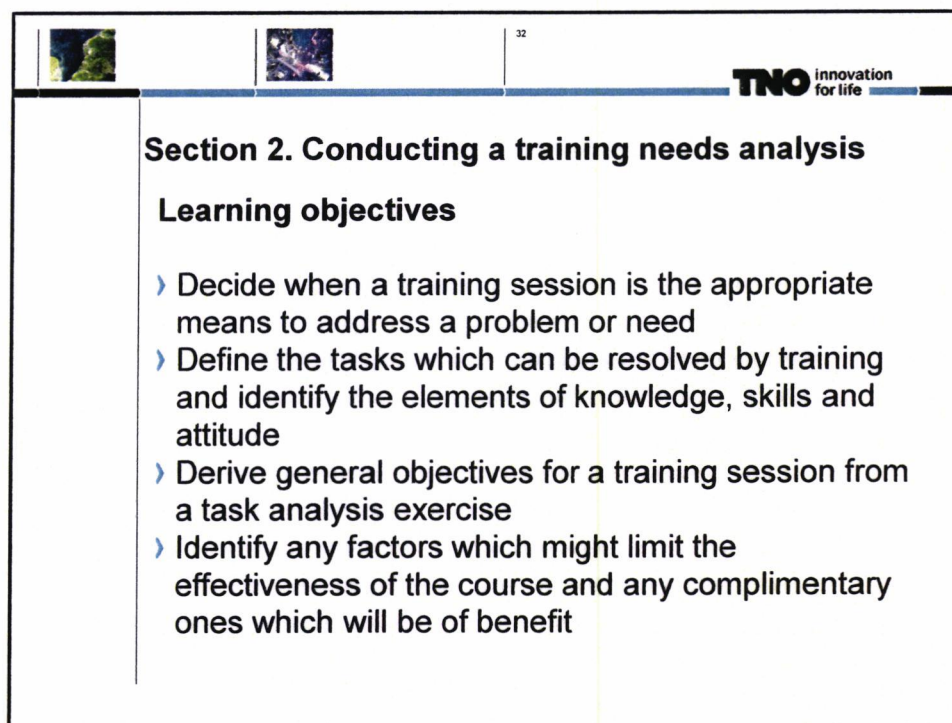
30

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).



Slide 31 features a header with two small images on the left, a slide number '31' in the center, and the TNO logo 'TNO innovation for life' on the right. The main content area contains the text '› END OF SECTION I' in a large, bold, black font.





Slide 32 features a header with two small images on the left, a slide number '32' in the center, and the TNO logo 'TNO innovation for life' on the right. The main content area contains the following text:

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






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Is training a solution?

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



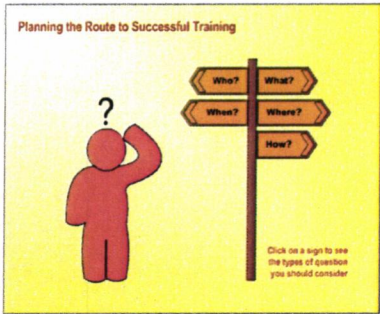





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Tasks


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






35

Having identified the tasks, one must consider

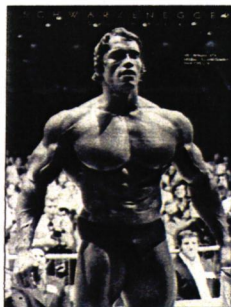
- › What should a person know in relation to the task?
- › What should a person do with this knowledge?
- › What attitude is needed in relation to the task?






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General objectives




- › Derived from the task analysis
- › They are the outcomes of the training



37



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


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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





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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



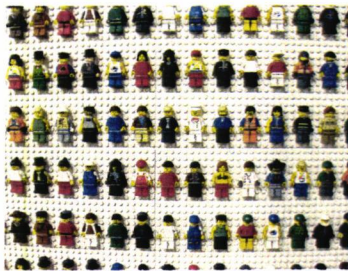
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
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Limitations and complementarity

Usual constraints are:

- › Time
- › Budget
- › Facilities
- › and of course **people !!**






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Recognizing dysfunctional behavior

- › Saboteur
- › Sniper
- › Assistant
- › Trainer
- › Denier
- › Quiet
- › Anxious
- › Dominator
- › Side Tracker
- › Hand Clasper
- › Polarizer
- › Attention Seeker
- › Clown





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Everybody has an opinion....






We want to hear YOURS!

Join us at the
Discussion Forums




43

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 ☺

44




› END OF SECTION 2

45

Section 3. Identifying learning strategies and teaching methods

Learning objectives

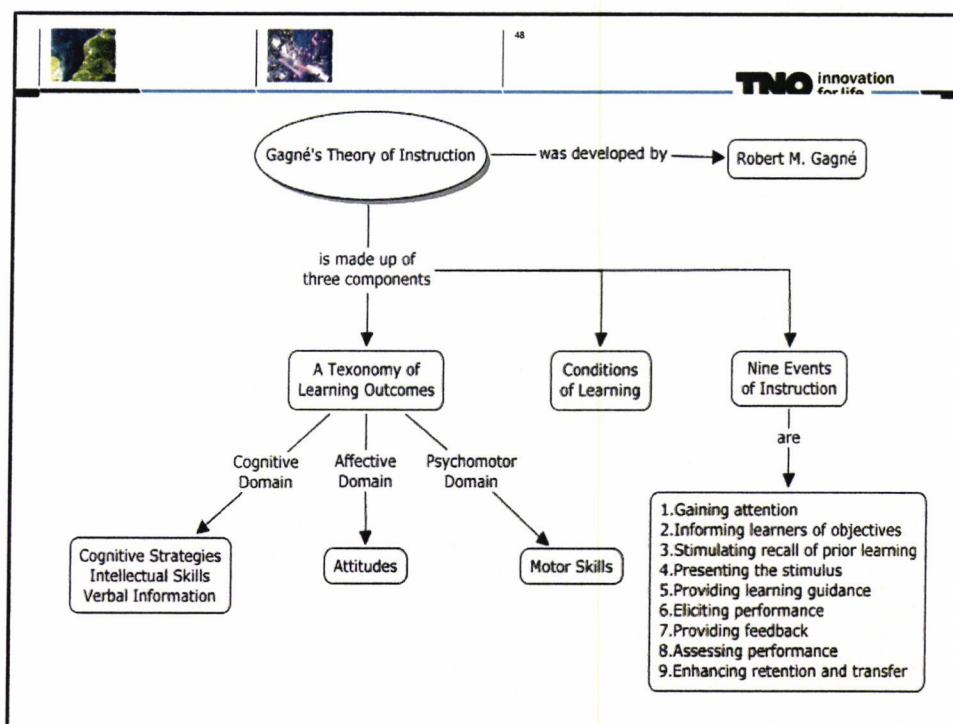
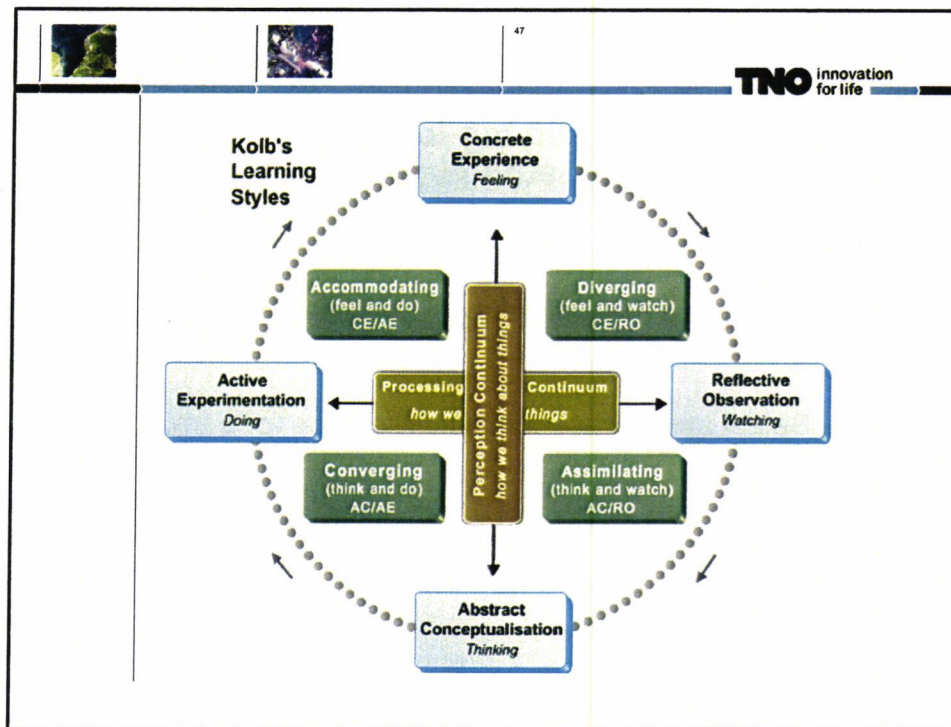
- › Recognize that different people learn best in different ways
- › Select appropriate teaching methods for a training session
- › Select appropriate teaching aids for teaching methods




46

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)






49

The Nine Events of Instruction

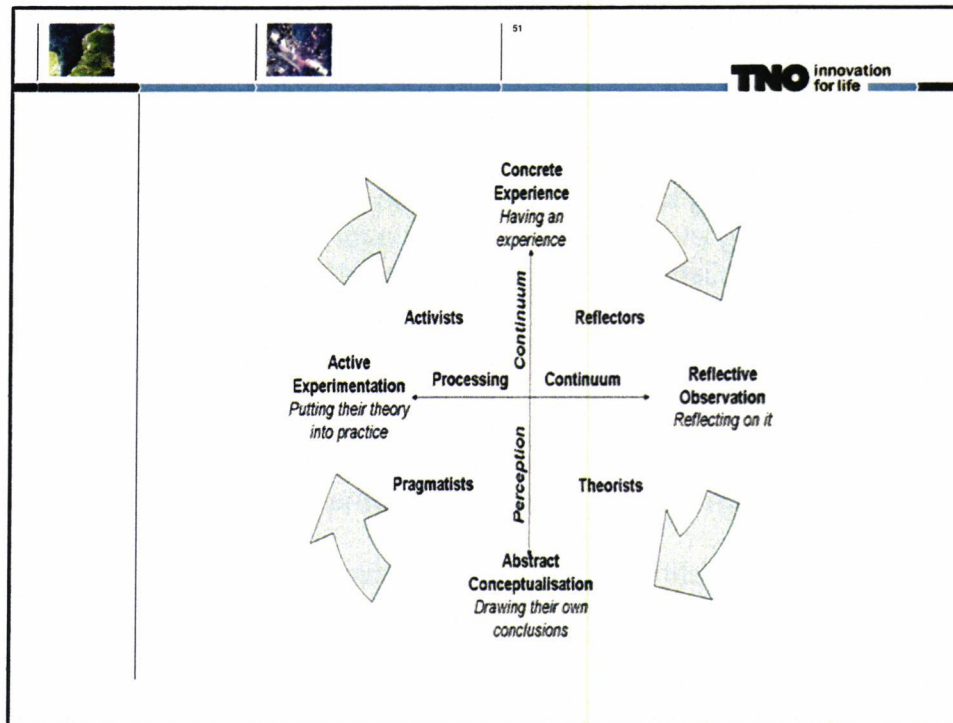
According to Gagné, learning occurs in a series of learning events. Each learning event must be accomplished before the next in order for learning to take place:

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.

50

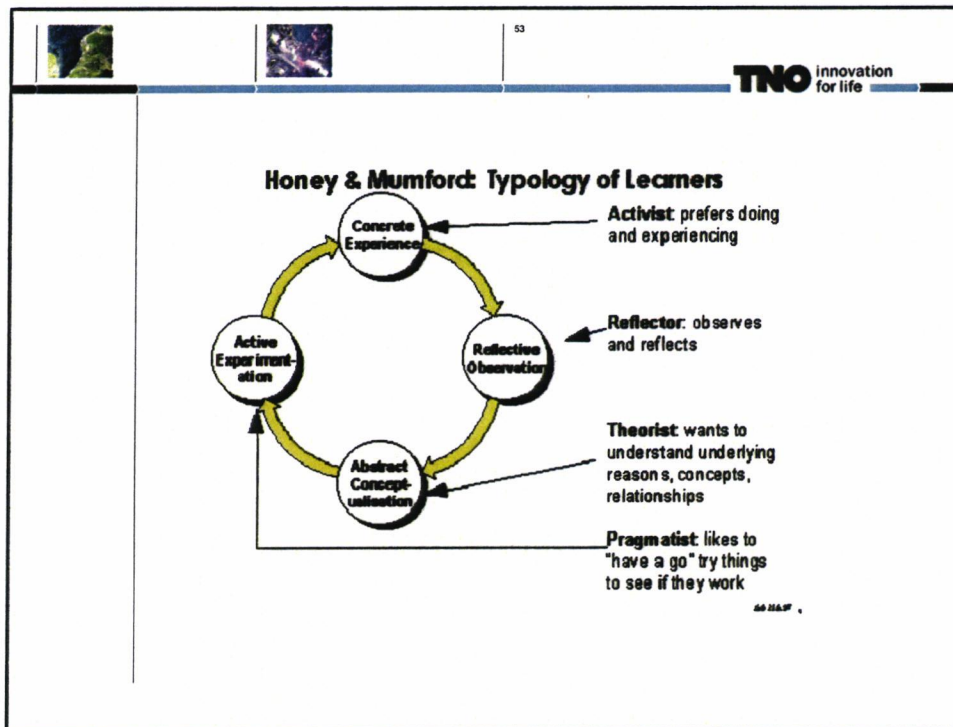
The Nine Events of Instruction

5. Providing learning guidance
6. Eliciting performance
7. Providing feedback
8. Assessing performance
9. Enhancing retention and transfer



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






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Teaching methods




Four criteria for selecting teaching methods

- 1) Effectiveness
- 2) Attainability
- 3) Variation
- 4) Target group

55


**“Nothing great was ever
achieved without enthusiasm”**

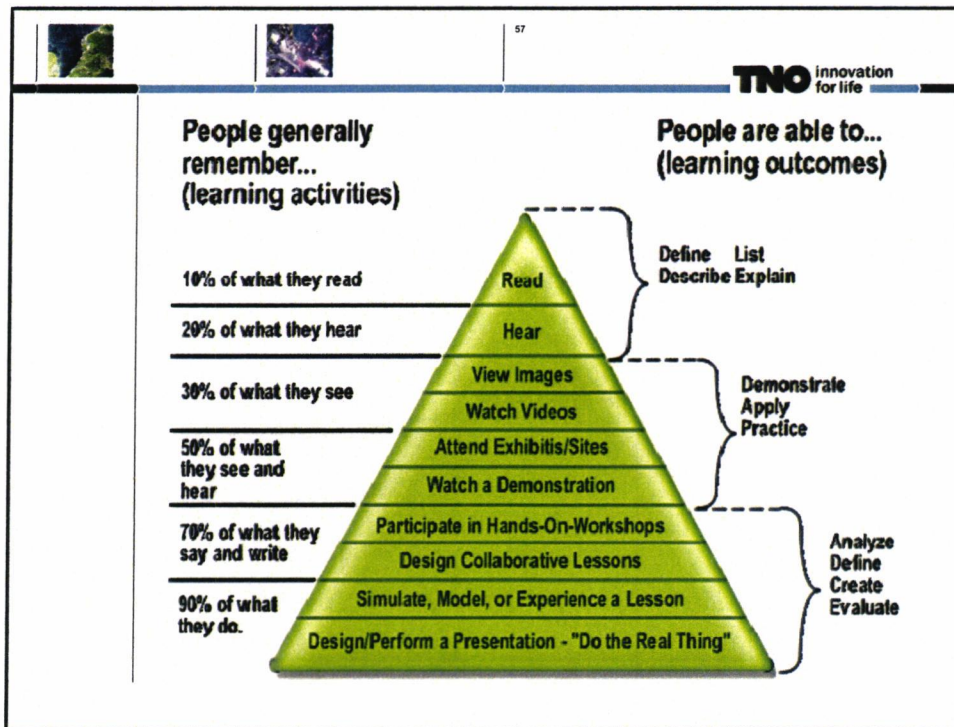
-Ralph Waldo Emerson

56

10 Methods of Delivery

- › Lecture
- › Structured discussion
- › Panel discussion
- › Reading
- › Case studies
- › Role playing
- › Skill application
- › Simulation
- › Games
- › Call to action
(issuing a challenge)







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Teaching Aids

Good teaching aids can function as:

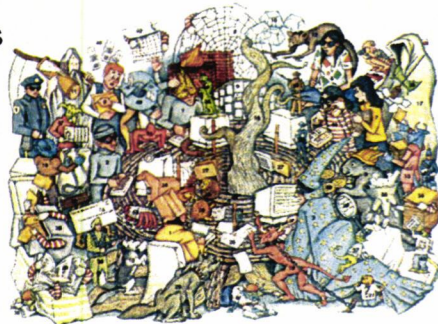
- › Support
- › Add information
- › Add variety



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Audio & Visual Tools

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



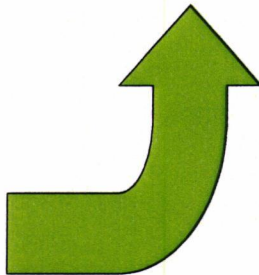
60

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Visual Aids

200%

Improve learning







Source: Studies at Harvard & Columbia

61

An accident in the USA


› CSB safety [video](#) on the 2009 explosion at NDK Crystal in Belvidere, Illinois, which fatally injured a truck driver at a nearby gas station






62

Visual Aids

Improve Retention **38%**






Source: Studies at Harvard & Columbia




63

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.

64




› END OF SECTION 3

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Section 4 - designing a short training session

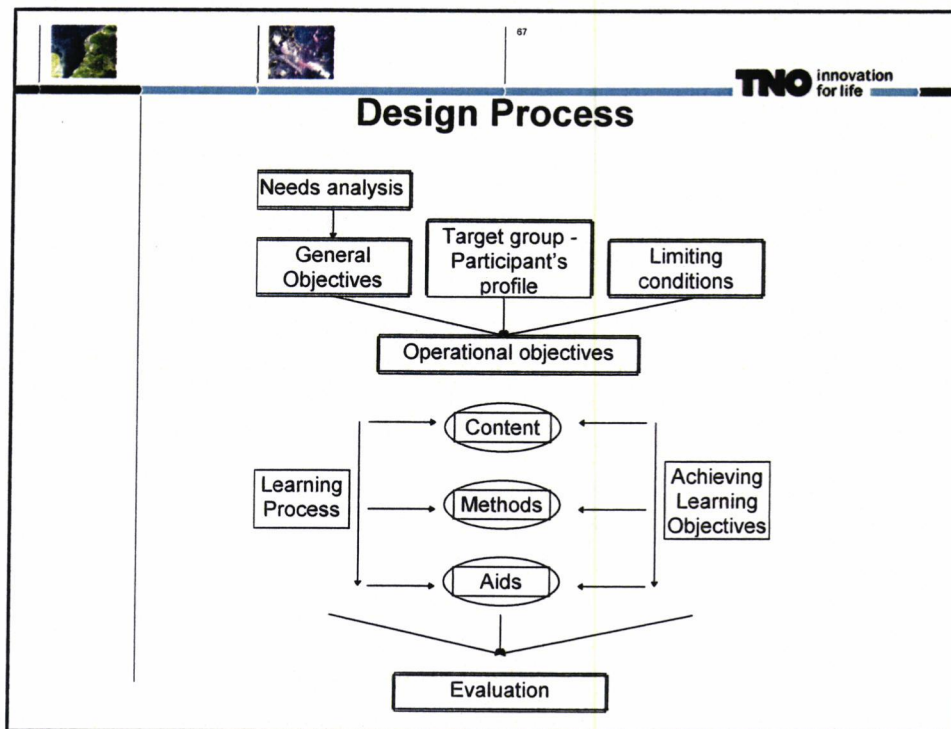
Learning Objectives:

- › Formulate operational objectives from general objectives
- › Produce a design for a course
- › Sequence contents within a design

66

Operational objectives are ...

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





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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



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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.



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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.



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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.



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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.

73

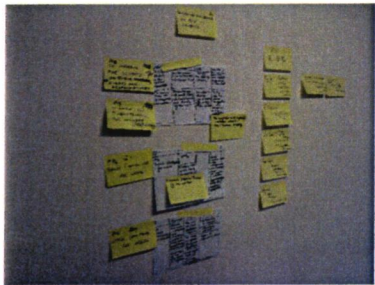
Time



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.


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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








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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.



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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)





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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



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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.

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5. Time estimate per teaching method

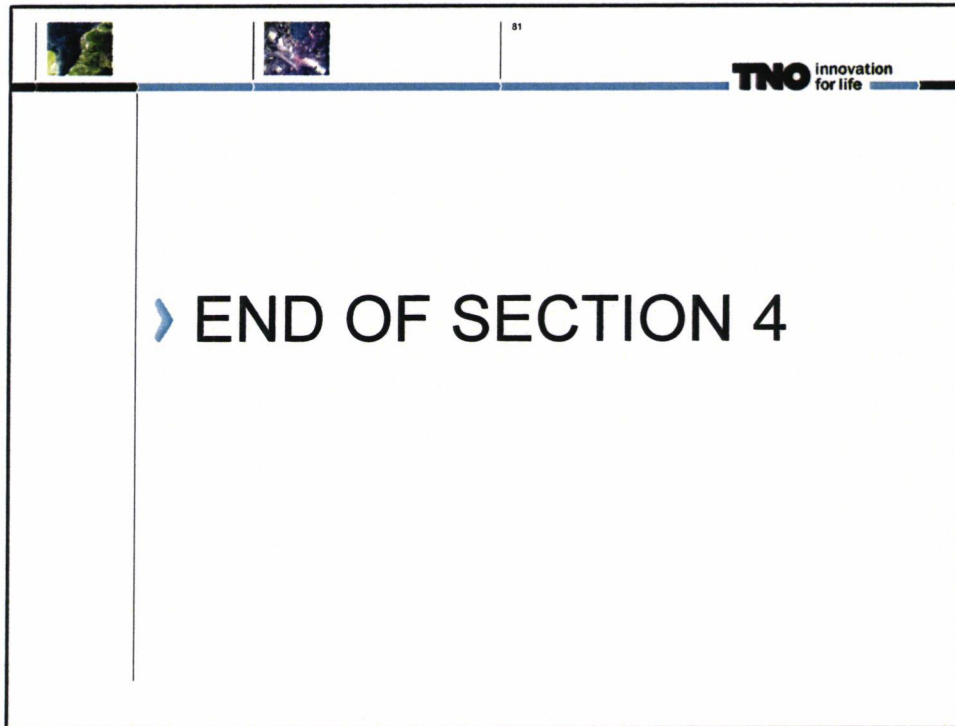
The 'duration' of a teaching method is influenced and determined by:

- › the complexity of the assignment.
- › quality of the trainer
- › group size

80

6. Fixed programme components

- › Make a blueprint to the fixed programme components
 - Introduction
 - Coffee
 - Lunch
 - Evaluation
 -

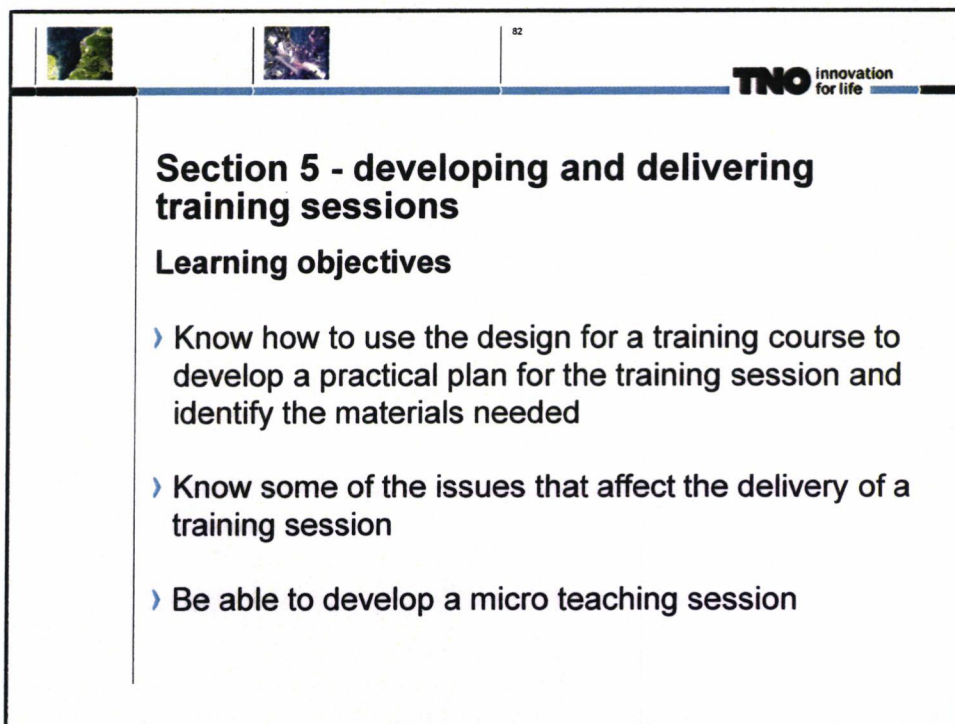


Slide 81 features a header with two small images (a green landscape and a blue abstract pattern) on the left, a small number '81' in the center, and the TNO logo with the tagline 'innovation for life' on the right. The main content area contains the text '› END OF SECTION 4' in a large, bold, black font.

81

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› END OF SECTION 4



Slide 82 features a header with two small images (a green landscape and a blue abstract pattern) on the left, a small number '82' in the center, and the TNO logo with the tagline 'innovation for life' on the right. The main content area contains the text 'Section 5 - developing and delivering training sessions' in bold, followed by 'Learning objectives' in bold. Below this, there are three bullet points, each starting with a blue arrowhead.



82


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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




83



Refining the operational objectives




- › Think about the operational objectives and test
- › A useful method for testing operational objectives is to use the acronym SMART



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Refining the operational objectives

- › **Specific:** have you distinguished between knowledge, skills and attitude?
- › **Measurable:** how will you know if the objective is achieved?
- › **Attainable:** do the activities really correspond to the tasks the participants are responsible for in their job?
- › **Reasonable:** is it reasonable to expect the participants to achieve the objectives within this course?
- › **Time based:** How long is the period in which the participants have to attain the objectives?

85




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 !!!!


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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.






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Developing your micro teaching session

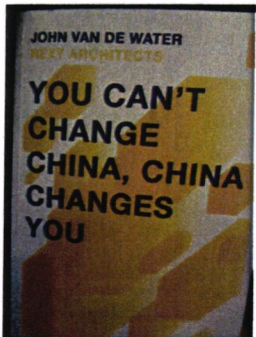
- › 15 minutes
- › Choose the topic carefully
- › You obtain the maximum benefit, you should try and select one operational objective so that you can really go through the whole process and test yourself in each aspect of design, development and delivery.



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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





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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*




90

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The chart displays the lineage of Ming emperors, starting with Hongwu (Zhu Yuanzhang, 1368-98) and branching into various dynasties including Jianwen, Yongle, Hongxi, Xuande, Jingtai, and others. The chart is presented in a traditional Chinese style with a dark background and gold text.




Die jaarstallen bij de keizers zijn die waarin hun imperiale geboortedag in oktober is gevallen.
The years given for the Emperors are the years of their inauguration and of their death.

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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



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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.



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› END OF SECTION 5

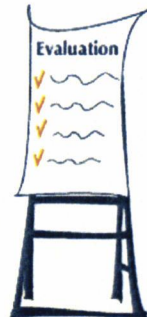



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Section 6 - Evaluating a training course or session
Learning Objectives

- › 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






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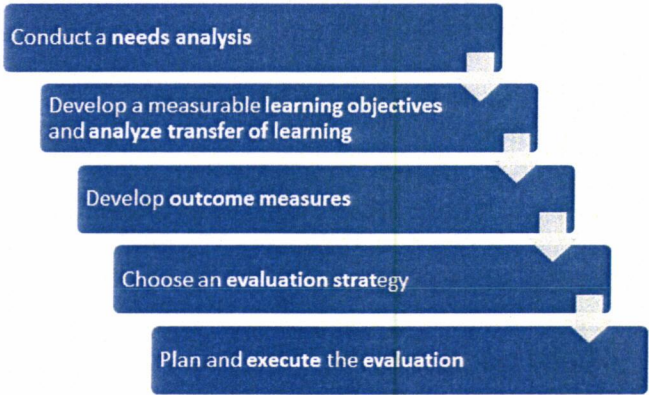
Evaluating a training

- › 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






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Overview of the evaluation process






```
graph TD; A[Conduct a needs analysis] --> B[Develop a measurable learning objectives and analyze transfer of learning]; B --> C[Develop outcome measures]; C --> D[Choose an evaluation strategy]; D --> E[Plan and execute the evaluation];
```

- 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**

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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.

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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






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Product evaluation

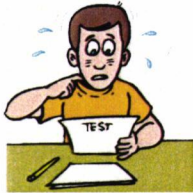
- › verbal test
- › written test
- › observation of role plays
- › observation in the work place


true, false
or give up

100

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.






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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




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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.




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

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



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

› END OF SESSION 6


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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

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

<p>PLEASE LEAVE HERE BLANK</p>	<p>PERSONAL INFORMATION: (name, surname, married/living together, kid(s), education, work place etc.)</p>
<p>THINGS THAT YOU LIKE TO DO</p>	
<p>THINGS THAT YOU DISLIKE</p>	<p>WHAT WOULD YOU DO IF YOU HAVE 20.000.000 YUAN?</p> 