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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 workbook 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 ESPRIT 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.



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:

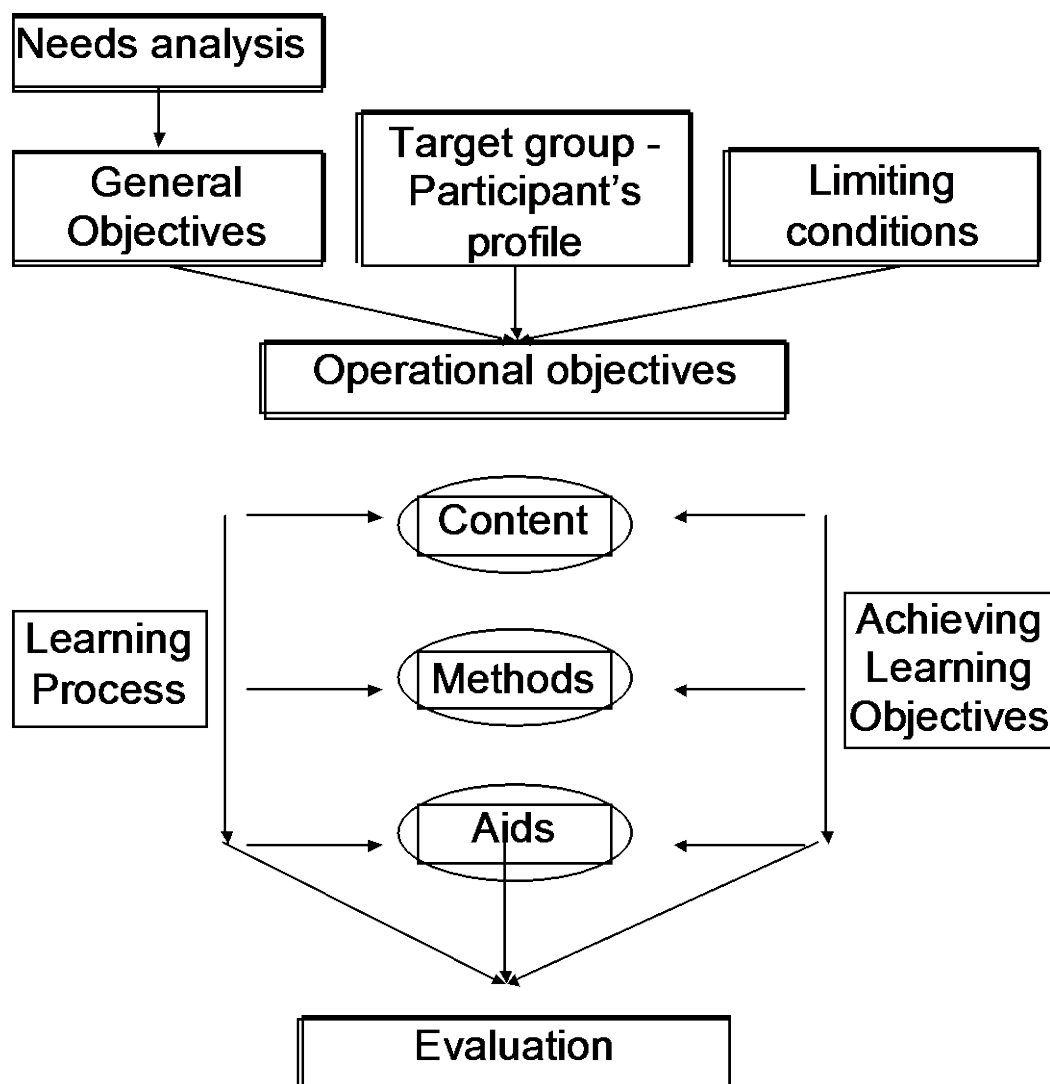
- *wash and dress a small wound,*
- *administer resuscitation following a heart attack*

A factory worker might have the same 2 operational objectives plus 2 that 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
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Using the examples of the knowledge elements identified in the feedback to the first task in Activity 7, arrange the 6 elements of Main Task A 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 desktop 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
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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?

--



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
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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 sessions 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
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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
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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
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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 ESPRIT 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 ESPrIT?

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) A company decides to provide computers to its workforce most cheaply by assembling these from their component parts. This assembling will be done by machine operators of the same company who would otherwise be made redundant. How can the content of such a training be sequenced?

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 workbook 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	



Topic	In or out
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
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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?



Objective	Number of participants	Teaching method	Teaching aids	Can this be completed in 15 minutes?

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

You should now prepare your micro teaching session.

Implementation

By the time you complete ESPrIT, 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 whole thing in the first example bores the manager 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
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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 workbook 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 that 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. Microteaching 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
- Microteaching 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. Microteaching 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 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 that 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
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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

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
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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 ESPrIT. 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 ESPrIT course. Although you will be delivering a face-to-face training session as the final assignment for ESPrIT, 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.