Module 4 Learning Resources

Unit 4.1 Use of learning/instructional aids

Contents

About this unit

Overview

Welcome to the first unit in the Learning Resources module.

This unit focuses on learning/instructional aids—what they are, how and why we use them, the different kinds of aids available, and how to select the right learning/instructional aid for your purpose.

The unit comprises four (4) sections:

- Section 1 provides an overview of the learning process and how learning/instructional aids fit into that process.
- Section 2 looks at the different kinds of aids and their uses.
- Section 3 concerns choosing the right learning/instructional aid.
- Section 4 provides a practical guide to using different aids.

How to use this manual

Throughout this unit are various activities and exercises, in addition to three assignments. The activities and exercises are not part of your final assessment, but they will help you to apply what you are learning and to check your progress.

You can check your responses to the activities and exercises against the response guidelines provided at the end of the unit.

The unit includes two assignments that you must complete and submit to your tutor.

Your assessment for these assignments will form the basis for satisfactory completion of this unit.

How you'll be assessed

You'll be assessed on three assignments based on competency. Your assessment will be graded as either 'passed' or 'incomplete'. The assignments will require research and will be presented in the form of written reports (and samples of aids prepared by you). Contact your tutor regarding the time allowed to complete and submit these assignments.

Finding your way

Throughout the unit you will see symbols (or 'icons') in the left-hand margin of some pages. These symbols will help to guide you through the text.

Read

Activity (self-evaluation questions/exercises)

Important—take note!

Assessment task

Listen to an audio-tape

Watch a video-tape

Competency

The competency for each unit is expressed as a number of learning outcomes and assessment criteria. Assessment criteria specify what you must be able to do to demonstrate that you have gained the knowledge and skills needed to achieve each learning outcome.

Each unit has its own specified learning outcomes. Recognition of prior learning (previous experience or training that you may have already completed) is encouraged; so if you feel confident that you can satisfy the requirements listed below, you may be able to take the assessments without studying the unit.

Can you:

- explain the value of using learning/instructional aids to motivate students and facilitate learning
- identify the range of learning/instructional aids that can be used in technical and vocational training
- select appropriate aids for specific learning activities?

If so, discuss taking the assessment with your tutor.

Other resources

You may need to explore other learning resources in addition to the information provided in this unit. Important sources of information include:

- local libraries and resource centres
- individuals, the workplace, other training institutions, community and professional organisations.

Section 1

Introduction

What is learning?

There are many definitions of learning, but probably the most appropriate in the context of this unit is the simple dictionary definition that describes learning as 'the act or process of gaining knowledge or skill'.

We learn basic skills—walking, talking, reading, writing—by watching, listening, copying, experiencing, and doing things ourselves. Gradually we develop more complex skills using the same techniques, building on the knowledge and skills we already have and using them to access further knowledge and skills.
Words are only part of the learning experience—we learn by listening, watching and doing. Listening and reading are passive activities that can become meaningless if you can't apply or see the information being used in a practical way.

This unit examines tools that can enhance or assist the teaching and learning processes by providing alternative or better ways to of communicate and demonstrate knowledge and skills.

Concrete and abstract concepts

Some concepts are easy to communicate—they can be easily observed, demonstrated or proved. Other concepts are less obvious and may need to be taught by illustration and discussion.

A concrete concept is easy to describe and to understand: big, small; light, dark; fast, slow; more, less; loud, soft; black, white. It can be seen, heard, felt and easily proved. On the other hand, an abstract concept may require a combination of our senses, our experience and our reasoning to understand fully how something might or should look or operate. Time is a good example of an abstract concept—you can't see, hear, touch, feel or smell time, yet most of us have no

problem in estimating it, measuring it, and communicating about it with others.

When we are very young we simply relate time to day or night or regular experiences such as meals or routines (breakfast, lunch, dinner, bedtime). Gradually yesterday, tomorrow, seconds, minutes, hours, weeks, months and years become familiar concepts. We learn to apply our senses, experience and reasoning to give time a common meaning.

Understanding and applying concepts are part of the learning process.

Motivation and effective learning

We all learn better if the information is presented in an attractive form, if it is easy to follow, holds our interest and gives us some active involvement in the learning exercise.

Being able to apply what we have learned or see it in practice gives meaning to the information and a reason or motivation for learning. The rewards are gaining new knowledge or a new skill and being able to apply that knowledge or skill.

Using tools such as learning/instructional aids in your teaching can make words come alive for learners and improve their motivation to learn.

Matching learning needs and strategies of instruction

To be effective, instruction strategies must suit learning needs. These needs are a combination of the desired learning outcomes of the course and the needs of the learners themselves.

Different people learn best in different ways. It's generally recognised that there are four primary types of learners:

- those who need a reason—a personal insight to motivate their learning
- those who want to understand everything—all the facts and all the possibilities
- those who need active involvement—to learn how things work rather than why
- those who like to discover things for themselves—both the "why" and the "how"

You need to be aware of these learner types and consider them when you choose your instructional strategy. Will the strategy accommodate the different needs of the group; is it flexible enough to work with all types of learners?

The best instructional strategy combines elements of presentation, tutoring, discussion and discovery-learning, giving all learners in the group equal opportunity to learn in the way that suits them best.

The topic, the type of content, the learning environment, the resources available and the size and skill level of the group will also influence the instruction method you choose. A topic such as mathematics or electronics may require familiarity with the theory before you look at practical applications. A very practical topic (e.g. a production process or physical activity) needs an instruction strategy that allows learners to see and, if possible, be actively involved during the learning exercise.

You may need to use an instruction strategy that overcomes the limitations in the learning environment or the resources (space, materials, equipment, teacher-student separation). Similarly, you may need to adapt your methods to cope with a larger group than usual, or simplify content for a less skilled group.

The instruction strategy you select must be appropriate for what, where and who you are teaching.

Communication and Learning

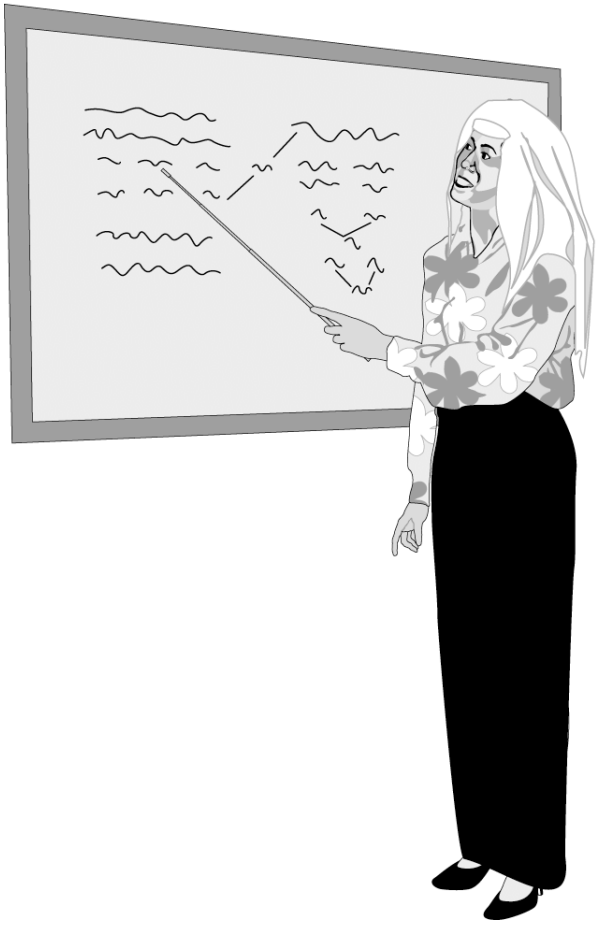
Communication, is what characterises the interaction between instructors and learners. Communication is essentially a process in which persons exchange information and ideas, and express feelings and attitudes. In the classroom, for example, this interaction involves the instructor and the learners in activities such as lectures, discussions, and question-and-answer. Besides the instructor, other sources for the learner are textbooks, videos, audiotapes, computer diskettes, and other media.

If the learner is to acquire the desired knowledge and skills this communication process has to be effective. It must be designed and carried out in ways that match the needs, abilities, circumstances and environment of the learner. It should also suit the content and the method of instruction selected for the subject. The meaning intended by the source must be clear to the learner and the messages must be easily and equally accessible to all the learners.

What are learning/instructional aids?

Learning/instructional aids can be anything you use to illustrate, explain or communicate information to your students—print materials, pictures, diagrams, charts, maps, transparencies, slides, television, radio, video or audio tapes, models or realia (real objects).

Aids can be passive or active. Passive aids such as charts or diagrams are simply presented to the learners. Active aids, such as video tapes or working models, can involve movement, animation, or even learner interaction. You can make a passive instructional aid more interesting (and effective) by introducing other elements—adding to a transparency during the presentation, inviting learners to add or remove overlays on diagrams or point out features while they are discussing them.



Aids can vary in sophistication from simple charts or drawings to complex computer simulations. The most effective aids are usually:

- easy to produce and use
- easy to understand
- relevant to the subject and the learner group
- visible/accessible to everyone in the student group

Why and how aids are used

Appropriate learning/instructional aids can help to explain abstract, complex or unfamiliar concepts, add interest to the topic, stimulate discussion and creative thinking, and provide 'hands-on' experience for learners.

Some learning/instructional aids are used to overcome limitations in the teaching/learning environment. Videos, computer programs and simulators can give learners the opportunity to experience places and activities that are hard to duplicate in the classroom.

Aids can also be useful for learners with learning difficulties or poor language skills and in learning environments where standard forms of communication between teacher and learner need to be enhanced or adapted.

In summary, learning/instructional aids are used for:

- explanation
- illumination
- illustration
- motivation
- communication
- practical experience

Throughout this unit we use the term learning/instructional aid to refer to a resource used by teachers to create more effective learning environments for students. In other educational material the term media may be used instead of learning/instructional aids. As you work through this unit you will learn that learning/instructional aids can take many forms; they can incorporate various media, or 'means' to produce an effect or outcome.

By using the term learning/instructional aids we are clearly putting the focus on resources that have been specifically designed and developed to result in the best learning outcomes for students: to motivate students; to free the teacher for more personal interaction, and to provide a higher quality of education in order to 'aid instruction' and enhance learning.

Summary

- Learning is a process of gaining knowledge and skills. We learn by listening, watching, and doing and by applying the basic concepts we've learned.
- We learn more effectively if we are motivated—if we can see theory being put into practice or apply the theory ourselves.
- Instruction methods/strategies need to match learning needs—learning styles, skill levels, the learning environment and the topic.
- Learning/instructional aids are an effective teaching tool, particularly if they are active or interactive.
- Learning/instructional aids can be used to explain concepts, add interest, overcome limitations in the learning environment, and assist learners with learning difficulties.

Activity

1. Describe what you think learning is and give an example.
2. Give three examples each of concrete and abstract concepts.
3. What do you think motivates learners to learn?
4. Why is it important to match the instruction method to the learning needs?
5. What are learning/instructional aids? Give some examples from your own experience as a learner.
6. Give four examples of situations where learning/instructional aids might be useful.

Guidelines to activity responses are provided at the end of this unit.

Section 2

Kinds of learning/ instructional aids

Categories of aids

Learning/instructional aids generally fall into one of five broad categories:

- visual
- print
- realia
- audio
- electronic

Some learning/instructional aids, such as tape-slide sequences, simulators and live work, combine a variety of formats and fit into more than one category. The most commonly used aids are visual and act as support to oral and print-based communication.

Individual aids and their uses

In Unit 3.1, Instructional Strategies, we discussed different types of media and identified their advantages and disadvantages. This section looks at some of these most commonly used media or training aids and then identifies their most appropriate use. The training aids we will look at are:

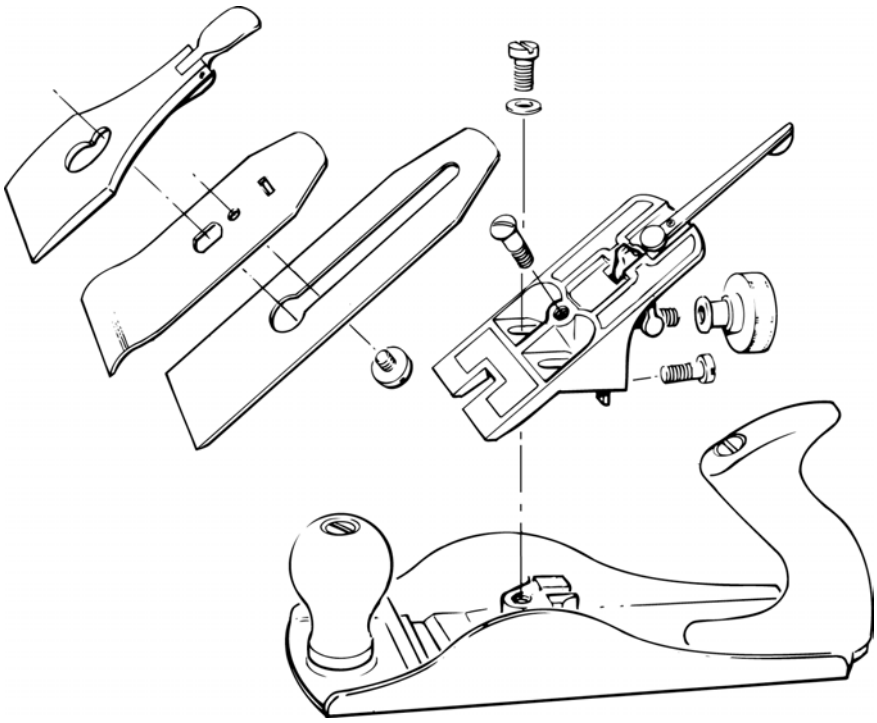
- diagrams
- charts
- print materials
- transparency projection (overhead and slide)
- realia
- audio tapes and CDs
- television and video tape

- computer screen projection
- computer assisted learning
- models
- simulators

The advantages and/or disadvantages of a particular learning/instructional aid can vary depending on how, why and where you want to use the aid.

The most practical aids are those that you have easy access to or can easily produce, are easy to set up and use, and are easily transported if necessary.

Diagrams



Diagrams can range from simple black-and-white, hand-drawn images on chalk boards, white boards or cartridge paper or card, to full-colour, computer-generated drawings with transparent overlays.

They can be used to:

- illustrate and simplify explanations
- show the relationships of different components
- show processes that can't be observed

- summarise information
- assist learners who have poor language skills.

Charts

Like diagrams, charts can be hand-drawn, copied or produced by computer, and can be as simple or as complex as required. They include statistical charts, process charts, organisational or structure charts, and text charts.

Charts can be used to:

- summarise key points
- highlight differences and similarities
- make comparisons
- show progression
- provide concise visual information.

Charts can be presented during the lesson or training session, or they can be displayed as a reminder or reference throughout a unit or course.

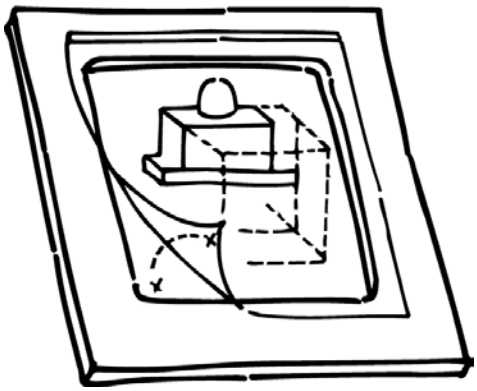
Print materials

Print materials include a broad range of printed information and publications; for example, books, journals, magazines, newspapers, industry and business publications, tables, brochures and posters.

Print materials can be used to provide:

- a focal point for a lesson and/or a reminder (particularly posters)
- an additional reference or resource
- examples to stimulate discussion
- factual information to support and illustrate a topic.
- unit/topic outlines

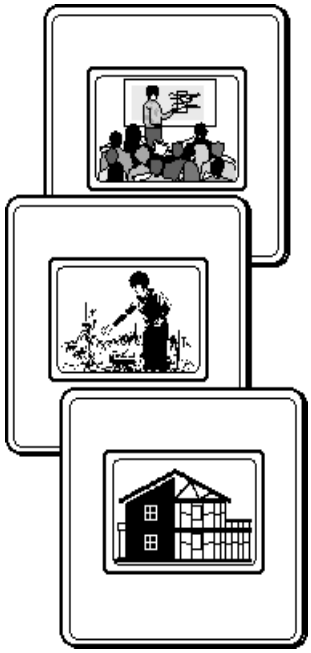
Transparency projection: Overhead transparencies



Overhead transparencies can be used in a variety of ways:

- as a prompt for both you and the learner group
- to summarise key points in a discussion
- to illustrate a point or a topic
- to enlarge and display a small image so the whole group can see e.g. a diagram or graph

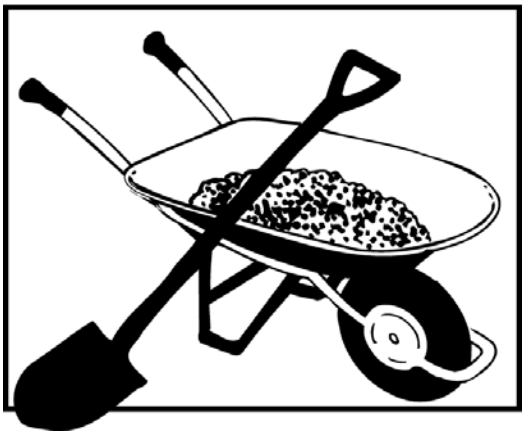
Transparency projection: 35 mm slides



35 mm slides are ideal for displaying graphic material. They can be used to:

- illustrate a topic through a series of visual images
- enlarge small objects and show fine detail
- provide different images for comparison and discussion
- show the progression of physical changes
- present images from other sources (e.g. books, photographs, computer images).

Realia



Realia, or real objects, can include items such as biological or geological specimens, samples, artifacts and similar objects, and are used:

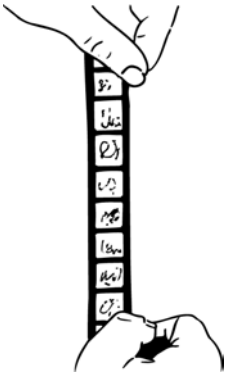
- for illustration of a topic or function
- for practical demonstrations
- to provide a 'living' example
- to give learners a 'hands-on' experience.

Audio tapes and CDs

Audio tapes and CDs can be used to support written or visual material and vice versa. They can be used to:

- enhance text or transparency projection
- provide variety in delivery
- demonstrate oral language elements
- provide sound effects
- motivate and stimulate interest.

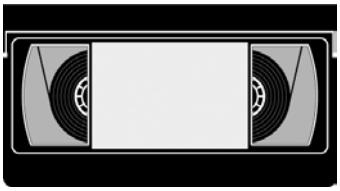
Motion picture films



Fiction and documentary motion picture films can be used to:

- illustrate concepts and activities
- support print-based material
- provide an alternative form of presentation
- stimulate discussion and creative thinking.

Television, video tapes



Television and video tapes are more frequently used than motion picture films today. Many television stations regularly broadcast educational programs and offer video tape copies of these programs for sale.

Video equipment has become smaller, lighter and easier to use. Many video-cassette recorders (VCRs) and players have features that allow you to 'freeze' individual scenes, show action in slow motion or speed up very lengthy processes. There are now compact digital models that have even more special features and can also transfer images directly to a computer. A video-projector can be used to overcome the problem of screen size for larger groups.

There are many professionally produced video programs available covering a wide range of topics. Alternatively, using 'home video'

equipment, you can produce your own tapes. Learners can be involved too—preparing material for programs and producing video tapes of practical exercises.

Video tapes can be used to:

- demonstrate or illustrate functions or concepts
- support print-based material
- show fine detail or complex movement
- record and review activities such as field trips, experiments and discussions
- provide interactive opportunities and immediate feedback for learners.
- classroom productions may seem too amateurish
- video planning and production takes time and patience.

Computer screen projection

Computer screen projection allows you to store visual aids such as charts, diagrams and graphs as well as video footage, sound and animation on a computer and present them using an overhead projector. A computer screen projection unit (also called an LCD panel) links the computer to the projector.

Using the computer, you can change images, create new ones and add or remove information during the presentation. If the room does not have its own computer connected to the unit, you can use a laptop computer with special connecting leads.

Computer screen projection can be used to:

- present a combination of text, graphics, live action and sound
- present small-screen images to a large group
- demonstrate computer software and programs to a group
- show small or complex images enlarged or in detail.

Computer assisted learning

Computer technology encompasses computer software programs and applications that are used in teaching. These may be available on disk or CD-ROM (a compact disc with read-only memory used with computers with a CD drive), or in on-line format (accessible through a computer system or network).

There is a wide range of such programs available commercially, some of which can be adapted to the specific needs of the teacher and learners. Some institutions and teachers develop their own software applications or include on-line delivery as part of their course offerings.

These types of aids offer varying levels of 'interactivity' for learners. That is, some require only basic computer navigation skills and yes/no responses using the keyboard, while others encourage the learner to think analytically and creatively and to select their own path through the learning material.

The Internet can provide computer access to other computers anywhere in the world. Using the Internet, learners can 'visit' remote places (galleries, museums, research centres, industrial plants) that have set up displays, or 'sites', on computer networks. Learners can 'talk' with other groups of learners using the keyboard and computer screen ('chat rooms') or two-way computer- video links (computer-based videoconferencing).

On-line delivery—courses and learning materials made available on computer networks—can give learners a broader range of options and better access to resources than some other forms of distance education.

Computer technology can:

- provide an alternative to print-based material
- provide an interactive learning activity
- be used to demonstrate or simulate processes
- be used for self-assessment
- be adapted for learners with disabilities.

Models

Models can range from simple cardboard, wood and paper creations to sophisticated working models with moving parts powered by hand or by mains electricity, batteries, solar power or even steam. They can be made to scale, larger or smaller than the real thing— a tiny component enlarged fifty times or a large piece of machinery reduced to a tenth of its real size.

A simple model might show only the outside appearance of the real thing, while a cut-away model will allow you to remove outer sections to show what's inside. Some models are made up of different parts that can be assembled and dismantled to demonstrate how the real thing is made or operates.

Models can be used to:

- demonstrate how something works
- show what can't normally be seen
- test a theory or concept
- provide practical experience.

Simulators

Simulators and simulations may be used when teachers or instructors do not have access to an actual workplace, or the work environment cannot be duplicated in the teaching institution because of restrictions such as limited space, lack of equipment or appropriate technology, or safety.

Examples of simulations range from simple role playing exercises to kitchens, production lines, aircraft cockpits, operator consoles and workstations. Simulators can be linked to computers and software that simulate the workplace environment, exposing the learners to a range of probable situations and problems.

Simulators can be used to:

- provide a realistic substitute for a 'real' environment
- offer a safe learning environment
- provide practical learning experience
- assess learners' skills and experience.

'Live' work (direct experience) describes the use of an actual task or process in the workplace to instruct learners in the use of equipment, processes and procedures and to test their skills. It may represent an extension of simulation; for example, where a college sets up its own restaurant or another service that is staffed or operated by learners under supervision.

Summary

- Learning/instructional aids can be visual, print-based, audio-based, realia or electronic.
- The most practical aids are those that are easy for you to access, set up, use and transport.
- All aids have particular advantages and disadvantages depending on how, why, where and when you want to use them.
- Major advantages are accessibility, simplicity, cost, adaptability and interactivity.
- Major disadvantages are complexity, limitations on group size, equipment and training requirements and cost.

Activity

Give an example of an aid from each category: visual, print, realia, audio, electronic.

Describe in what situation and why you would use each of these aids.

Which aids would be best suited to demonstrating a process to a large group?

Which aids would be the simplest to produce and use?

Which aids would require special equipment or training to produce or use?

Which aids would you prefer to use and why?

Guidelines to exercise responses are provided at the end of this unit.

Section 3

Selecting learning/ instructional aids

This section looks at how to select the appropriate learning/instructional aid for your purpose—the options you might have, using selection criteria, matching aids to the learning styles/activities of the group, and sequencing content material. You should be aware that, in some cases, a particular aid may be essential to the teaching task (e.g. computer technology, simulators) and not optional.

Choosing the appropriate aids

Choosing the appropriate learning/instructional aid for your purpose needs careful consideration. It's not a matter of deciding to use a particular aid and building the lesson around it—the aid supports the lesson, it's not the focal point of it. The most appropriate learning/instructional aid is the one that:

- suits the topic and the teaching/learning style
- best meets the learning objectives
- you feel comfortable and confident using.

Before you select a specific learning/instructional aid, there are some general considerations that will help you narrow the field.

Considering the options

The first step is to consider your options—what aids are available to you, which ones are you most comfortable using, and what are the practical considerations.

What's available?

You may have access to the full range of aids or only a limited selection (e.g. no VCR, computer projection unit or suitable computer hardware or software). Find out what's available and check that all the components you need are available and in working order.

If you've never used a particular learning/instructional aid before, you may need training or expert help. Once again, find out what's available if you need help or instruction. Faulty equipment or an inexperienced user can break the flow of a lesson, disrupt learners' concentration, and defeat the purpose of using the aid.

What suits you?

Choosing a learning/instructional aid is also a matter of confidence, experience and personal preference. You might not feel confident using some technologies or there might be insufficient training or support available for using an unfamiliar aid. In some situations and with some groups you might simply prefer not to use a particular type of aid (e.g. slide or video require a darkened room and therefore loss of eye contact with the group).

What's practical?

Along with what is and isn't available is the question of what's practical. Transporting material or equipment, finding somewhere to display charts and diagrams, an accessible power source, and the ability to darken a room are some basic considerations that may limit your choice of learning/instructional aids. If an aid is difficult to transport, set up or use the problems may outweigh the benefits.

Using selection criteria

Once you've made your decision to use learning/instructional aids you can look more closely at specific aids you might use. Applying

some basic selection criteria will help you choose a learning/instructional aid that will satisfy both your requirements and the learners' needs.

Basic selection criteria include:

- learning activity
- objectives
- type of information
- target audience/learner group
- group size
- facilities
- resources
- environment
- cost
- time available for preparation and presentation
- practicality

These criteria are treated in more detail later in this section, but two of them are of particular importance – learning activities and objectives.

Matching aids with learning activities

An important consideration is how learning/instructional aids complement the learning activity. Charts and diagrams may be useful for explaining theoretical relationships between concepts or components, but a video tape or working model will be far more effective in demonstrating how something actually works. Slides and overhead projection can provide still images that allow learners to focus on detail, while simulators provide an interactive learning situation that stimulates a number of senses.

Aids can be used in different ways according to the instruction method and the learning styles of the group. An aid can be used to communicate information, provide an opportunity for questions to be asked and answered, stimulate discussion and encourage learner participation and self-discovery.

Providing print materials in addition to visual aids will satisfy some learners' need for detailed information, while introducing some interactivity to a presentation (inviting a learner to label an

overhead transparency or operate a working model) will give others the opportunity to do things for themselves.

What are your objectives?

When you select a learning/instructional aid, one of your first priorities is to understand your objectives—what is the main purpose of using the aid. Your objectives will usually fall into one or more of the following categories:

- information
- explanation
- illumination
- motivation
- interactivity
- self-assessment

Information

You may select a learning/instructional aid as a means to convey a specific type of information. Detailed information such as tables, mathematical data and reference material may be provided in print form. Some information needs to be displayed visually for accurate interpretation and to allow the teacher to point out specific details or aspects for the group. Audio tapes provide sounds that cannot be adequately described in print. Realia can inform senses such as hearing, smell, taste and touch. Electronic aids can be used to access and process information.

Explanation

Concepts can sometimes be difficult to explain without practical demonstration and visual support. Aids such as charts and diagrams can be used to explain relationships and processes. Video tape, computer programs and models can assist in explaining movement, effects, impacts and how things work generally.

Illumination

Learning/instructional aids can be particularly effective in demonstrating and clarifying abstract or difficult concepts and making theory come to life. A series of charts or overhead transparencies with overlays can be used to illustrate how sequential events develop, while visual aids such as slides, video tapes and computer projection can give real meaning to concepts such as colour, shape, size and motion.

Motivation

Learning/instructional aids, particularly active and interactive aids, can be effective in motivating learners and stimulating interest and discussion. An aid such as a diagram or chart that makes everything 'fall into place' for a learner provides a reward for the effort and encourages confidence in personal ability. Being able to see and apply a theory in practice gives the learner a reason for learning a skill and an interest in developing that skill further.

Interactivity

Interactivity is essential to learning new skills and enhancing existing ones. It may be important that a learner not only can see what something looks like, but also knows how it sounds, moves, feels or even tastes and smells. A working model, computer program or simulator can require complex actions and responses that encourage the learner to draw on and experiment with a combination of skills. Interactivity gives the learner the opportunity to test concepts and skills with instant feedback.

Self-assessment

Self-assessment is an important contribution both to motivation and to learners' understanding of their own learning preferences and styles. Aids such as video tapes of learners performing tasks, interactive computer programs and learner-produced aids give the learner the opportunity to judge their own performance, assess their own weaknesses and gain satisfaction from their successes. For example, a video of a hospitality trainee interacting with a 'client' can allow the trainees to see the image they are projecting.

Selection criteria

Once you have identified your objectives and the type of aids that you are interested in using, you can continue to apply the selection criteria to choosing the most appropriate aid for the task. These criteria include:

- learning activity
- objectives
- type of information
- target audience
- group size
- facilities
- resources
- environment
- cost
- time available for preparation and presentation
- practicality

Learning activity

The learning activity is an important indicator of the type of aid that will be most appropriate. As discussed before, some aids are unsuited to group activities, while others may interrupt a learning activity rather than complement it. Some learning activities need active aids that illustrate movement or processes, others need

passive aids that can remain on view for learners to refer to. Try to use aids in a way that complements the learning activity and satisfies the needs of the learners.

Ask yourself:

- What sort of learning activity is it?
- What is the main objective of the activity?
- How can I use this aid in the most effective way?
- Will it satisfy the needs of the learners?

Objectives

When you choose a specific aid you should consider your original objectives and compare the advantages and disadvantages of that particular aid with those of another. If you want to explain a process to learners with a low skill level, simple diagrams or transparencies might be more effective than a video tape intended for learners who already have a basic understanding of the process.

Ask yourself:

- What was the original objective?
- How will this aid help to achieve that objective?
- Have I taken into consideration the needs and skill level of the learners in meeting the objective?

Type of information

Some information is more suited to some aids than others. If you want to compare information on different charts or diagrams, it's easier to have them displayed hanging side-by-side than moving back and forth between different slides or overhead transparencies. It's better to provide detailed information in print form than to project it.

Video tapes, computer programmes and models are better at demonstrating movement than a series of still images. Realia may enable learners to use a combination of senses (sight, sound, smell, taste, touch) but may not allow them to see microscopic detail or internal workings.
Ask yourself:

- What sort of information do I want to present?
- Do I need colour, movement or sound?
- Do I want to magnify or reduce images?
- Do I need to be able to move backwards and forwards through the information, slow it down or pause it?
- Will I need to present this information or should the learners move through it themselves?

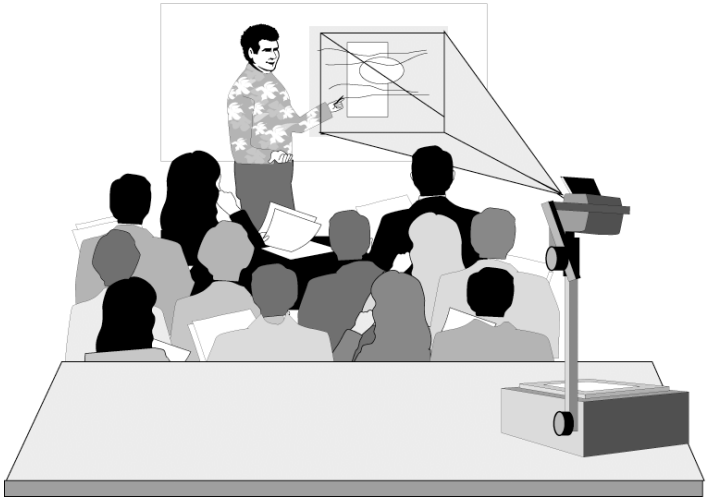
Target audience

Your target audience may determine not only the type of aid but how complex it is and what basic skills it requires for understanding. Learners with language difficulties may have problems with print-based materials or text information on complex diagrams and charts, or in fully understanding commentary or dialogue in motion picture films and video tapes. Similarly, some interactive computer technology or simulators may be too advanced for a group of learners without the necessary skills and training. No matter how good the learning/instructional aid, it won't be effective if the learner can't relate to it or understand what's being presented.

Ask yourself:

- Is this aid suitable for the skill level of the learning group?
- Is the level of presentation appropriate?
- Do any of the group have language or other learning difficulties?
- Can I adapt the aid to suit the group?

Group size



Group size is an important consideration in choosing a learning/instructional aid. Visual aids need to be large enough for the whole group to see—tiny print or small television and computer screens can be frustrating.

Interactive aids may prove difficult with large groups, particularly when not everyone can use them at once, and alternative activities may need to be provided during the session. Models and realia may need plenty of space around them to give everyone access, or extra time for everyone to examine them closely.

Computer technology, simulators and live work may need constant supervision, which may prove difficult even with a small group.

Ask yourself:

- Is this learning/instructional aid large enough to be seen by everyone in the group?
- Can it be enlarged if necessary?
- Will everyone in the group have the opportunity to examine/use the aid?
- Will I need to provide alternative activities for some group members while others view/use the aid?
- How much supervision does the aid require?

Facilities

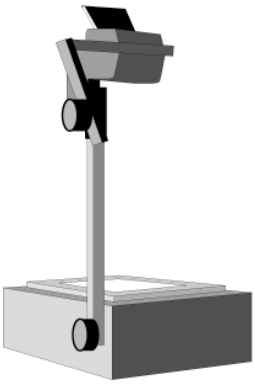
Room or teaching space size and availability, lighting, the means to darken an area, moveable seating and other furniture, wall space for displaying material, location and type of power sources and availability of computer cabling are all important considerations.

You should be aware not only of what facilities are available, but what facilities different learning/instructional aids might require and how this affects factors such as time, practicality and effectiveness.

Ask yourself:

- What sort of facilities does this learning/instructional aid require?
- Are those facilities readily available or do I have to make special arrangements?
- Are there simple ways of adapting facilities to make them suitable?

Resources



When you choose a learning/instructional aid you should ensure that you have access to all the appropriate resources—equipment, materials, skills and help if required.

Simple charts and diagrams can be prepared easily, but producing more sophisticated colour transparencies or overlays for overhead projection might need special photocopying resources. Slide, video

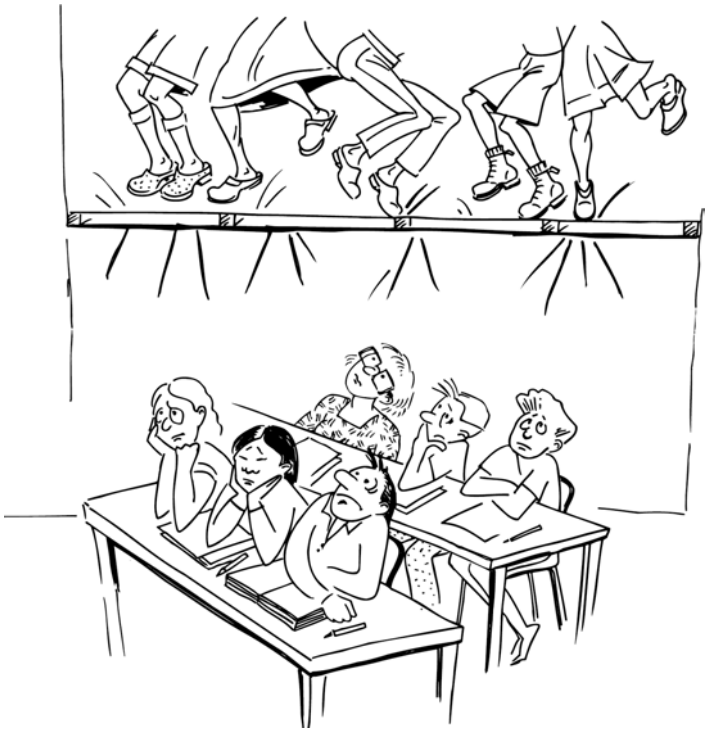
and computer presentations might stretch your own resources and you may need access to libraries and other sources of material.

Equipment such as projectors, VCRs, computers and simulators need to be in good working order and compatible with other equipment where necessary. You may need instruction in using an aid, assistance in setting up or technical help if something goes wrong.

Ask yourself:

- What basic resources do I need and are they readily available?
- What additional or alternative resources are available if I need or want them?
- Do I understand the equipment that I need and what training and assistance is available?

Environment



The environment you work in is important to both you and the learner—light, heat, noise and other intrusive factors can create problems.

Some learning/instructional aids, such as diagrams and charts, need plenty of light to be seen properly. Slides and motion picture films need darkness, and television and computer screens can be difficult to see from particular angles if light is reflected from them.

Some equipment can overheat and malfunction if room temperatures can't be controlled. A too hot or too cold environment can also distract learners. Noise is a major factor effecting concentration, particularly if it drowns out commentary or when the activity is particularly quiet.

Ask yourself:

- Will this aid work properly in this environment?
- Are there any light, temperature or noise problems that might affect using the aid successfully?
- Can I control or remedy any problems easily?
- Is there an alternative area I can use if problems arise?

Cost

Some learning/instructional aids cost very little to prepare (diagrams, simple charts, slides), while others (videos, computer technology and simulators) can be enormously expensive to produce or obtain. Your choice may be limited by available funds.

Aids that can be used more than once or adapted for other purposes are more cost-effective than those that have limited use. The value of the benefit to the learners is sometimes difficult to assess, but should be considered. Sometimes the cost can be justified if the aid will be used extensively or by other teachers/instructors.

Ask yourself:

- How much will it cost to produce/obtain this learning/instructional aid?
- Is the cost justified in terms of the benefit to learners?
- Can the aid be borrowed/hired from another source to reduce cost?
- Can I produce this aid more cheaply, or are there cheaper alternatives?
- Will I, or others, be able to use the aid for other sessions, groups or purposes?

Time available for preparation and presentation

Rushed or inadequate preparation can result in poor or ineffective presentation (e.g. overlays that don't match up), badly organised material (e.g. slides out of sequence), technical problems (e.g. missing or faulty cables) and loss of learner confidence and attention.

Similarly, rushed presentation can ruin the effectiveness of a learning/instructional aid. A group may become restless if you have to take time to set up equipment during the session, or you may have to rush through or skip material because you are running out of time.

When you choose a learning/instructional aid, ask yourself:

- How much time will this aid take to prepare/set up?
- Can I set up before the session?
- How much time will I need during the session?

- How much time will learners need (e.g. questions, instructions on using an aid, time for everyone to use equipment)?

When judging time, you should remember to consider:

- your familiarity with the aid
- the need for any training/instruction in its use
- the size and nature of the group and the type of activity.

Practicality

When you select a learning/instructional aid, you should weigh up the learning advantages of using a particular aid against the practicality of using it. Overall, practicality combines a number of the factors you have already considered—the availability of resources, facilities and time, the cost, and ease of transport, setting up and use.

You may think that an aid would be ideal for presenting a specific topic to a particular group, but if the effort of preparation, setting up and presenting is going to outweigh the effect, you may be better off using an alternative.

Ask yourself:

- What special arrangements will the aid require?
- Can the cost, time and effort be justified?
- Would another aid enable me to achieve the same objectives without taking up valuable time, energy and funds that could be used elsewhere?

Summary

- Choosing appropriate aids means considering your options carefully, using the selection criteria and matching the aid to the learning style/activity.
- Identify your objectives—information, explanation, illumination, motivation, interactivity, self-assessment.
- Apply the selection criteria—learning activity, objectives, type of information, target audience, group size, facilities, resources, environment, cost, time.
- Weigh up the benefits of using a particular aid against the practicality of using it—cost, time, transport, special facilities or resources.
- The best aids for your purpose are those that satisfy most, if not all, of your selection criteria.

Activity

1. What are the first steps to choosing an appropriate learning/instructional aid? List the common objectives in using a learning/instructional aid.

2. List the basic selection criteria for choosing an aid.

3. Which do you think are the most important criteria and why?

4. How would you choose between two different aids that both seem appropriate for your purpose?

5. Select a suitable aid to demonstrate safe work practices to a group of ten students and explain why you selected that aid. Guidelines to exercise responses are provided at the end of this unit.

Guidelines to activity responses are provided at the end of this unit.

Assignment No. 4.1 – 1

Unit 4.1 Using Instructional/learning aids

You are now required to do the **Assignment 4.1 –1,** which will be found at the end of this unit or distributed by your Tutor.

If you have any questions relating to the assignment, please don't hesitate to contact your Tutor.

Section 4

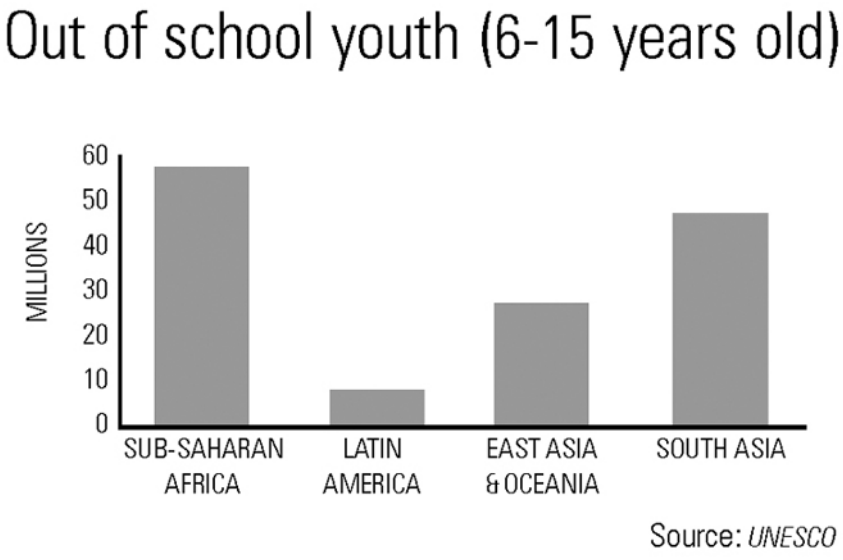
Using learning/ instructional aids

This section provides a practical guide to using the learning/instructional aids identified in Section 2, and includes hints for successful use. Detailed information on producing and adapting learning/instructional aids is provided in Unit 4.2 of this module.

Many learning/instructional aids involve using or adapting material from other sources. If the material is protected by copyright law, you may need permission from the original author or producer before you use it. If material is protected by copyright, it is illegal to use it without this permission. Check your obligations under local and international copyright laws before you use or adapt material from other sources.

If you're not the original author of the material, you don't have an automatic right to use it or change it without the author's or producer's permission.

Diagrams and charts



Diagrams and charts are very similar in terms of preparation and production and in the things you need to remember when you present them.

Diagrams are useful in explaining relationships and processes and in summarising information. Charts can be used to contrast and compare information, show progress and provide a summary. Both diagrams and charts can help learners to visualise concepts, processes and relationships and can overcome language and communication difficulties.

Resources

Simple black-and-white diagrams and charts can be hand-drawn on large sheets of paper or card or produced on a computer with a standard printer. More complex diagrams and charts may use overlays or be generated using computer software. You can also copy diagrams and charts from books, magazines and other sources and adapt them for your own use (keeping in mind copyright responsibilities). Some display-size charts and diagrams are available from publishers, resource centres, the commercial sector and other organisations.

Flip charts can be useful when you have limited space or want to display a series of images one after the other. You can use transparent overlays or cut-outs that 'flip' over the base image to build up the picture, or reverse the order to gradually reveal the full picture.

Preparation

Whether you are preparing your own material or using material from other sources, diagrams and charts will be more effective aids if you give some thought to how they present the information. A badly produced diagram or chart can confuse the learners, be misinterpreted, or simply be too hard to read or understand.

Check the material before you use it—errors, omissions and outdated information can be confusing for the learners and embarrassing for you.

Colour

Colour makes visual presentations more interesting and gives you more effective ways to identify and link or separate information. You can use colour to group or distinguish different information or components, to indicate relationships, to compare information or to highlight particular sections. You can also use colour in overlays to contrast with the base image.

Size

The diagram or chart must be large enough for everyone in the group to see. Diagrams and charts can be produced as normal page size and enlarged on a photocopier. Very large diagrams may need to be split into sections which can then be hung side-by-side or one under the other.

Lettering

Lettering should be printed and large enough to be read by learners at the back of the group. Lettering can be produced by hand using stencils. Using word-processing software, you can also produce lettering on the computer. Whatever the method you choose, use script in plain font styles and avoid colours (such as red or yellow) that are hard to see from a distance. Contrasting colours for background and text makes lettering easy to read from a distance.

Detail

Diagrams and charts should be as simple as possible. Use transparent overlays to add detail as required or use additional diagrams or charts that focus on specific aspects of the process or components. Remember that detail can be lost when you enlarge or reduce a diagram or chart.

If diagrams or charts are very detailed, you may need to distribute copies of the diagram or chart or handouts with additional information.

Setting up

When you use diagrams and charts, ensure you have a clear space to hang them and an appropriate means of hanging them (e.g. hooks, pins, velcro tape). They can also be arranged in sequence on a flip-chart stand and revealed in order as you need them. Check that the person sitting furthest from the displays will still be able to see and read them clearly.

Note any problems that might need to be rectified later or specific aspects that might need particular mention or explanation to the group. Have handouts ready for distribution.

Presentation

Before you present diagrams or charts, make sure the group understands the purpose of the material and provide any introductory information they may need to understand what is being presented.

Because visual learning/instructional aids can be distracting, it's best to display them only when you are talking about the topic they relate to. Learners may look at the diagram or chart instead of listening to important introductory material, or try to relate it to later information that it doesn't apply to.

Diagrams and charts should be placed at a distance, height and position where you can reach them easily if necessary and every member of the group has a clear view. Wherever possible, place charts and diagrams on an uncluttered background—not surrounded by irrelevant material or on top of other visual displays.

Try not to block the group's view and make sure everyone has time to take notes and ask questions.

Hints

Before you use a diagram or chart you've prepared, check that:

- It's in good order—clean, not crumpled or torn, and no errors
- you can display the diagram or chart easily—there's something to hang it on or fasten it in place with
- it can be seen and read easily from the back of the room
- you can reach it easily to point to specific aspects or change overlays.

Your presentation will be more effective if you:

- use a pointer so you don't have to stand in front of the chart or diagram
- keep eye contact with the group—don't face the diagram or chart or turn your back to the group
- have a copy of the chart or diagram in front of you to refer to rather than the screen
- don't go on to the next diagram, chart or overlay until you are sure everyone has understood the information they are viewing.

Print materials

Print materials cover a wide range of printed information and publications. As a learning/instructional aid, print materials are particularly useful as factual support for information, an additional reference or resource, and examples to stimulate discussion.

For large print materials such as posters and blown-up photographs, the same guidelines apply as for diagrams and charts (e.g. size, use of colour, position). Other print materials (such as books, magazines, publications, tables, brochures) will usually need to be distributed to the group for individual viewing.

Resources

You can prepare your own print materials—copies of extracts from publications, collections of photographs, handouts of your own text. Alternatively you can use material from other sources—publishers, libraries, professional organisations and business firms.

Since multiple copies are often required (and preferable), you should ensure that the material you want to use is available in sufficient numbers. Remember that print material can quickly become out of date and you may need to check that you have the latest issue.

> ***Wherever you use or copy someone else's material, make sure that you are not breaching copyright requirements.***

Preparation

Relevant, well organised, well laid out material is easier for you and the learners to work with. If the information is too detailed, not clearly related to the topic or not well laid out, it will confuse the learners and distract from the learning activity. In detailed information, you can highlight or mark up relevant or important sections of text.

Illustrations, photographs and colour all make the material more interesting, but they can also be a distraction when you want the group to concentrate on the content of the text.

Copying

Print materials are often photocopied for distribution. Sometimes copies are illegible, diagrams and illustrations lose detail or pages are lost or incomplete. Make sure that copies are legible and show the detail you need, and that multiple-page copies have no missing pages and are correctly collated.

Group use

Using print materials in a group means you have to ensure everyone has access to a copy (sometimes this means sharing) and that everyone is looking at the right information at the right time. It may be better to limit the information you distribute to extracts or clearly mark the specific information you are referring to on the copies you distribute.

When you work with a group you also need to ensure that everyone has sufficient time to read the information and understand it, and be aware of any group members with reading difficulties. Check that you have allowed adequate time for everyone in the group to read and understand the information.

Presentation

It's very tempting for learners to begin or go on reading material that interests them before or after you are ready to use it. If this is likely to be a problem, try not to distribute print materials until you are ready to use them, and collect them immediately after you have finished using them. Marking the relevant information clearly and limiting the amount of material you distribute will also help.

Make sure you have explained the purpose of the material to the group and that everyone has a copy if sufficient are available. Sharing copies can be disruptive, although learners with language difficulties may benefit from assistance from another learner with better skills.

Hints

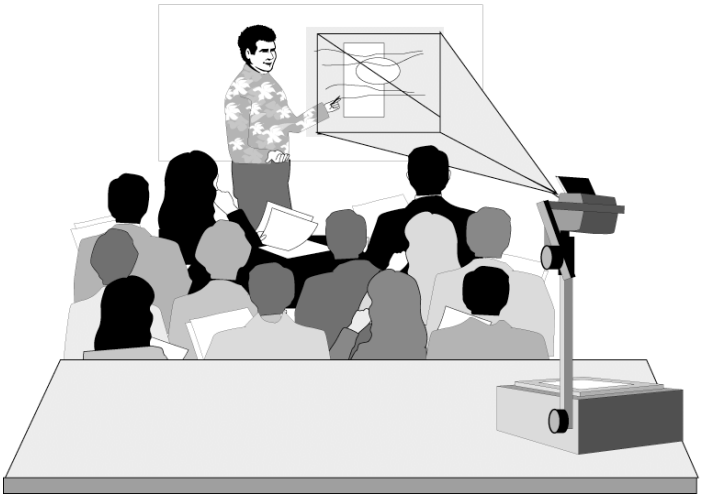
Before you use print materials check that:

- you have copyright clearance
- the material is up-to-date
- you have sufficient copies for the group (including yourself)
- the material is in good condition—clean, legible, no missing pages
- no members of the group have reading difficulties

When you use print materials:

- explain the purpose of the material when it's distributed and how it will be used.
- arrange for material to be distributed and collected at an appropriate time and with the minimum of fuss.
- give the group adequate time to read and digest the information.

Transparency projection



Overhead transparencies and slides are ideal for use with small and large groups to display graphic information, illustrate key points in a discussion, illustrate the progress of processes and physical changes and show fine detail.

The two different types of transparencies—overhead transparencies and 35 mm slides—require similar presentation techniques. Most of the guidelines that apply to diagrams and charts (colour, detail, lettering, presentation) also apply to preparing transparencies. Slides, being photographic, are more appropriate for presenting objects, figures and scenes, than for text information.

If you haven't used transparency or slide projection before, you may need some instruction on the equipment and how to use it and someone to help you set up.

Resources

You can prepare your own overhead transparencies and slides, or have them done professionally by the A/V specialist in your institution. Overhead transparencies and slides can also be used to present suitable diagrams, charts and print material adapted for the purpose.

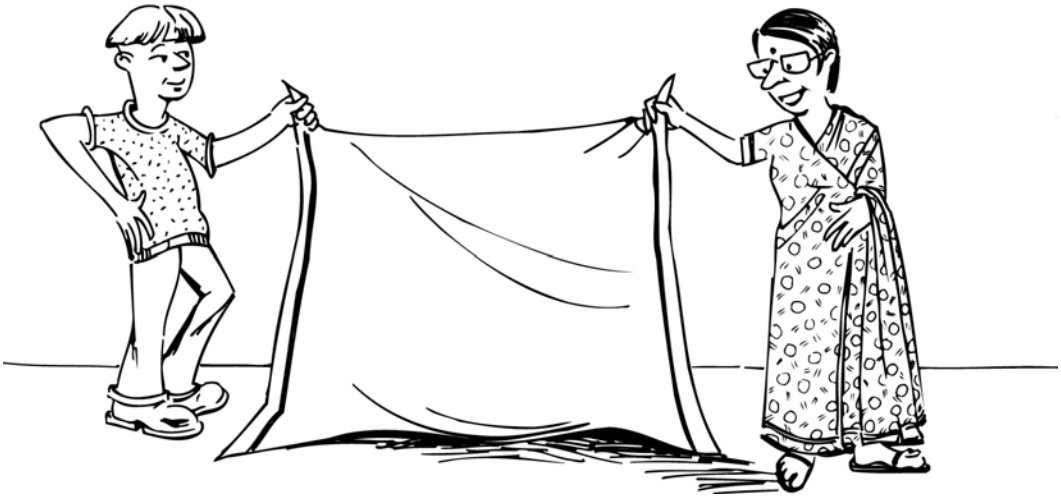
Setting up

Transparencies need projection equipment, a screen (sometimes a bare wall is used), and an accessible power source. Before you set up you should check the location of power points and the arrangement of the room to make sure you can position the equipment properly.

Power source

The power source should be close to the projection equipment to avoid trailing cables that someone could trip over and accidentally pull over the projector. A good practice is to wind excess cable around the table leg to keep it out of the way.

The screen



The screen should be at a height where everyone can see it and in a position where you don't block the group's view when you talk about the image being projected. The screen also needs to be tilted forward to reduce distortion ('keystoning') of the image being projected. The size of the screen is important because it determines the best position for the audience in terms of viewing distance from the screen.

The minimum distance from the screen should be twice the diagonal width of the screen and the maximum should be eight times the diagonal. This means that if you have a screen that measures one metre diagonally from corner to corner, the closest audience member should be sitting no less than two metres from the screen and the furthest audience member should be no more than eight metres from the screen.

The projector

For overhead transparency projection, the projector is usually positioned at the front of the room and to one side of the screen. For 35 mm slides, the projector needs to be placed so that the beam goes over the top of the audience's heads so as not to block the image or anyone's view.

Check the projection equipment is working properly and that you have the right cables and spare lamp bulbs and know how to replace them. Failed lamps are a common problem with projectors. If the slide projector comes with a remote control, check you have the right one for the projector you are using.

Lighting

Overhead transparency projectors don't require a darkened room but direct light or strong sunlight on the screen will make the image difficult to see. Slide projectors do need a darkened room. Check the room to see if there are any lighting problems for overhead transparencies and make sure you can darken the room sufficiently for slide projection. Also check the location of the light switches and that they are working properly.

Preparation

A practice-run will let you check equipment and materials to make sure everything is working and properly organised. Test the overhead projector by placing a transparency on the projector and checking focus and positioning on the screen. Place slides in the slide projector and check the focus, size and position of the image on the screen. Ensure also that slides are loaded correctly and projecting right way up. To avoid tedious reloading of slides, keep each set of frequently-used slides in a separate slide tray, ready for use. If the slide or transparency image is not large enough, move the projector back until the image makes best use of the screen area without losing focus.

Go to the back of the room and check that the image is clearly visible to the whole group. Check that lettering and detail is large enough to be read easily from the furthest point from the screen. Move to the front of the room and check that seating at the front is not too close to the screen for comfortable viewing.

Run through your presentation to check you have allowed sufficient time (including questions and answers) and that your transparencies/slides are in the right order, the right way up and not back to front. Damaged slides should be discarded as they could jam the projector.

Presentation

Poorly presented or badly organised material will let you down. Make sure transparencies are easy to read and don't contain too much detail—one or two main points per transparency is ideal. Reduce information to key points and use handouts to provide more detailed information. Practise writing on transparency film and check that your writing is clear enough and large enough on the screen.

Make sure that everything is in logical order and matches discussion of the topic. Number and label slides and transparencies (especially useful if you drop them) and use the numbers in your notes to help you stay on track.

Try to introduce some variety—use overlays or paper or card to gradually build up or reveal information on a transparency. Introduce an unexpected or humorous image to catch the group's attention and provide some relief from concentration.

Introduce your presentation by clearly relating it to the lesson topic/theme. Only show an image while you are talking about the subject it relates to—15 to 20 seconds is usually long enough for a slide. Overhead transparencies may need to be shown for slightly longer, especially if you are using overlays. Keep the number of transparencies and slides to the minimum necessary for the topic (fifteen to twenty slides maximum).

Don't leave the group staring at a blank lit screen or squinting at a bright light if the presentation is interrupted. Cover overhead transparencies with card or paper or switch off the projector. Don't remove slides while the projector lamp is still on.

Hints

If you are using transparency projection:

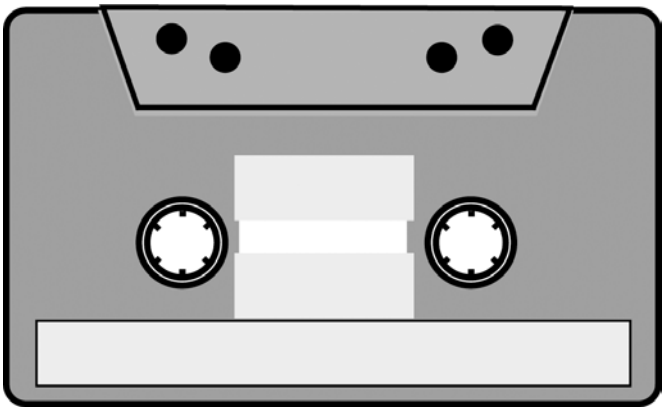
- make sure you are familiar with the equipment
- make sure you have allowed enough time for proper preparation, setting up before the session and a practice run

- check overhead transparencies are in good condition, well laid-out and legible
- check slides are undamaged, in focus and loaded in the correct sequence.

For your presentation:

- ask group members to help you manage things like lights and curtains and changing slide carousels to minimise interruptions
- use a pointer so that you don't have to move in front of the screen
- look at the group, not the image, when talking
- keep the presentation short, simple and to the point
- allow sufficient time for group members to make notes if required.

Audio tapes and CDs



Audiotapes and CDs can be used to support written or visual material (e.g. books or slide sequences) or may provide the focal point of the lesson supported by other material (oral language instruction, music, identifying faulty machinery by sound). Learners can create and use their own tapes for oral presentations and self-assessment.

Audio tape-slide sequences provide a more interesting variation to transparency presentation and help to bring another dimension to the learning experience. (The guidelines for a slide presentation also apply to a tape-slide sequence.)

Cassette and CD players are relatively inexpensive and there is a large range of audiotapes and CDs available on a variety of topics.

Resources

You can record and edit your own audiotapes and create your own tape-slide sequences. Some cassette players can be linked to slide projectors, using a 'pulse' signal to change the slides automatically with the audio commentary. University and college resource centres and libraries, the education ministry and other government agencies, as well as radio stations are all possible sources of audiotape material.

Audio materials (tapes and CDs) are covered by copyright law. Before you copy or edit published material, make sure you have the right to do so.

Preparation

When you record a tape, make sure there is minimum background noise or other interference. If you are providing commentary, speak clearly and don't move too close to the microphone. Play the tape back to check the quality of the recording—it might take several tries to get it right.

You can edit a tape before you use it or set the tape at the point you want before the session. Currently, home CDs cannot be edited, but most CD players have the facility to select a particular track or point on the CD that you can move to instantly. CD recorders and blank CDs are now available, either as separate devices or built into computers. Most persons would require some training in their use, as well as familiarity with the computer.

If you have to move from point to point in a tape, set the counter and note the position where you start and stop. Using guesswork during a session will mean lots of fast forwarding and rewinding. Remember to check and reset the counter if necessary before the session.

If you are using several tapes or CDs, make sure they are in order and correctly labelled. Make sure the equipment you want to use is working properly and that audiotapes sound clear and are undamaged.

Setting up

Check that the room or area you will be using has minimum background noise and has accessible, working power points for the cassette or CD player. If you are using battery power make sure you have a supply of replacement batteries.

Some rooms have 'dead spots' where sound appears muffled or loses tone or detail. Do a test run and walk around the room to test volume levels at different spots. Remember that human bodies will absorb sound and you may need to adjust the volume when the room fills up with people.

Presentation

Audiotapes and CDs don't pose the same problems for the presenter as visual aids. You can move around the room, pointing to visual displays, or concentrate on the group's reactions.

The length of the presentation may depend on the material to be presented, but short and to the point is always better. If the presentation is long, try breaks at appropriate intervals for discussion and questions. If external noise becomes a problem, it may be better to pause the tape or CD until the noise has stopped.

If you are using an audio aid as support to visual material, make sure the commentary matches the visual display—don't move on to a new diagram or slide before the tape does or stay with an image when the tape has moved on to the next.

Hints

If you use audio tapes and CDs:

- check the player and tapes or CDs are in good working order
- try using sound effects for variety and illustration
- edit out or fast forward over unnecessary material
- always match visual displays to the audio

Realia

Realia covers any real example or specimen that can be presented in a classroom—samples, specimens, functioning objects. Because the possibilities are so varied, it's difficult to provide specific guidelines, but there are some general considerations that may help.

Resources

Resources depend on the type of realia you are considering. Libraries, resource centres, professional organisations, industry, museums, collectors, experts in the particular field, and even group members may be good sources to try.

Some objects can't be removed from their location for various reasons, but you may be able to arrange to take your group to see an item and possibly inspect it closely or operate it. This often has the advantage of having experts on hand who can provide the learners with more detailed information and answer questions.

Preparation

Once again, preparation varies with the nature of the object. You may need to make special transport and display provisions, prepare supporting information or have access to special facilities or equipment.

Collections of objects should be clearly labelled and organised in logical order, if appropriate. Delicate or fragile items may need protection from too much handling. Some objects may need special equipment for display, or access to power so they can be operated. Check that you have appropriate facilities, equipment and power sources.

Very small objects may be displayed by using a document camera (a kind of video overhead projector) connected to a multimedia projector. This will allow the whole group to see the object and any special details enlarged on a screen. The object can thus be handled, turned and viewed from different angles.

If the object can only be viewed, handled or operated by a limited number of people at one time, you may need to find alternative activities for the remainder of the group.

Consider safety issues, particularly if there is any danger to learners in handling or using the object (e.g. sharp edges, working machinery).

Setting up

If you need special facilities or equipment (e.g. lighting, power, document camera and multimedia projector), check that these are properly set up and working. Always try to set up before the session begins.

Check the arrangement of the room and ensure that the group will be able to view the object properly or move around it, as appropriate. Check safety arrangements.

If the object has several parts or is operated in some way, check that it is assembled correctly and is working.

Presentation

Before you introduce the realia, provide students with introductory information and any supporting material. Set down clear instructions on how the object is to be handled or operated and provide any safety information.

You should discuss the object and point out various features before the group examines it closely. It may be an advantage to allow the group to ask questions both before and after examining the object.

Allow sufficient time for all learners to have the opportunity to view, touch or operate the object. Where appropriate, provide commentary on the object while it is being viewed.

Hints

When using realia:

- use good examples of your topic rather than ones that are just similar
- ask learners to contribute examples if they have them
- make sure collections of realia are in good condition, clearly labelled and well displayed
- make sure you have made adequate arrangements for learner safety and for protection of realia
- consider the best way of displaying and allowing learners access to realia

Motion Picture Films

Although less frequently used since the introduction of video, fiction and documentary motion picture films can be very effective learning/instructional aids. Action is often more interesting and informative than text or still visuals, and the ability to show detail, to slow down or speed up movement, and to use special effects is a valuable teaching tool.

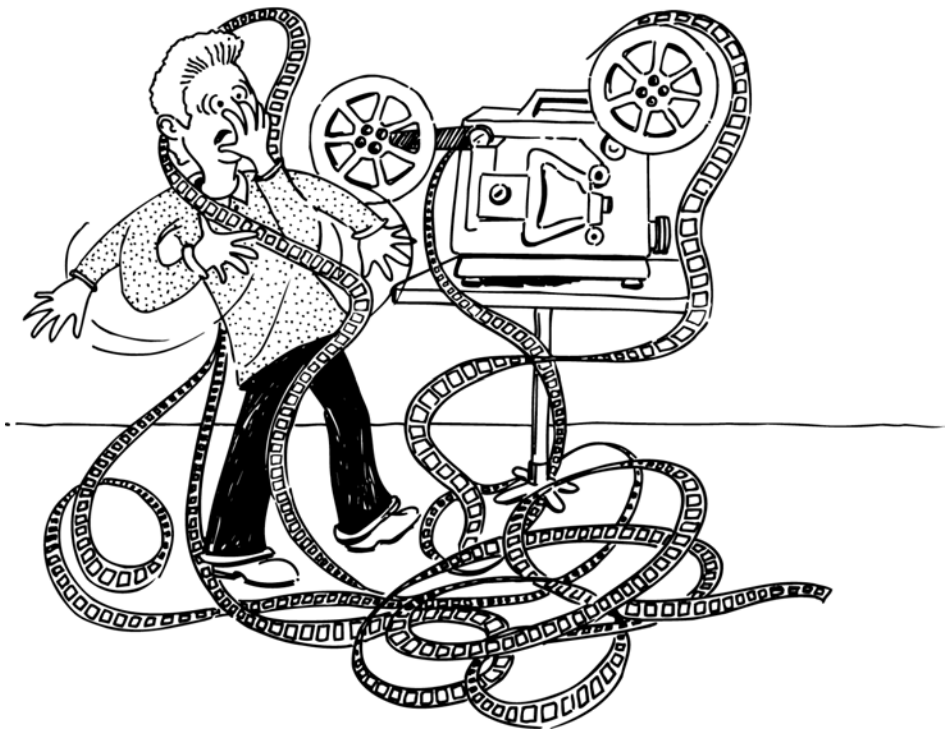
Producing a motion picture film is expensive, requires some training and is not usually practical for most teachers/instructors. Editing existing footage to suit your purpose is an option, but once again this needs some experience and can be expensive.

If you are showing a motion picture film, remember that some countries have occupational health and safety regulations that require projectionists to be trained and licensed.

Producing motion picture films is too expensive for most educational institutions and individuals, and professionally produced films are not as easy to obtain as video tapes. Many libraries and resource centres have transferred existing productions to video tape. However, there are some film libraries still operating. If you do decide to use film, you may need some instruction in using the projector.

Copyright is an important consideration before you use or adapt a film produced by someone else.

Setting up



Film projectors are heavy and require some experience to operate. The guidelines for using them are similar to those for setting up and positioning slide projectors.

The room needs to be darkened and the projector and screen positioned at the right height to avoid the beam being interrupted. You need an accessible power point and cables need to be out of the way to avoid accidents.

Presentation

Most films for classroom use are relatively short. Longer films may be shown over more than one session. It's difficult to break for discussion during a film, so provide a good introduction that gives the group a clear understanding of the topic and purpose of the film and anything you want them to pay particular attention to.

When the film is finished, allow the group a few moments to get accustomed to the light, stretch and settle down again. If there's time for discussion and questions after the film, don't try and pack up the equipment while you talk. A hand-out with questions or

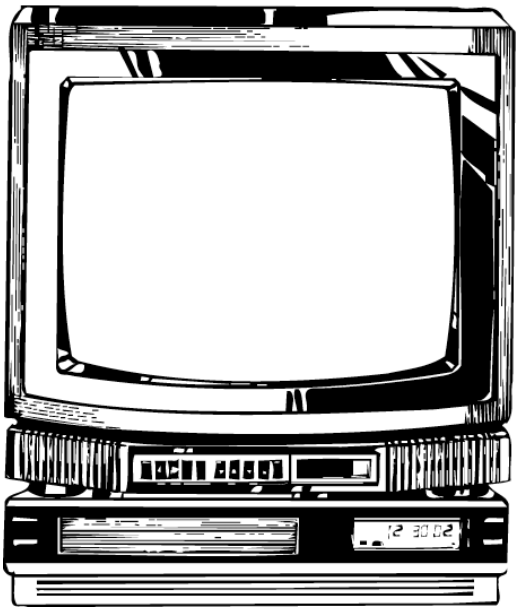
notes on specific points can be useful to stimulate discussion, particularly if it has to wait until the next session.

Hints

If you are using motion picture film:

- make sure you know how to set up and operate the projector properly
- check how much time you will need to show the film
- check the room you will be using for power sources, intrusive light or noise
- view the film before you show it and prepare an introduction
- discuss the film with the group as soon as possible after it is shown

Television, video tapes



Television and videotapes are more common today than motion picture films. Like films, they offer the advantages of movement, action, special effects, the ability to slow down or speed up action and to magnify detail. Teachers and learners can use 'home video' equipment to present material, record activities or demonstrate a process.

The small size of the average television screen can be a problem with large groups. 19-21 inch TV sets will not be adequate for large groups or large rooms. 27 - 35 inch screens will work much better. Multimedia projectors (also called video-data or LCD projectors) that project the image onto a large screen are even better. Though the newer models are small, light and easy to operate, they remain relatively expensive and many institutions are unlikely to have them.

Resources

Many television stations broadcast educational material, and professionally produced programmes can be bought or borrowed from a wide range of sources—resource centres, libraries, educational institutions, video hire outlets, television stations, and professional and industry organisations.

Home video equipment (combined camera and recorder, known as a 'camcorder') has become much less expensive, lighter, and easier to use in recent years. Many colleges have equipment available for staff and student use. But you may need some instruction in using the equipment.

> ***It can be illegal to record, copy and/or edit television programmes or video tapes without the permission of the broadcaster or the producer. Check the copyright requirements with the provider.***

Preparation

If the group is going to watch a programme broadcast on television, check the starting and finishing time to make sure it fits comfortably in the lesson time. If only one section of a particular programme is relevant, you may be able to find out from the television station the approximate time of that segment.

If you are using videotape, view the programme yourself first. Check the running time and work out how much time you will need for viewing and discussion. Like cassette players, VCRs usually have tape counters. If you only want to use selected parts of the tape, you can use the counter to identify specific points to start and stop.

You should also test the equipment to make sure it's compatible—televisions and VCRs of different makes and ages may not be. In addition, different countries use different television systems, and videotapes made for one system can't be used with a VCR or television monitor designed for a different system.

There are three main systems used:

- PAL—used in parts of Asia, in Australia and the Pacific, and in the United Kingdom.
- NTSC—used in Japan, North America and the Caribbean.
- SECAM—used in France and former French colonies, and in countries of the former Soviet Union.

There are VCRs that can automatically identify the system used and play the tape accordingly. However, these are very expensive and not widely available, and also require a television monitor capable of displaying the different systems. Most VCR's you would use or buy are likely to be of the NTSC type.

Special connector cables may solve equipment compatibility problems and videotapes from one system can be converted ('dubbed') to another, but you need the equipment and the time to arrange these things. Check them well in advance.

Some educational video 'packages' come with support material such as brochures, booklets and information sheets. You may want to organise copies of this material to distribute to the class.

Setting up

The guidelines for television and videotapes are much the same as for overhead transparency, slide and film projection. Test the equipment and check the room—cables, power, lighting, and position of equipment. If you aren't using a video projector, you may have to rearrange seating to ensure that everyone has a good view of the TV screen.

The television and the VCR may share a remote control or each may have its own. Make sure you know which is which and how the controls work.

Presentation

Television programmes don't offer the teacher much control, but videotapes can be paused, fast-forwarded and rewound if necessary. Most VCRs let you freeze the picture or slow down action. Use slow motion so the group can follow movement or observe gradual changes.

Use the remote control to pause for discussion or freeze on an image of special interest. If you put the remote control down, always put it in the same spot so you can find it easily when you want to use it again.

Don't stand in front of the television while a program is still running. If you want to talk to the group, pause the program or wait until the particular segment is finished and switch off the set. If you must make a brief comment during a television broadcast, choose an appropriate point and turn the sound down for a moment.

Pause to give the group time to take notes if necessary, or provide handouts for later discussion.

Hints

When using television or video-tapes:

- prepare properly to avoid unnecessary delays and interruptions
- don't talk over commentary
- don't stand in front of the television while the program is running
- keep the remote control where you can find it quickly
- switch the television and/or the VCR off when the program is finished

Computer screen projection

With computer screen projection, the projector is connected to a computer and projects the images from the computer screen onto a normal projection screen at the front of the room.

Computer screen projection allows you to combine different sorts of aids in the one presentation. You can use a computer presentation package such as Power Point and a scanner to prepare and present diagrams, charts, slides and photographs.

More sophisticated software can be used to produce animated sequences and special effects. Computer screen projection systems can be connected to both data sources (computers) and VCRs or video camcorders (for video projection), so you can combine graphics, text and video in the one presentation. Computer projection equipment and software is expensive, but, as with video, may become less so as demand increases.

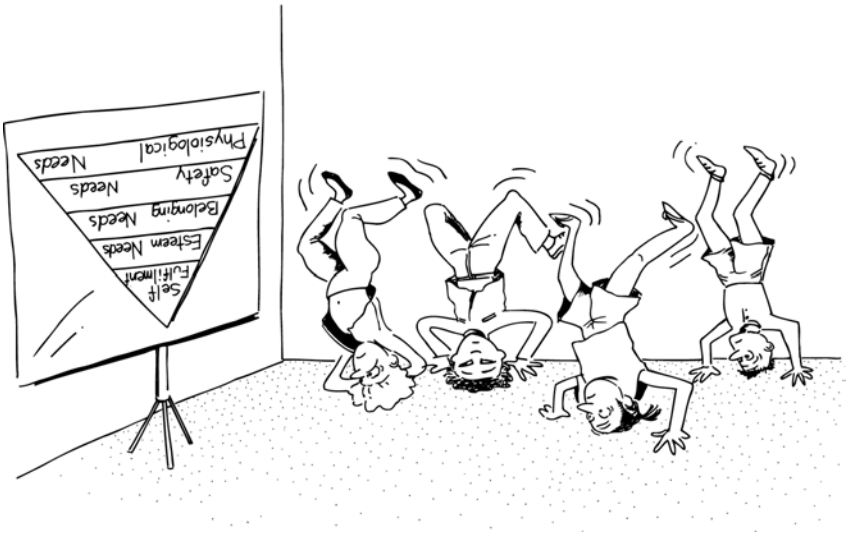
Resources

There are two types of computer screen projection: computer projection units and computer projection panels. A computer screen projection unit is a projector that links directly to a computer. The smaller, portable models have features such as zoom lenses. A computer projection panel is not a projector in itself, but is placed on an overhead projector like a transparency.

You can use the computer projection system with a computer specially set up in the room or a laptop computer. This means you can prepare your presentation on disk or on your own laptop (provided you have the right connector cables to connect to the projection unit).

The use you make of these systems depends on your own computer skills, the capabilities of the computer hardware and software you are using, and what instruction is available. Software is widely available, and many packages come with tutorials for the user. Access to training and expert help is essential to make the most of these aids and to prepare quality presentations.

Preparation



It's very important to ensure that you know how to set up and operate the equipment and the software. Give yourself plenty of time to prepare the presentation and familiarise yourself with the equipment. Ask for advice on common problems that could arise and how to deal with them.

Check all the equipment and cabling and the facilities you are going to use (power sources, lighting, seating). The larger, usually ceiling-mounted projectors are normally set up in a special room and operated from a control panel (for focus, colour, contrast etc.). Smaller, mobile units have remote controls.

Use a practice run to check content, timing and any presentation problems as well as the equipment.

The images you use should meet the same requirements as any projected material—good sized lettering, good layout and use of colour, not too much or too little detail. Check that the material you are using is suitable for projection.

Setting up

Give yourself plenty of time to set up equipment and test everything before the session. As with overhead and video projection, computer projectors operate from the front of the room. A room specially set up for computer projection will usually have fixed places for the control panel, computer and computer connections.

If you have to set up the room yourself, check the position of the equipment, the view from the back of the room, the projector focus, the position of the screen (tilted forward to avoid 'keystoning'), and the lighting. The computer must be located close to the projector because of the connector cables.

Try to position yourself so that you can also see the projection screen clearly during the presentation to check the image and focus. Avoid obstructing the view of the group or positioning yourself where operation of the computer might distract them.

Presentation

Computer projection allows you to make a presentation as simple or as sophisticated as you like. The limitations are the capability of the computer and software and your own skills. However, the basic rules still apply, such as keeping to the topic, no unnecessary detail and not too long.

Use a pointer rather than standing in front of the screen and try to maintain contact with the group rather than focus totally on the computer. Don't rush or stay too long on one image—watch the group's reactions for cues to delay or move on. Allow time for questions or discussion if required.

Using the computer, you can create or change images during a session, but you need to be sure of what you are doing. You can also involve group members in creating or changing images on-screen if they have the skills.

Remember, charts, diagrams and other screen images from the presentation can be printed out for distribution to the group. They

can also provide a valuable back-up in case of technical failure during the session.

Hints

When using computer projection:

- make sure you fully understand how the equipment and software works and what to do if there's a problem
- know your limitations—a well-prepared simple presentation is more effective than a badly presented complex one
- don't be too smart—don't try to impress the group with the technology or your skills
- keep it short, simple and to the point—don't use unnecessary special effects or complex sequences just because the technology is there.

Computer technology

Computer technology is becoming a major tool in education for educators and learners alike. With more and more workplaces using computer technology in daily operations, computer familiarity and skills are essential in vocational education.

Computer technology used as learning/instructional aids comes in various forms, from common commercial applications (word processing, accounting, business, graphics) to specially designed learning packages (software programs, CD-ROM, interactive multimedia, on-line). The Internet offers access to a vast range of information and other resources from world-wide sources.

Using computer technology you can communicate with a learner in another city or a group scattered over a dozen different locations, or bring information and images from around the world into your classroom.

Resources

New technology is being developed at an amazing rate, and equipment is expensive and quickly out-dated. Resources can range from a basic computer and software to powerful multimedia systems linked to other equipment. Some institutions have special facilities—computer suites and 'electronic' lecture theatres with computer projection facilities.

Software and CD-ROM packages are available from a wide variety of sources, and many are designed specifically for educational purposes. Some educational institutions develop and produce their own programs for use with specific subjects and offer training and assistance to staff who want to develop their own packages.

Some institutions also have their own computer networks for on-line teaching and learning. These networks may link into wider networks connecting remote campuses, other institutions and organisations, workplaces and individual students.

Using computers limits the group size to the number of computers available—you may have to arrange for learners to take turns during a session. A computer projection unit can be used to allow some group members to see what you or others are doing.

Preparation

Make sure you understand what resources, facilities and packages are available and get some advice on what is best suited to what you want to do. At the very least you will need basic computer skills and an understanding of the equipment.

Be aware of the skills and experience of the learner group—some may need more assistance than others. How you structure the session will depend on the type of learning activity and the topic, what sort of package you are using, how big the group is, the skill level and the time available.

Check the facilities—number of computer terminals available, power, seating and similar. Check that the computer(s), software, cabling and other equipment are compatible and in working order.

Check software, CD-ROM or network connections for problems and to ensure you know how to operate them properly. Run through the program you will be using to check the time you and the group need.

Setting up

If the room you are using is permanently set up for computer use and groups, check that everything is properly connected and switched on and that the required software is loaded. Minimise group preparation time by having the necessary software, programs or network connections ready to use when the session starts.

If you have more than one learner using a computer, make sure sufficient space and seating is available around the computer—one user and two observers is usually the maximum practical number if the computer images are not being projected.

Presentation

Give a brief introduction to explain the topic, what the group will be doing and the objective of the session. Check that everyone understands clearly what to do and what is required.

When you are working with groups and computers you may need to move around the room to check progress or assist with problems. Use computer projection if available to show the group what the screen should look like or to point out particular details.

If the session is a long one, make sure you and the group take appropriate breaks—use the time to discuss what you have seen or done. Make sure learners don't get frustrated or bored because of lack of skills or because the activity is too simple.

Hints

When using computer technology:

- make sure you have the necessary level of skills and understanding
- select the program/package carefully to match the topic, your objectives and learner needs
- be aware of learner skill levels and tailor the structure and content of the session accordingly
- provide supporting material if required (print-outs of screens, instructions, help notes)
- don't get carried away with the technology and forget the purpose.

Models

Models are useful both to reduce or enlarge objects to a practical scale for teaching and to demonstrate processes or operation. Working models can provide learners with 'hands-on' experience and the opportunity to involve a combination of senses in the learning experience.

Resources

Models can range from 'home' designed and in-house-made ones to sophisticated, scale versions of the real thing, made by specialist model makers using computer-aided design. You can involve learners in the design and production of models as a learning activity.

The sophistication of the home-made model will depend on your own skills and the resources and materials available. Enlist the help of experienced people who may be able to provide special skills, materials or components that you need.

Some resource centres, institutions and professional organisations have models for loan or can direct you to professional model makers. Some models are displayed in places such as technological museums, where you can arrange a demonstration for a group.

Preparation

The facilities and area you need for display and/or operation of a model will depend on the size and type of model. Check what is required—accessible power, lighting, a table or stand, water supply.

If the model is free-standing or needs to be seen from all sides, check the space available for display. If people have to squeeze past it or lean over to see particular aspects, they may damage the model or knock it over.

If the model is large, heavy or very fragile, make sure you have made appropriate arrangements for transport—sometimes it's more practical to take the group to the model rather than the model to the group.

If the model is very small or has tiny components, you could consider using a video projector connected to a camera to show the group fine detail.

Do a practice run to check that the model is working properly, is undamaged and that you have all the components and know how to assemble them correctly. Electrically-powered models may need special cabling and power adaptors.

Setting up

If the model is difficult to transport and set up, make sure that you've allowed plenty of time to do so before the session. Check that the model is correctly assembled and connected to the right power source.

If the model is fragile or must not be bumped or moved, make sure it is positioned so that the group can get close enough to see without touching the model or the stand. If you are working with a large group, you might want to erect some sort of barrier using a rope or chairs, although this may make it hard to see.

Make sure the model is positioned where everyone can see it and where you can easily point to specific parts without obstructing their view.

If the model uses battery power, make sure you have spare batteries.

Presentation

Introduce the model, explaining its purpose and any special features. Warn the group if the model is fragile and must not be touched. Don't let the group crowd around the model or touch anything before you are ready and the group has been fully informed of any special requirements.

Many models aren't suitable for use with large groups, but you can overcome this by limiting the number of people examining or using the model at any one time.

With working models, make sure everyone can see the operations clearly and that everyone gets a chance to operate the model if appropriate. Use a pointer to point to different components so that you don't obstruct the group's view.

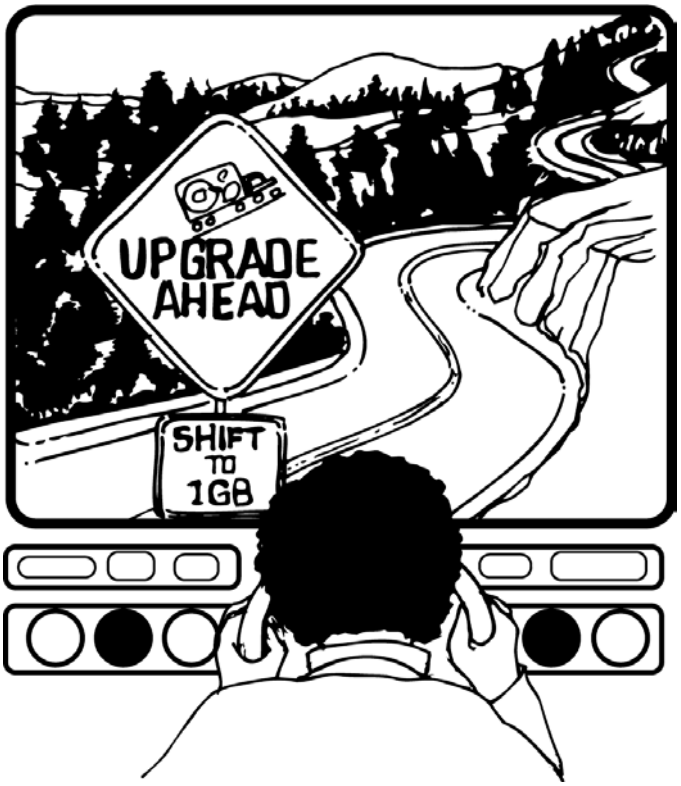
Provide support information (handouts, brochures, diagrams) so learners can relate the model to concepts and theoretical processes they are learning about.

Hints

When using models:

- check you have all the necessary parts and know how to assemble them properly
- make sure you understand the model fully so you can answer learners' questions accurately
- give all group members time to examine and/or operate models before you move on to discussion
- don't leave models operating after you have moved on from the topic.

Simulators



Simulators and simulations provide a valuable alternative to real-life experience (live work) when the work environment or the task is difficult to replicate in the classroom, difficult to supervise or potentially dangerous to a learner.

Simulations can range from simple role-playing (e.g. customer and salesperson) through to computer technology that provides a replica of the real environment (an aircraft cockpit or the driver's cabin of a train), including movement and a visual display.

Given this variety, the cost can vary enormously—it may cost very little to set up a basic office or shop environment in the classroom, but millions of dollars to provide simulators for aircraft personnel.

Resources

Simulators can require as little as a desk and a telephone, or a table for a shop counter and a cash register. More elaborate equipment or facilities, such as scientific or computer laboratories and simulated production processes, may be provided by the college or may have to be sought elsewhere. Some organisations may be willing to provide after-hours access to their facilities to set up simulated work situations.

High-technology simulators such as those for training aircraft personnel are usually located in special facilities, often owned or supported by companies or organisations with workforce requirements in that field. These usually have to be booked or are used under ongoing arrangements with the organisation concerned.

Preparation

No matter how simple or complex the simulation, learners need to be well-prepared and understand what is required of them. Ill-prepared learners can become confused and intimidated, perform badly and become discouraged. Some learners may also be nervous about 'performing' in front of a group.

You need to discuss the simulation with the learners, provide adequate information and preparation, and be aware of individual skills and learning ability or difficulties. Make sure you provide the group with any written information that may be required.

If you are setting up the simulation yourself, make sure you have all the necessary equipment and that any special facilities are available and booked if necessary. Check that equipment is working and that you have adequate space for group work. Plan your setting up carefully.

If you will be working in a special facility, make sure you are familiar with the equipment, its location and how the simulation works and will be conducted. If you are uncertain or lack confidence, so will the learners. If the simulation involves other instructors or supervisors (e.g computer or other personnel), arrange for them to be available after the session for discussion and questions (if required).

Make sure you know how to use the equipment or have appropriate assistance on hand. Do a practice run if possible to check you have allocated enough time, particularly if working with a group. If you have to travel to and from the location, include this time in your assessment so that you don't have to rush through the session.

If only some of the group will be involved at any one time, consider how the others can be occupied during that period. Unnecessary observers could distract learners and make them lose confidence.

Setting up

If you are setting up your own simulator or simulation environment, try to do it before the start of the session, so it doesn't distract learners or eat into valuable time. If some things can't be done until during the session, allocate tasks to group members to save time and to involve them in the process.

Check equipment and the arrangement of the room to ensure freedom of movement, visibility, access to equipment and adequate seating arrangements. If you are working in a special facility that is already set up, ensure that the facility and required staff have been booked in advance. On the day, check the facility is ready for you and the learners and that appropriate equipment is working and ready for use.

Presentation

Simulations with groups can very quickly become chaotic if you don't maintain control. Provide a thorough introduction for learners, outlining the object of the exercise, what is expected of them and any special requirements or rules for using equipment. Make sure learners understand the nature of the exercise and their responsibilities.

Explain each step of the simulation exercise and ensure that all learners understand. Handouts of background material or instructions should be done early and learners should have sufficient time to read important information before they start.

Depending on the type of simulation, you may have to move among the group checking progress and dealing with problems, or simply observe the simulation in progress. Don't intimidate or disrupt learners by leaning over their shoulders, interrupting the simulation unnecessarily, or making audible negative comments on their

progress. Discourage other group members who may be observing from commenting during the simulation.

If the session is a long one, take adequate breaks to relax and discuss what is being done. When the simulation session is finished, allow ample time for discussion and questions and give positive feedback.

Hints

If you are using simulators or simulations:

- make sure both you and the learners are well prepared
- plan carefully, taking into account equipment, time and skill requirements
- make sure you have adequate support if you need it
- keep control of the group
- provide an environment that encourages, not intimidates, learners.

Live work

From the learner's point of view, live work is probably the most effective and satisfying learning/instructional aid.

Direct experience usually involves placing the learner in a 'real' work environment where they are shown how to do something and then given an opportunity to learn the skill by completing a supervised task.

Live work may be more suitable for individuals rather than groups, unless it involves cooperation of a team and the task can be performed safely by an inexperienced team with supervision.

Resources

Live work is usually performed by learners who spend at least part of their time in a workplace. Most colleges have arrangements in place with local industry and companies to provide 'live work' opportunities for learners who are college-based. This is usually done through internships, apprenticeships and other work-experience schemes. You may want to approach other organisations for special 'live work' tasks, where the latest equipment, production techniques or work practices are not available elsewhere.

Some colleges set up their own small businesses to provide 'real' work opportunities and training; for example, restaurants, small design and production houses. These are not simulations but 'real' businesses with real customers, and provide live work opportunities for learners in a range of courses.

Preparation

Both learners and instructors need to be familiar with occupational health and safety regulations and any special requirements for the workplace and task concerned (e.g. protective clothing).

If the activity is taking place in an industrial or commercial setting that is unfamiliar to the learner, ensure that the learner is given basic information such as location of toilets, lunchrooms and first aid facilities.

The instructor should run through the task first and ensure that it's suitable for the skill level of the learner. Equipment should be checked to ensure it's in proper working order and complies with safety regulations. Time may be a factor in the successful completion of a task or the availability of certain equipment, and this should be taken into consideration when planning the session.

Setting up

Setting up for a task may require making special arrangements for processes to be slowed or stopped or for the learner to complete a task in isolation from the normal process. You may need to set up special equipment or limit the learner's access to other equipment or processes.

Check that learners have the correct safety clothing/equipment and that they understand any restrictions on their movement or activities. Check that equipment is properly set up, in working order and that all materials needed for the task are available.

In some situations it may be useful to prepare a checklist to guide the learner through the sequence of tasks to be completed.

Presentation

You should first introduce the learners to any other people they may be working with and explain the purpose of the session and the task. Explain the task carefully and invite learners to ask any questions.

Point out specific components as you talk about each one—don't wave in the general direction of a piece of equipment. Demonstrate the skill or the process carefully, explaining each step and checking the learner has understood.

When you are sure the learner is ready, guide the learner through the task, correcting mistakes and repeating actions as you go. Allow learners to repeat the task until they are competent in all aspects and can complete the task without error. Remember that not all learners will learn at the same rate.

Leave some time for discussion and to answer questions if necessary. Ask learners for feedback on their experience during the session.

Hints

In a 'live work' situation:

- make sure the workplace is properly set up for the lesson
- know the skill level of the learner before you start
- make the learner feel comfortable, not intimidated
- ensure the learner understands the task and knows what to do
- encourage the learner and give positive feedback.

Summary

- Access to resources and expert advice is an important part of using learning/instructional aids.
- Preparation, setting up and presentation are keys to effective use of aids.
- Copyright is a major issue when you are using or adapting material from other sources.
- Visual aids (diagrams, charts, projected material) need to be clear, easily read from a distance and in good condition.
- You need to be familiar with equipment (e.g. projectors, video equipment, computers) and know how to set it up and use it before you start the session.
- Always have a practice run before you use an aid.
- Make sure the learners understand the object and requirements of the material you are presenting.
- Don't get carried away with technology and forget the purpose of using the aid.
- Technology can be unpredictable—if your lesson depends on the information the aid provides, make sure you have back-up material.

Activity

1. What three steps should you consider when planning to use a learning/instructional aid and why?

2. Select three different types of aid and describe what situation you would use each in.

3. What facilities would you need for each aid you have selected?

4. Is there any special preparation required for the aids you have selected?

5. When displaying or projecting material, what do you need to ensure?

6. What is copyright and how can it affect the material you use?

7. How important is your presentation to the effectiveness of the aid?

Guidelines to exercise responses are provided at the end of this unit.

Assignment No. 4.1 – 2

Unit 4.1 Using Instructional/learning aids

You are now required to do Assignment 4.1 – 2, which will be found at the end of this unit or distributed by your Tutor.

If you have any questions relating to the assignment, please don't hesitate to contact your Tutor.

Exercise response guidelines

The exercise questions are designed to allow you to check your understanding of the information and your progress through the unit.

The guidelines provided here will give you a basic idea of the information your responses should contain. If you have any difficulties or questions, please contact your tutor.

Section 1

1. Your answer should explain what learning means to you, for example, gaining or enhancing skills, acquiring and applying knowledge or information. How do you think you learn?
2. Your answer should include examples other than those in the text – think about concepts that you use every day to understand the world around you. Are those concepts easy to explain to others?
3. Your answer should consider not only your own reasons for wanting to learn but also what might motivate others. How can you make learning more interesting to a group?
4. What do you need to consider when you are trying to match a teaching method to the learning needs of a group? Your answer should recognise the four different types of learners and the various factors that can influence your choice of teaching method.
5. Give your own definition of learning/instructional aids and why they are used. How did the aids you have listed assist you to learn?
6. Your answer might include situations from your own experience or examples of situations where you would use aids. Think about the type of information, the purpose of the activity, the learner group and the learning environment.

Section 2

1. Your examples should include at least one of the following aids in each category:
   - Visual – diagrams, charts, overhead transparencies, 35mm slides
   - Print – books, posters, brochures, handouts, tables and similar
   - Realia – samples, speciments, artifacts, real objects
   - Audio – audio tapes and CDs
   - Electronic – films, television and video tape, computer technology

2. Your answer should describe the purpose of using each aid and why you selected it. For example, you have chosen a diagram to provide a simplified illustration of a production process; the diagram was easy to prepare and could be distributed as a handout as well as enlarged for display.
3. Your answer could include charts, diagrams, transparency projection, film, video (using video projection), computer projection.
4. Your answer could include charts, diagrams, overhead and slide transparencies, realia, simple models and pre-produced aids. Note that the ease of producing and using some aids may depend on how complex or sophisticated you want to make an individual aid.
5. Your answer should include transparency projection, video, computer projection, computer technology, models, simulators and live work.
6. Your answer should explain your personal preference for particular aids; for example, your familiarity and skill in using that type of aid.

Section 3

1. Your answer should include a brief description of assessing the options available to you, using selection criteria and matching the aid to the learning activity.
2. The common objectives include information, explanation, illumination, motivation, interactivity and self-assessment.
3. The basic selection criteria include learning activity, objectives, type of information, target audience, group size, facilities, resources, environment, cost, time and practicality.
4. Your answer should identify the criteria that you think are the most important to satisfy and provide reasons for their importance. For example, if an aid is particularly effective in achieving objectives with a specific learning activity, does this outweigh time and cost?
5. Your answer should include reference to applying selection criteria, identifying what's most important and comparing the advantages and disadvantages of the two aids. For example, a diagram of a process might be easier to prepare and set up but a video would show movement and physical changes during the process.
6. Your answer can relate to safe work practices in any vocational area. You should describe briefly the information you are presenting, how you will use the aid to present the information and why you think the aid will be effective.

Section 4

1. The three steps you should consider when planning to use a learning/instructional aid are:
   - What's appropriate
   - What best meets the objectives
   - What am I most comfortable with?
2. Your answer should include aids that represent at least three of the five categories – visual, print, realia, audio and electronic. You should also describe the learning activity for which each aid was selected.
3. Your answer should describe the type of facilities each selected aid would require and any special features. For example, slide projection would require a room that can be darkened and that has appropriate power sources, seating and provision for the screen and projector.
4. You should describe any special preparation requirements for each aid. For example, video may require copyright checks, arranging for video projection, setting tape counters and similar.
5. Your answer should include specific reference to the clarity of the image, position, size and visibility.
6. Copyright is the legal protection of original material. It means that you do not have the right to use or adapt someone else's work unless you have permission or the material is free of copyright restrictions. Your answer should include that copyright can cover all types of material – visual, print, audio, electronic – and that you need to check the copyright status before you use material from other sources.
7. Poor presentation can reduce the effectiveness of an aid, confuse, or alienate learners and result in objectives not being achieved. Your answer could include brief examples of poor presentation, such as a diagram with too much information, badly prepared overhead transparencies, or an inexperienced user having difficulty using equipment.

Assignment 4.1 – 1

Unit 4.1 Use of Instructional/learning aids

To be completed and returned to your Tutor for assessment.

This is an open book assignment and you may refer to whatever resources you have at your disposal.

Name:…… Date: ……

Question 1

Instructional/learning aids are not used to simply make more work for the instructor. There are some very clear reasons why they should be used, and these objectives are hidden within the following cross word. Complete the cross word using these clues:

1 across	The opposite of theory
2 across	knowledge or skill resulting from this
3 across	to make bright
4 across	serving to elucidate
5 across	stimulate interest
1 down	transmit or pass on by speaking or writing
2 down	a declaration made with a view to mutual understanding

2 marks each - 14

Question 2

Using the list of words provided, complete the following sentences, making them statements of issues you may need to consider when deciding on what instructional/ learning aids you should use:

2.1 What are the .... of the students which I should accommodate in my instruction.

2.2 What resources are ..... available.

2.3 What ..... am I trying to get across to my students.

2.4 Could achieving the learning outcome benefit by instruction that includes ..... , ... or .....

2.5 Does the learning outcome specify a ..... activity

2.6 Can the instruction be given in a "live" situation without jeopardising the ..... of the students.

2.7 What is the ..... of the group

2.8 How much ..... can I devote to the preparation of these instructional aids

2.9 Am I fully aware of the ..... in which this instruction must take place

2.10 What special ..... would be involved with a particular instructional aid that I have in mind

1 mark each - 13

reasonably, practical, movement, special, needs, sound, requirements, information , size, safety, colour, time, environment

Question 3

Select a learning/instructional aid for each of the following learning activities and give reasons for your selection in each case.

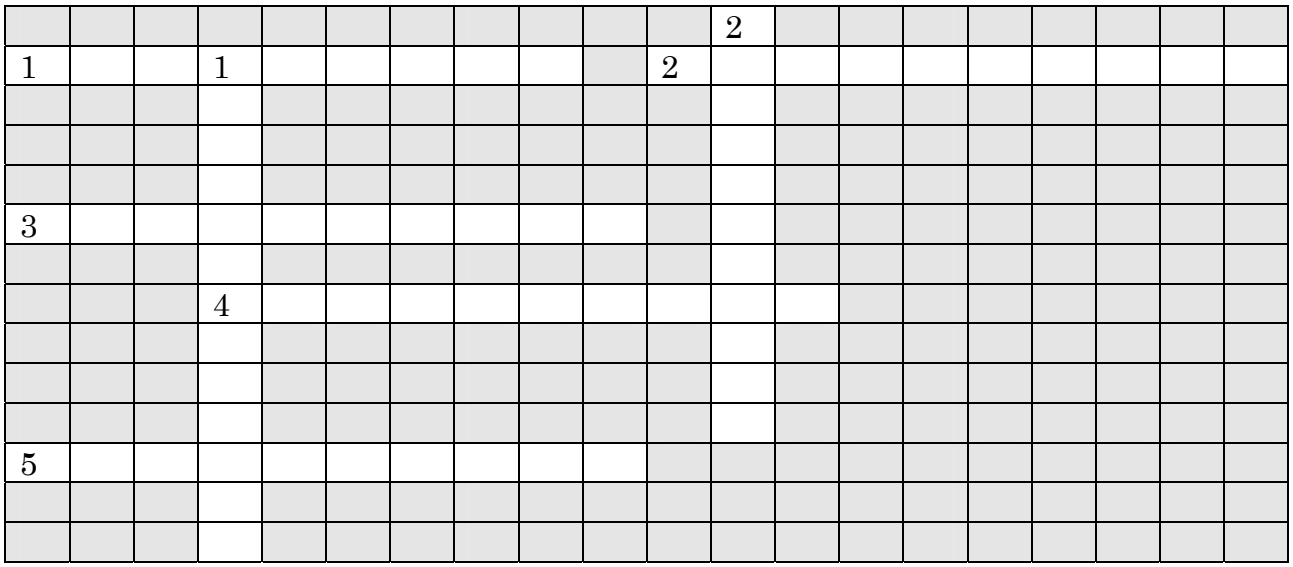
3.1 Serviette Folding
3.2 Writing a Letter of Complaint
3.3 Repairing a Pump
3.4 Production Processes without Power Support
3.5 Tutor Guide Training

4 marks each – 20

Total mark -47

Unit 4.1 – Assignment 4.1 – 1

Question 1



Assignment 4.1 – 2

Unit 4.1 Use of Instructional/learning aids

To be completed and returned to your Tutor for assessment.

This is an open book assignment and you may refer to whatever resources you have at your disposal.

Name:…… Date: ……

Question 1

Although different aids may need different equipment and facilities, there are some basic steps in preparation that are similar for all aids.

- Describe briefly what sorts of things you may need to do when preparing to use a learning aid.
- Include examples to illustrate your answer.

Question 2

Give a practical demonstration of using an aid selected from those discussed in this unit.

- The aid must suit the topic chosen and the group and environment in which the demonstration is delivered.
- It may be done in a similar session with your colleagues or in a class situation if this can be arranged with your tutor.

Question 3

Write a brief report explaining:

- Why you selected the aid
- Your objectives
- Why you think it matches the learning activity
- How it satisfies the criteria
- The approximate cost and time that might have been spent in developing the aid*

**this does not imply that you should prepare/develop the aid you use yourself. Any existing aid that you have access to, and which was discussed in this unit, can be used for the demonstration.*