

Commonwealth Youth Programme  
Diploma in Youth Development Work

## Module 1

# Learning Processes

Commonwealth Secretariat  
Marlborough House  
London SW1Y 5HX  
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Copies of this publication may be obtained from:

**Commonwealth Youth Programme**

Commonwealth Secretariat  
Marlborough House  
Pall Mall  
London SW1Y 5HX  
UNITED KINGDOM  
Tel: +44 20 7747 6462/6456  
Fax: +44 20 7747 6549  
E-mail: [cyp@commonwealth.int](mailto:cyp@commonwealth.int)  
Web site: <http://www.thecommonwealth.org/cyp>

CYP Africa Regional Centre  
University of Zambia  
Great East Road  
P O Box 30190  
Lusaka  
ZAMBIA  
Tel: +260-1-252733/252153/294102  
Fax: +260-1-253698  
E-mail: [admin@cypafrica.org.zm](mailto:admin@cypafrica.org.zm)

CYP Asia Regional Centre  
Sector 12 (PEC Campus)  
Chandigarh - 160012  
INDIA  
Tel: +91 172 2744482/2744463/274182  
Fax: +91 172 2745426/2744902  
E-mail: [admin@cypasia.org](mailto:admin@cypasia.org)

CYP Caribbean Regional Centre  
Homestretch Avenue  
D'Urban Park  
P O Box 101063  
Georgetown  
GUYANA  
Tel: +592-2-268565  
Fax: +592-2-268371  
E-mail: [cypcc@cypcaribbean.org](mailto:cypcc@cypcaribbean.org)

CYP Pacific Centre  
Lower Panatina Campus  
P O Box 1681  
Honiara  
SOLOMON ISLANDS  
Tel: +677-38374/5/6  
Fax: +677-38377  
E-mail: [regionaldirector@cypsp.org.sb](mailto:regionaldirector@cypsp.org.sb)

## The Commonwealth Youth Programme's Mission

CYP works to engage and empower young people (aged 15–29) to enhance their contribution to development. We do this in partnership with young people, governments and other key stakeholders.

Our mission is grounded within a rights-based approach, guided by the realities facing young people in the Commonwealth, and anchored in the belief that young people are:

- a force for peace, democracy, equality and good governance,
- a catalyst for global consensus building, and
- an essential resource for poverty eradication and sustainable development.

## Acknowledgments

### The Module Writers

<b>Module 1</b>	Dr G Gunawardena – Sri Lanka	<b>Module 8</b>	R K Mani – India
<b>Module 2</b>	Lincoln Williams – Jamaica	<b>Module 9</b>	Teorongonui Keelan – Aotearoa/New Zealand
<b>Module 3</b>	Louise King – Australia	<b>Module 10</b>	Dr P Kumar – India
<b>Module 4</b>	Peta-Anne Baker – Jamaica	<b>Module 11</b>	Steven Cordeiro – Australia
<b>Module 5</b>	Dr Mable Milimo – Zambia	<b>Module 12</b>	Dr M Macwan'gi – Zambia
<b>Module 6</b>	Morag Humble – Canada	<b>Module 13</b>	Paulette Bynoe – Guyana
<b>Module 7</b>	Anso Kellerman – South Africa		

### The CYP Instructional Design Team

	Original version	2007 revision
<b>Project manager</b>		Sid Verber – UK
<b>Senior ID</b>	Melanie Guile and Candi Westney – Australia	Catherine Atthill – UK
<b>Module 1</b>	Hilmah Mollomb – Solomon Is	Catherine Atthill – UK
<b>Module 2</b>	Ermina Osoba/RMIT – Antigua	Catherine Atthill – UK
<b>Module 3</b>	Candi Westney – Australia	Rosario Passos – Canada
<b>Module 4</b>	Rosaline Corbin – Barbados	Julie Hamilton – Canada
<b>Module 5</b>	Judith Kamau – Botswana	Catherine Atthill – UK
<b>Module 6</b>	Dr Turiman Suandi – Malaysia	Chris Joynes – UK
<b>Module 7</b>	Evelyn Nonyongo – South Africa	Evelyn Nonyongo – South Africa
<b>Module 8</b>	Melanie Guile – Australia	Chris Joynes – UK
<b>Module 9</b>	Irene Paulsen – Solomon Is	Rosario Passos – Canada
<b>Module 10</b>	Prof Prabha Chawla – India, and Suzi Hewlett – Australia	Rosario Passos – Canada
<b>Module 11</b>	Melanie Guile – Australia	Rosario Passos – Canada
<b>Module 12</b>	Dr R Siaciwena – Zambia	Dr R Siaciwena – Zambia
<b>Module 13</b>	Lynette Anderson – Guyana	Chris Joynes – UK
<b>Tutor manual</b>	Martin Notley / Lew Owen / Thomas Abraham / David Maunders	Catherine Atthill – UK
<b>Typesetters</b>	Klara Coco – Australia	Decent Typesetting – UK
<b>Editors</b>	Lew Owen / Paulette Bynoe	Lyn Ward – UK Tina Johnson - USA
<b>Proofreader</b>	RMIT	Andrew Robertson

The University of Huddersfield for the Curriculum Framework Document and the Editorial work on the module content – Martin Notley and Lew Owen.

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Graphic Art – Decent Typesetting.

Final Module review – Magna Aidoo, Lew Owen, Paulette Bynoe.

Guy Forster for the module cover designs.

## **The CYP Youth Work Education and Training (YWET) Team**

### **PCO Adviser: Youth Development**

Cristal de Saldanha Stainbank

### **YWET Pan-Commonwealth Office**

Jane Foster

Tina Ho

Omowumi Ovie-Afabor

Fatiha Serour

Andrew Simmons

Nancy Spence

Eleni Stamiris

Ignatius Takawira

### **YWET AFRICA**

Yinka Aganga-Williams

Gilbert Kamanga

Richard Mkandawire

Valencia Mogegeh

James Odit

### **YWET ASIA**

Seela Ebert

Raj Mishra

Bagbhan Prakash

Saraswathy Rajagopal

Raka Rashid

Rajan Welukar

### **YWET CARIBBEAN**

Armstrong Alexis

Heather Anderson

Henry Charles

Kala Dowlath

Ivan Henry

Glenyss James

### **YWET PACIFIC**

Afu Billy

Sushil Ram

### **YWET PACIFIC**

Jeff Bost

Tony Coghlan

Sharlene Gardiner

Suzi Hewlett

Irene Paulsen

### **Pan-Commonwealth Quality Assurance Team (PCQAT)**

#### **Africa**

Joseph Ayee

Linda Cornwell

Clara Fayorsey

Ann Harris

Helen Jones

Fred Mutesa

#### **Asia**

Thomas Chirayil Abraham

Shamsuddin Ahmed

Vinayak Dalvie

Bhuddi Weerasinghe

#### **Caribbean**

Mark Kirton

Stella Odie-Ali

Carolyn Rolle

#### **Pacific**

Robyn Broadbent

Ron Crocombe

David Maunders

Sina Va'ai

### **YWET Evaluators and Consultants**

Chandu Christian

Dennis Irvine

Oscar Musandu-Nyamayaro

Richard Wah

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## Introduction

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Welcome to Module 1 *Learning Processes*. The ability to learn is the most marked trait of human beings. You must have heard the following saying (or its equivalent in your culture): ‘Learning is better than silver or gold.’

Learning is intrinsically satisfying. What’s more, it can be fun. It’s a personal experience, an experience of change. It’s an inner process, which can only be observed by others in the form of changes in your behaviour.

Learning takes place throughout life – in different ways, in different contexts. It’s almost impossible to stop people learning, in some form or other, all the time. This is very useful for youth development workers. Learning is a powerful tool that we can use deliberately to improve knowledge and enhance skills. If you can direct learning along appropriate channels, then you will accelerate the process and help young people to develop very rapidly.

The aim of this module is to introduce you to the ideas and practices of learning that are relevant to youth development work. The module focuses on the role of youth development workers as educators, or to put it another way, as ‘learning facilitators’. We prefer this term because it indicates that your role will be to help and guide the very powerful internal learning processes in young people, rather than to control them.

The module explores different theories of learning and their influences. It identifies the different ways in which people learn and the factors that inhibit or facilitate learning. It also considers experiential learning as a method that is appropriate to youth development workers, and examines appropriate strategies for face-to-face work with young people and adults.

## Module learning outcomes

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Learning outcomes are statements that tell you what knowledge and skills you will have when you have worked successfully through a module.

### Knowledge

When you have worked through this module you should be able to:

- identify and discuss key theories of learning
- outline the principles of adult learning and the characteristics of adult learners
- give an overview of important psychological and philosophical principles relevant to 'education for all' and youth development work
- describe the characteristics of informal education and apply this knowledge to youth development work
- identify factors that help and factors that hinder people's learning, particularly in informal settings
- explain what is meant by 'experiential learning'.

### Skills

When you have worked through this module you should be able to:

- describe your own and other people's learning style(s) and mode of intelligence
- devise effective strategies for learning with a range of individuals and groups in youth development work
- make use of the techniques of informal and experiential learning in youth development work
- enable other people to make use of these techniques in youth development work.

## About this module

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Module 1 *Learning Processes* is divided into seven units:

### **Unit 1 What is learning?**

This unit offers you the opportunity to explore what learning is. It introduces you to the main theories of learning and describes how learning takes place.

### **Unit 2 How adults learn**

This unit will help you to understand how adults learn and the factors that have to be considered when dealing with adult learners.

### **Unit 3 'Education for all'**

This unit focuses on describing some of the philosophical and psychological aspects of learning that support the principle of equal education for all. You will also learn about the role of the facilitator and youth development worker in adult learning.

### **Unit 4 Informal education**

In this unit you will learn about different learning settings, focusing on informal learning. You will also look at the agents of learning and how informal learning can take place in formal institutions.

### **Unit 5: What helps and what hinders learning?**

While the first four units focus more on the positive aspects of learning, this unit introduces you to some of the factors that can either help or hinder learning. You will learn how to cope with and manage these factors, which can be environmental or personal.

### **Unit 6: Learning styles**

In this unit you will be introduced to different modes of intelligence and different learning and training styles, and to the importance of adapting learning methods to suit them.

### **Unit 7: Facilitating adult learning**

In this unit you will learn about the crucial importance of learners participating in all aspects of planning, designing, implementing and evaluating adult learning programmes. You will also explore strategies for adult learning.

This table shows which units cover the different module learning outcomes.

<b>Module 1 Learning outcomes</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>Knowledge</b>							
1 Identify and discuss key theories of learning.	x					x	
2 Outline the principles of adult learning and the characteristics of adult learners.		x					
3 Give an overview of important psychological and philosophical principles relevant to 'education for all' and youth development work.			x				
4 Describe the characteristics of informal education and apply this knowledge to youth development work.				x			
5 Identify factors which help and factors which hinder people's learning, particularly in informal settings.		x			x		
6 Explain what is meant by experiential learning.		x	x				
<b>Skills</b>							
7 Describe your own and other people's learning style(s) and mode of intelligence.						x	
8 Devise effective strategies for learning with a range of individuals and groups in youth development work.	x	x	x	x	x	x	x
9 Make use of the techniques of informal and experiential learning in youth development work.	x	x	x	x	x	x	x
10 Enable other people to make use of these techniques in youth development work.							x

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# Assessment

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Each module is divided into a number of units. Each unit addresses some of the learning outcomes. You will be asked to complete various tasks so that you can demonstrate your competence in achieving the learning outcomes. The study guide will help you to succeed in your final assessment tasks.

## Methods

Your work in this module will be assessed in the following three ways:

- a major research assignment of approximately 1750 words (worth 50 per cent of the final mark)
- a review of the learning journal you keep (worth 20 per cent of the final mark).
- a written examination set by the institution in which you are enrolled for this Diploma programme (worth 30 per cent of the final mark).

Several exercises, some requiring field investigation and action, will be required in the course of your work on each unit.

There are full details of the assignments at the end of the module.

**Note:** We recommend that you discuss the study and assessment requirements with your tutor before you begin work on the module. You may want to discuss such topics as:

- the learning activities you will undertake on your own
- the learning activities you will undertake as part of a group
- whether it is practical for you to do all of the activities
- the evidence you will produce to prove that you have met the learning outcomes – for example, learning journal entries, or activities that prepare for the final assignment
- how to relate the assignment topics to your own context
- when to submit learning journal entries and assignments, and when you will get feedback.

## Learning journal

Educational research has shown that keeping a learning journal is a valuable strategy to help your learning development. It makes use of the important faculty of reflecting on your learning, which supports you in developing a critical understanding of it. The journal is where you will record your thoughts and feelings as you are learning and where you will write your responses to the study guide activities. The journal is worth 20 per cent of the final assessment. Your responses to

the self-help questions can also be recorded here if you wish, though you may use a separate note book if that seems more useful.

Again, we recommend you discuss the learning journal requirements with your tutor before you begin, including how your learning journal will be assessed.

## Self-test

Take a few minutes to try this self-test. If you think you already have some of the knowledge or skills covered by this module and answer 'Yes' to most of these questions, you may be able to apply for credits from your learning institution. Talk to your tutor about this.

**Note:** This is not the full challenge test to be held by your learning institution for 'Recognition of Prior Learning'.

Put a tick in the appropriate box in answer to the following questions:

	Yes	No	More or less
Can you already explain and discuss the main theories of education and learning?			
Can you describe the main features of adult learning and how adults learn best?			
Do you already have a working understanding of the psychological and philosophical concepts that underpin learning in youth development work?			
Can you explain how the theory of informal education is relevant to youth in development work?			
Can you identify factors that hinder and help the learning process, especially in informal settings?			
Can you describe the nature of experiential learning and give examples of its practical application?			
Can you describe your and others' learning styles and mode of intelligence?			

	Yes	No	More or less
Can you describe effective learning strategies for a range of individuals and groups? Do you have practical experience in using them?			
Do you already use the techniques of informal and experiential learning?			
Can you help others to use the techniques of informal and experiential learning? Can you demonstrate that you have had experience of this?			

## Learning tips

You may not have studied by distance education before. If so, here are some guidelines to help you.

### How long will it take?

It will probably take you a minimum of 70 hours to work through the study guide for this module. The time should be spent doing the activities and self-help questions, and completing the assessment tasks and studying the readings.

Note that units are not all the same length, so make sure that you plan and pace your work to give yourself time to complete all of them. In this module, Unit 1 *What is Learning?* is likely to take you longer than later units, as the ideas may be new to you.

### About the study guide

This study guide gives you a unit-by-unit guide to the module you are studying. Each unit includes information, case studies, activities, self-help questions and readings for you to complete. These are all designed to help you achieve the learning outcomes that are stated at the beginning of the module.

### Activities, self-help questions and case studies

The activities, self-help questions and case studies are part of a planned distance education programme. They help you make your learning more active and effective, as you process and apply what you read. They will help you to engage with ideas and check your own understanding. It is vital that you take the time to complete them in

the order that they occur in the study guide. Make sure that you write full answers to the activities, or take notes of any discussions.

We recommend that you write your answers in your learning journal and keep it with your study materials as a record of your work. You can refer to it whenever you need to remind yourself of what you have done. The activities may be reflective exercises designed to get you thinking about aspects of the subject matter, or they may be practical tasks to undertake on your own or with fellow students. Answers are not given for the activities. A time is suggested for each activity (for example, 'about 20 minutes'). This is just a guide. It does not include the time you will need to spend on any discussions or research involved.

The self-help questions are usually more specific and require a brief written response. The answers are given at the end of each unit. If you wish, you may also record your answers to the self-help questions in your learning journal, or you may use a separate notebook.

The case studies give examples, often drawn from real life, to apply the concepts in the study guide. Often the case studies are used as the basis for an activity or self-help question.

## Readings

There is a section of Readings at the end of the study guide. These provide additional information or other viewpoints, and relate to topics in the units. You are expected to read them.

There is a list of references at the end of each unit. This gives details about books that are referred to in the unit. It may give you ideas for further reading. You are not expected to read all the books on this list.

**Please note:** In a few cases full details of publications referred to in the module have not been provided, as we have been unable to confirm the details with the original authors.

There is a list of Further Reading at the end of each module. This includes books and articles referred to in the module and are suggestions for those who wish to explore topics further. You are encouraged to read as widely as possible during and after the course, but you are not expected to read all the books on this list. Module 4 also provides a list of useful websites.

Although there is no set requirement, you should aim to do some follow-up reading to get alternative viewpoints and approaches. We suggest you discuss this with your tutor. What is available to you in libraries? Are there other books of particular interest to you or your region? Can you use alternative resources, such as newspapers and the internet?

## Unit summary

At the end of each unit there is a list of the main points. Use it to help you review your learning. Go back if you think you have not covered something properly.

## Icons

In the margins of the *Study Guide*, you will find these icons that tell you what to do:



### Self-help question

Answer the questions. Suggested answers are provided at the end of each unit.



### Activity

Complete the activity. Activities are often used to encourage reflective learning and may involve a practical task. Answers are not provided.



### Reading

Read as suggested.



### Case study

Read these examples and complete any related self-help question or activity.

## Studying at a distance

There are many advantages to studying by distance education – a full set of learning materials is provided, and you can study close to home in your own community. You can also plan some of your study time to fit in with other commitments, such as work or family.

However, there are also challenges. Learning away from your learning institution requires discipline and motivation. Here are some tips for studying at a distance.

- 1 **Plan** – Give priority to study sessions with your tutor and make sure you allow enough travel time to your meeting place. Make a study schedule and try to stick to it. Set specific days and times each week for study and keep them free of other activities. Make a note of the dates that your assessment pieces are due and plan for extra study time around those dates.

- 2 **Manage your time** – Set aside a reasonable amount of time each week for your study programme – but don't be too ambitious or you won't be able to keep up the pace. Work in productive blocks of time and include regular rests.
- 3 **Be organised** – Have your study materials organised in one place and keep your notes clearly labelled and sorted. Work through the topics in your study guide systematically and seek help for difficulties straight away. Never leave problems until later.
- 4 **Find a good place to study** – Most people need order and quiet to study effectively, so try to find a suitable place to do your work – preferably somewhere where you can leave your study materials set out ready until next time.
- 5 **Ask for help if you need it** – This is the most vital part of studying at a distance. No matter what the difficulty is, seek help from your tutor or fellow students straight away.
- 6 **Don't give up** – If you miss deadlines for assessment pieces, speak to your tutor – together you can work out what to do. Talking to other students can also make a difference to your study progress. Seeking help when you need it is a key way of making sure you complete your studies – so don't give up!

## If you need help

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If you have any difficulties with your studies, contact your local learning centre or your tutor, who will be able to help you.

**Note:** You will find more detailed information about learner support from your learning institution.

*We wish you all the best with your studies.*

# Unit 1: What is learning?

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## Unit introduction

Welcome to Unit 1 *What is learning?*

This first unit offers you the opportunity to explore what learning is. It sets out a basic model of what is currently understood by educators about how people learn. It introduces you to the main theories of learning.

The aim of the unit is to start you thinking about learning – as a learner yourself and as a youth development worker working with other learners. It starts by asking you to reflect on experiences you have had of learning, so that you can build up your own definition.

This first unit contains a lot of reading material and ideas that may be new to you. It is one of the longer units in Module 1. Work through it gradually. You can return to the readings and ideas as you work through the rest of Module 1 and the other modules, as your knowledge and understanding deepen. Don't forget to use the glossary for explanations of specialist terms. The self-help questions and activities in the unit will help you to relate the ideas to your own work and experience and to discuss them with colleagues and other learners. The unit will ask you to analyse your own learning behaviour and that of the young people you know, in the light of your reading and thinking. Note that you don't have to remember everything.

The unit introduces important aspects and key theories of learning, but it does not aim to give you an in-depth understanding of them. However, it should help you to construct your own theory of how people learn. This will act as a framework that you can use throughout this module, and in your work as a learner and as a facilitator of educational opportunities for young people.

The field of human learning is so rich and interesting that you will soon begin to develop your own theories and philosophy of education. We hope so, because these attributes will help guide your practice as a youth leader, and help you to develop aims and objectives for your work.

## Unit learning outcomes

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When you have worked through this unit, you should be able to:

- write your own definition of learning
- describe important elements of a definition of learning
- identify and discuss the main points of some key theories of learning
- relate what you learn in this unit to your own experiences.

## Thinking about learning

Learning is a process of mental growth that may also change your physical and social abilities. For you as a learner, the experience of learning is felt as personal, both as an inner process of improvement in your mind, and as a change in your behaviour (such as the improved ability to tackle problems). An educator or learning facilitator will be able to observe your change in behaviour – but they have to work out what has happened in your mind.

Human beings belong to a learning species. It's almost impossible to stop people learning, and therefore learning takes place throughout life, in all sorts of different ways and different contexts. Of course, what we learn may not always be what we want or need. People can learn all sorts of behaviour by simply being exposed to situations where damaging behaviour is normal. Think of teenagers who acquire bad behaviour in school and refuse to learn useful school knowledge, in order to be accepted as part of an anti-school peer group.

Human beings have a huge capacity for learning. However, we use surprisingly little of the active, intellectual part of our brains. But we can extend our intellects enormously when we need to. This becomes clear in disaster situations. For example, when villagers living peaceful, repetitive lives on the land are forced to deal with the threat of floods or earthquakes, they have to make extreme adaptations to meet the challenge of finding food and shelter and reorganising economic and social life.

For youth development workers, understanding this principle – that people can extend their capacity for learning when they need to – is crucial. You may encounter serious problems of community and environmental breakdown when you are trying to mobilise young people to utilise their intellectual capacity to solve the problems they face. Their access to this spare capacity in their brains might be blocked by previous learning experiences, and by present failure to open the right intellectual doors. To open these doors, you need to understand some of the principles of learning that have begun to be discovered by psychological and sociological research. Above all, you need to facilitate the growth of their self-confidence, and help them to understand that they can achieve many intellectual skills relatively easily.

So what we can find out about how people learn? Have you ever thought about the question: 'What is learning?'

By doing or studying research into the nature of learning, we can gain a better grasp of how to organise the learning experience. It's surprisingly hard to define learning, though we can usually describe the situations in which learning takes place. By thinking about what happens to us in those situations, we can begin to develop a personal understanding of the processes of learning. This helps us to observe

whether or not the young people we are working with are actually learning anything. It's possible for people to appear as if they are learning, but in reality their learning may be superficial, so they will not be able to do anything with it nor build on it.

Over the last 100 years, the subject of how people learn has been controversial, with different schools of thought struggling to define the issues. You may meet much intellectual conflict regarding some of the ideas presented here (particularly if you come from a culture with different traditions from the contending liberal humanist and Marxist ideas that underpin this module). Those disagreements are valuable for increasing understanding, and involving yourself in them will be good for your own development.

We start our investigation of how people learn by asking you to think about your own experiences.



### **Activity 1.1**

(about 15 minutes)

1. In your learning journal, write down brief descriptions of different sorts of examples of learning that you have experienced, such as learning a physical skill, an aspect of a school subject, a social skill. Write down as much as you can about them. Keep working for the whole 15 minutes.
2. Once you have a good list of examples, try to organise them into groups or types of learning activities.

If you work with a tutorial group, you may want to do this as a group activity.



### Self-help question 1.1

(about 15 minutes)

Now try to write an answer to the question: ‘What is learning?’

Look at the list you prepared in Activity 1.1 and try to write a definition of learning that covers all the different examples that you included.

Learning is

.....

.....

.....

.....

*Compare your answers with those suggested at the end of the unit.*

The purpose of this question is to let you see that, while you can usually describe what is happening on the surface of learning situations, the underlying learning process itself is much harder to define. However, we can use simple problem-solving techniques to give us more insight into the nature of the learning process. Read the following case study about ways of learning, teaching and testing.



### Case study 1.1

#### Learning about cocoa production in Ghana

A group of young people are going to learn about why Ghana became a major cocoa producer. John, a youth development worker involved with the group, has been asked to plan the best way of testing whether they have really learned the subject.

There seem to be three options:

- 1 Test them after a period of time, or immediately.
- 2 Test them in a variety of problem-solving situations.
- 3 Test them to see if the knowledge can be used as the building block for more advanced abilities.

John realises that it all depends what the learners are expected to achieve – the objectives of their learning. So the learning must be arranged to meet the different objectives implied in the three options:

- 1 Testing the knowledge immediately will tell John whether or not the learners have *understood* it and *recalled* it, and may reassure him that the structure of the argument is clear in their minds for the moment. John could teach to this objective by clear, well-illustrated presentation or by getting learners to work out the ideas for themselves in a small group. By testing them again after a long period of time, he can test whether they just *recall* the bare facts or whether they can organise these facts into an argument that shows *comprehension* as well as *recall*.
  - 2 By testing in practical situations, John will be testing a higher level of thinking than in option 1. Option 2 tests the *application* of the knowledge. To be able to do that successfully, learners will have had to *analyse* the meaning of the ideas very thoroughly to see which of them apply to each situation, and how they apply. To do this they will also have to *understand* the information. The learners could perhaps be given several scenarios in which political, economic and climatic conditions varied for Ghana, and they could be asked to explain what would then happen to cocoa production in Ghana. To answer these, they would need to understand key economic ideas such as 'comparative advantage'. What John is testing here is their ability to apply a theoretical understanding of an aspect of economic geography to the specific situation of Ghana. To teach this, John would have to concentrate on developing insight into the theory. That needs a learning situation where learners are continually presented with problems, and in order to solve them they have to apply the theory. That can be done by a 'discovery learning' approach, where they work in groups through a workbook, perhaps in combination with a teacher-led, question-and-answer session, and so on.
  - 3 To test whether learners have developed the idea so that it can be used as a building block for further learning, John might, for example, present the learners with a description of the set of recent world conditions in which Ghana's cocoa production is under threat, and get them to investigate why Ghana is in this position. This would make them go back to why Ghana became a major cocoa producer, but would also enable them to move on to key principles of modern world trade. This test is perhaps the most difficult, because it requires learners to build up the theory themselves by *synthesising* material from several sources, material which they will have had to *analyse* and *evaluate* and *apply*, which means that they must *comprehend* that material also. This method of testing would require a series of teaching processes that encourage these skills, best done in small, interacting groups so that ideas could be tried out and challenged.
-

The words in italics in the case study come from a method of analysing the nature of different kinds of learning and the different levels of complexity that they involve, invented by Benjamin Bloom (1956). Bloom called it a ‘taxonomy of learning’. This is a valuable idea because it tells us what we should be teaching in order to help a learner reach a particular level of learning objective. It can also suggest to us how best to teach it as well. The levels are:

- knowledge
- comprehension
- application
- analysis
- synthesis
- evaluation.

So it is important to create effective learning structures, depending on different kinds of learning and the objectives of learning.

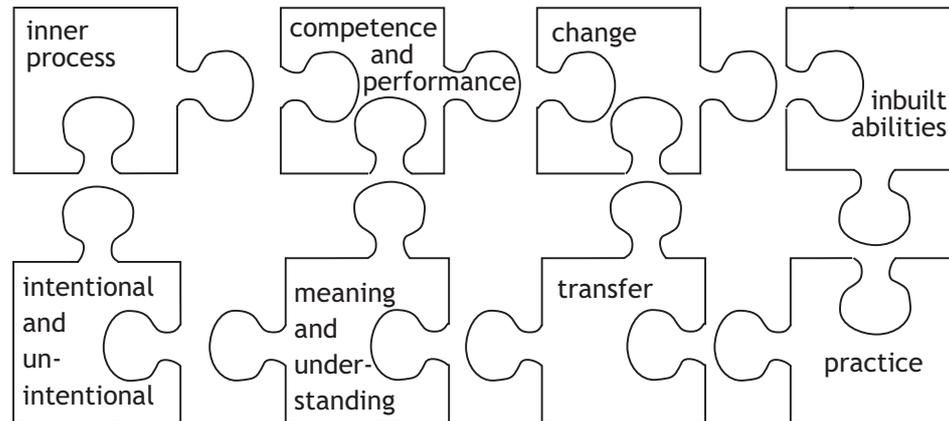
A lot of learning needs to be acquired in ways that will enable you to build on it in the future, rather than getting stuck with a method that suits just one situation. Even in many apparently simple, repetitive skills, there are underlying abilities that could be developed and used for different, more challenging problems, if you can expose them. This is important if you are working with young adults. They may have developed what appear to be very simple skills, such as quick calculations when selling goods in public – very common among young street traders in developing countries. However, it could be that those apparently simple skills involve submerged logical thinking. As the example of young street traders in Brazil shows later in this unit (Case study 1.3), youth workers would be able to facilitate the development of true mathematical abilities if they could recognise and develop these underlying logical processes.

Youth workers meet many young people who do not have confidence in their own ability and potential because no one has recognised the extraordinary range of abilities that they have. Simply by having lived and survived in the turbulent everyday world, they have considerable abilities. But they may not have acquired these abilities in such a way that they can build on them further. So youth workers must facilitate that building-on process.

In this section you have thought about your own experiences, formulated your own definition of learning, and begun to look at levels of learning. In the next section, we will build on that.

## Defining learning

There appears to be no final answer to the question: ‘What is learning?’ What we have is a number of theories backed up by research, and we can use these findings to get more out of learning techniques. So, while defining the concept of learning is very difficult, even for the experts, we can examine some of the aspects of learning that need to be considered in a definition.



There are three self-help activities in this section to help you try out the ideas.

### 1 Inner process

Learning is essentially a personal process that takes place in the brain. It is a process of change in our underlying mental competence which usually shows itself in aspects of our behavioural performance, such as the skill to do calculations or cook food. Other people can only be aware of a change in our inner competence by observing a change in our behaviour or performance.

For example, they may see that we can make pepper soup faster and it tastes better than before. Or they can set us more advanced arithmetic questions and check how quickly and accurately we can do them. And they can then infer that we must have developed a higher level of ability in these skills.

### 2 Competence and performance

What’s the difference between competence and performance? It’s important to distinguish between them. Competent learning means the process of internal development. Actual performance in the real world means behaviour that someone else can observe. From a change in performance, it should be possible to work out what change in underlying competence has taken place. However, the sort of performance is significant (as shown in Case study 1.1).

Because human abilities tend to be complex, even in apparently straightforward skills, we have to be sure that the performance does reveal underlying competence.

For example, somebody can be trained to develop the particular social skill of behaving politely with other people. But the underlying competence that enables this skill to be achieved may be the ability to empathise with the other person and to use behaviour that will increase the flow of communication between them. That will ensure that this kind of behaviour becomes part of their everyday behaviour. To know whether they have acquired that underlying competence we need to test it in a range of circumstances. We need to be sure that the learner understands what makes the behaviour work.

Even apparently simple skills, such as the ability to calculate money in roadside transactions, are underpinned by complex, abstract processes (as you will see later in Case study 1.3 about the Brazilian street traders). So, not everything that is learned will necessarily be demonstrated in an obvious way.

Motivation to perform is also crucial. For example, young people may be inhibited from performing by the presence of their peer group, especially if they believe the others are of socially higher status than them. Or teenagers may have mastered a school subject but may choose not to show their skills because they want attention from the teacher, or because they are hostile towards the school. These are important external conditions that affect the motivation to perform. They are primarily social conditions. As a youth development worker, you need to learn how to create the right social conditions if you are going to motivate your groups to perform.

When learning is primarily intellectual (in other words, when it leads to greater knowledge or understanding of something, such as chemistry or history) other people can only assess that learning when the learner applies it, by answering examination questions or by solving intellectual problems in the real world. Intellectual development will be seen in more sophisticated performance when discussing or writing about a subject. Bloom's taxonomy (1956) is helpful in assessing these things. Assessing the mental competence underlying this intellectual performance is not simple. You yourself may well have passed examinations by presenting knowledge that you have forgotten immediately afterwards, and which had no meaning for you in the real world. Therefore the knowledge did not lead to a permanent change in your ability to perform.

### 3 Change

Most definitions of learning assume that it involves change – the notion of a more or less permanent change in performance or behaviour.

Changes in performance or behaviour are not always due to learning, but to other factors, such as injury or illness; intoxication or fatigue; a natural developmental response (such as sucking and blinking); or maturation or growth.

When we talk about change as an indicator that learning has taken place, we are usually talking about conscious change – changes in understanding, in attitudes and in the ability to perform things such as problem solving. However, Gleitman (2003) makes the point that we perform most of our mental functions and much of our behaviour unconsciously, or rather non-consciously.

For example, when we clean our teeth there is a series of quite complicated movements, supported by detailed knowledge, that enables us to do the cleaning. But we usually just use these automatically, thinking only of the position of the brush in our mouths. Likewise, we acquire large parts of our knowledge and skills non-consciously, by absorbing them through interacting with others and with our surroundings.

This implies that learning does not necessarily take place as a result of teaching. Much of our learning occurs informally at a non-conscious level and may very often be unintentional.

Take another example: making conversation in a group. That skill involves subtle knowledge of where to position yourself in relation to other people in the group, how to shift your body position and move your head and arms, where to look when you are speaking in order to show respect and interest. We can see how important this is when we observe the dilemma of people who are slightly autistic and who do not have the internal mechanisms for observing and acquiring these detailed skills. Unwittingly, they may present themselves as clumsy and perhaps rude because they are socially incompetent. Because they have been unable to observe and understand these subtleties, they may become very mechanical in what they do, rather like a robot.

Another example. You can see how complex some of these non-conscious skills are in someone recovering from a severe stroke. He has to learn the apparently simple skill of walking, a tiny bit at a time, gradually stringing the sequences of tiny, separate movements together into short but complete steps, then hopefully into full movements.

The fact that the stroke patient can do this does suggest that, when we first learned to do these things, we made changes in our performance that, to some extent, we consciously learned through observation and interaction. However, as we will describe later, our brains have internal cognitive systems that accelerate this kind of learning. By observing and interacting with people around us, and occasionally being given instruction, these cognitive systems will have enabled us to learn the complex patterns of social life in the family and community, until we employed them ourselves, habitually and automatically. As a result, we no longer have to waste energy paying conscious attention to them. They are organised into sub-routines of behaviour which can become part of longer and more complex routines. They are then the source of fast and efficient behaviour.

Depending on where and how we are brought up, these routines vary significantly. If we are brought up in an environment where ways of

speaking, thinking and acting are part of our society's elite culture, then we will readily adapt to the norms of that culture. Any tests designed by our elite are likely to be relatively easy for us to master. Where we develop the low-status norms of our society, we have to make huge adjustments to perform well against elite norms, such as those tested by IQ tests or university examinations.

This largely non-conscious learning has its dangers. We can become trapped into incompetence by these ingrained habits when we are faced by problems that need a fresh approach. We may find that that we have a rigid 'mental set': a way of seeing and dealing with something that has become fixed in a way that's hard to change and that blocks our ability to adapt. As you will see in Case study 1.3, the skills of the Brazilian street traders in selling food on the streets work in the trading situation, but they can't adapt them to school maths, though they are based on the same principles. These skills have become mentally fixed around items of food. When the food is not there, the skills disappear.

This is where the process of conscious learning is so crucial. Like the stroke patient, we may sometimes need to analyse a skill a bit at a time into its small building blocks, then to rebuild these blocks, the sub-routines, of our earlier learning, in order to be able to add on the new learning. There are several alternative psychological models for doing this.

#### 4 Inbuilt abilities

It is important for youth development workers to recognise the inbuilt learning abilities of their groups – to work in harmony with the way that nature has endowed the human species. The evidence of linguists such as Pinker, working in the general tradition of Noam Chomsky, suggests that we are born with a structure in the brain known as the 'Language Acquisition Device' (LAD). This automatically understands and recreates the rules of any language in which it is immersed, providing that the right conditions are in place. By using methods derived from this research it is possible for learners to acquire mastery of a new language extremely quickly (Krashen, 2003). It is accepted among scientists working in this area that the LAD is found in a structure consisting of several related parts of the brain next to the motor areas that support spoken language (Butterworth, 1999).

The best conditions for foreign language learning are normally met in non-formal situations in childhood. The reasons for this are that:

- children are generally not under pressure to speak in a language community until the basic rules of that language have been formed in their minds from listening with understanding;
- this happens simply from exposure to or immersion in the language, in conditions where they are allowed to concentrate on

the meaning of what is being said, rather than on the form of the words.

When these conditions are met, the LAD seems able to absorb and process the grammar and form appropriate grammatical rules.

What young children do naturally has to be carefully constructed with young adults. This sort of learning has to be adapted to suit them and their circumstances, and specific learning strategies devised for specific bodies of learning. We have found, in our own action research, that these principles that work so well in foreign language learning, work even better when learners are acquiring new specialist languages for the sciences and the arts – such as political literacy or the language of the sociological thinker.

For example, you may be helping a group to set up a small business enterprise. The learners will have to learn rapidly how to understand business documents and communicate with funding companies and other businesses. Think about what you might do to prepare them quickly for these skills. They need to understand the meaning of what is being studied. So what ways are there in which you can make business situations meaningful and realistic when you are delivering training? They will need lots of exposure to business language and business communication, both spoken and written, but only when the meaning is absolutely clear.

This view of language acquisition is very positive for adult learners, if you can create the right learning conditions, because they have so much experience on which to draw. This same model has been argued by Jackendoff (1995) to be applicable to musical learning, social learning, and artistic learning. Chomsky has argued that we have inborn, open-ended faculties for acquiring all the main forms of knowledge that have been developed. Butterworth (1999) describes a similar model of people's inborn capacity for mathematical learning. He calls it 'our innate Number Module'.

While there has been controversy about what the psychological processes involved are, the general model is now widely accepted as being relevant to learning. The model suggests that it is crucial to:

- understand the ideas or the essence of the situations embodied in the linguistic form. For example, if you understand from discussion of the real world what a sociological text is really talking about, then you have no problem in coping with, and acquiring for your own use, the 'sociologese' – the sociological language registers.
- be exposed to lots of examples of the linguistic or representational forms in which these ideas are expressed. (For example, think about arithmetic where you need to work on lots of examples before the process sticks and becomes a natural part of your thinking).

## 5 Intentional and unintentional

Many of the skills we take for granted, such as speaking our mother tongue, are the result of unintentional, non-conscious learning. So, unintentional learning occurs all the time in informal settings and often goes unrecognised because we are not conscious of it. What we are advocating in this unit is that you should become aware of these non-conscious processes and use them intentionally to accelerate learning.

The reading that follows and the self-help question will help bring together the aspects of learning discussed so far, namely:

- inner process
- competence and performance
- change
- inbuilt abilities
- intentional and unintentional learning.



Now turn to Reading 1: 'The automatic systems in the mind', by Dr G. Gunawardena. This paper discusses the automatic systems in the case of learning to crawl and talk, and what this means to learning as an adult. As you read, think about:

- the points that reflect your own experience, for example of learning a new language
- the points that you could you apply to your work with young people.



## Self-help question 1.2

(about 10 minutes)

Consider the learning that occurs in the following contexts and ask yourself what sort of learning is going on (intentional or unintentional, conscious or non-conscious).

- 1 A pupil learning to write an essay in school.
- 2 An adult learning to drive a motor car.
- 3 A child learning that touching a flame is risky and painful.
- 4 A son learning to plough a field while working with his father.
- 5 A child learning to open up a bottle.
- 6 An adult learning a foreign language.
- 7 An infant learning its mother tongue.
- 8 An infant learning to crawl.

*Compare your answers with those provided at the end of the unit.*

## 6 Meaning and understanding

The most critical element of learning is understanding. When there is understanding of the underlying ideas of a piece of knowledge, learners can be exposed to the forms in which this knowledge is encoded and will be able to understand and acquire these codes.

You can most easily acquire this understanding of new knowledge by applying it to your own experience, or to examples of experience described for you, as shown in the following case study.



## Case study 1.2

### Kes

There is a famous English language film called *Kes*, in which a young, semi-literate boy called Billy Casper finds a young kestrel (a bird of prey) and is determined to train it to hunt. He doesn't read well, but has to learn how to train the kestrel. So he steals a book on hawking and teaches himself to understand this rather complex, technical book by using the pictures for understanding and experimenting with the bird to see if it matches what he thinks he's learning. He quickly becomes expert in the language and skills of hawking, and even delivers a lecture to his classmates on this subject. This is a big change of social and intellectual skill level for him. The film was based on a true story about real characters known by the author, who was then a teacher.

What is crucial here is that Billy crosses the boundary between not understanding and understanding what's written in the book because the book becomes meaningful to him through his involvement with the hawk. And this meaningfulness is the thing that leads to his understanding the text. This enables him to build the new knowledge onto what he already knows, and in the process to increase his reading skills, which in turn leads to more understanding. The meaningfulness of the book also sustains his interest and motivation.

Ausubel (1963) emphasises the importance of meaning, in particular in the area of verbal learning. He contrasted effective meaningful verbal learning with inefficient traditional 'rote learning' (memorising information without it being meaningful). He proposed that being able to combine and internalise an aspect of new knowledge depends on the learner's own knowledge and experience of that aspect.

According to the Swiss developmental psychologist Jean Piaget, the learner's existing knowledge about an aspect of knowledge is organised in one or more schemata (or structures of thought). The new knowledge is then checked against one of these schemata. If it does not contradict the schema it is accepted as one more element within the existing structure. If it does contradict it, the schema may reject the new learning, or it may be changed to accommodate the new learning, making it a richer schema.

It is something like this process that must have been happening to the young boy in *Kes*. The boy has a schema, based on everyday knowledge, which tells him that hawks can be trained to hunt and return to their trainers. He sees a picture in the book of the hawk on the trainer's wrist, wonders what the trainer in the picture is holding out, and reads 'fresh meat'. That enables him to extend his schema about hawks being trainable to include the idea of using meat to attract the hawk and getting it used to perching on his wrist. In this way, he builds up a sophisticated schema of training hawks that now

includes some of the formal language of hawking, which he begins to use well enough to explain the process to classmates.

Learning has to take the learner from the known to the unknown. The emphasis of both Ausubel and Piaget is that the teacher should teach by starting with what the learner already knows, then modifying the learner's available schemata by introducing new but closely related knowledge. And, in developing a new schema, learner and teacher must realise that the schema takes time to form into a firm cognitive (intellectual) or psychomotor (physical) structure.

Working with adults in this way is a very natural process because of the huge range of schematic structures already in place, developed from their life experience. But those schemata may also be too firmly set for some aspect of new learning to be acquired quickly. They may reject the new learning because it contradicts their mental set for that bit of learning.

In the 1920s, Lev Vygotsky developed a theory on the role of language in learning and thinking. He outlined a model called 'scaffolding'. This means the mental structure required for understanding in order to move to the next level of complexity of learning. This mental structure is built into a schema, or series of schemata, which make the next level of complexity (the 'zone of proximal development') accessible. This theory is called a social-cognitive theory because it says that intellectual learning is based on our socially acquired knowledge and experience. It emphasises the co-operative basis of knowledge, particularly culture and language. Culture and language are built up in us through social processes, without which our intellectual functioning is very limited. Because of culture and language, we are capable of higher mental functions such as imagining, reasoning and remembering.

His theory presents a strong argument for carefully designed, socially based, language-intensive activities that challenge the learners to expand their perceptions and raise their consciousness. What this means in an adult learning group is that the learners are invited throughout to contribute to and control discussion and also the learning processes. They are not confined to passive learning or merely book learning. This means that the learning processes are very active and participative. This approach makes it much easier to link old and new learning and to adapt old schemata and develop new schemata.

Reading 2 looks further at these ideas. The self-help question that follows poses a problem, for which these ideas can suggest a solution.



Now turn to Reading 2: 'Scaffolding and the zone of proximal development', by Dr G. Gunawardena. This reading discusses Lev Vygotsky's theory.

As you read, think about ways you could make use of the model of scaffolding and also the practice of exploratory talk that is described, in your work with young people.



### Self-help question 1.3

(about 10 minutes)

Think of yourself as a youth development worker somewhere in your country. You have a mixed-gender group working together on an environmental project.

You now want to move into a phase of the project where the organisation of work will be used to break down traditional gender roles and expectations. You hope this will develop new social relations among the young people, to prepare them for the changes taking place in their society.

You have decided to start this process by working together to develop a project plan. You assume that the compulsion to take on equal gender roles will automatically begin to bring about the necessary changes in attitude. But what you find is that the traditional local attitudes strictly separate male and female roles. The rigid mental sets of the members of your group means that they find it extremely difficult to conceive of things in any other way. What can you do about this? Suggest the first step you would take to start changing roles and expectations.

*Compare your answers with those provided at the end of the unit.*

## 7 Transfer

Can the learning be applied to a new situation?

For many, this is the final indicator of whether learning has taken place – application, a high level of learning in Bloom's taxonomy, described earlier. This is called 'transfer of learning' (or of training). It represents an important behavioural change that is related to the learning process.

The following short case study illustrates the problem of transfer. It is based on a piece of research in Sao Paolo, Brazil, reported by the UK Open University. It contains an account of a group of street children who, from the age of eight until late adolescence, sell food in the streets of Sao Paolo to earn a living.

The self-help question asks you to apply your learning from this unit to answer the questions.



## Case study 1.3

### Brazilian street traders

The researcher Ana Lucia Schliemann found that a group of young street traders, who had no school education of any kind, were remarkably quick and extremely accurate at the following things:

- adding up and subtracting variable quantities of money
- multiplying and adding varying numbers of food items
- subtracting totalled additions from notes of large denomination
- moving effortlessly between the new denominations of the local currency and the old denominations (the new denominations consist of the old denominations divided by a thousand)
- breaking down complex amounts into simpler structures and moving the parts around the sum to make the calculations easier.

The same children were hopeless at school mathematics.



### Self-help question 1.4

(about 20 minutes)

Consider the following questions. If possible, discuss them with others (co-workers and/or tutorial group).

- 1 How have the young street traders managed to do these things?
- 2 Have they acquired any mathematical knowledge?
- 3 Why can't they do school maths?
- 4 If you were a youth development worker assigned to help these young people, what could you do?

*Compare your answers with those provided at the end of the unit.*

## 8 Practice

Driving a car, playing a musical instrument or performing well in sport require a lot of experience, or practice. Learning theorists not only emphasise changes in behaviour. They also stress that these changes are deepened as a result of experience, or practice. To master arithmetic we need to be using it everyday to solve problems in shopping, budgeting and so on. And the nature and quality of that practice is extremely important, as the examples of great performers (such as sports people) show.

In the study of learning, 'practice' is a major area of concern. How you practise is important in developing a high level of ability. Take for example, in the United Kingdom, the Institute for Advanced Motorists. It uses a technique whereby the motorists practise on the road as normal but talk themselves through all the processes that are happening, so that they pay extra conscious attention to what they normally do non-consciously. This significantly improves their driving ability. This principle is supported by what research has shown about the effects of language on learning (Slobin, 1979).

This technique can be applied widely. For essential psychomotor-based manual skills, such as bricklaying or drilling, the trainer can make learners direct their efforts much more precisely, improving the quality of the movements involved, by the use of language. What seems to happen is that the words, by drawing attention to the meaning and the detail of what is being done, sharpen the learner's perception. That feeds into the psychomotor system, because these two areas (perceptual and psychomotor) are closely linked in the brain.

Spectators don't generally appreciate that a great deal of the skills used in sport depend on the link between psychomotor and perceptual schemata in the brain. In other words, much of the process is intrinsically mental. The great coaches make use of the research in this area to increase the performance levels of their athletes, often employing psychologists and psychotherapists as part of practice.

The great tennis champion, Billie-Jean King, is reported to have spent the days prior to major tennis matches envisaging what might happen in the game, and talking herself through all the moves she would make to counter her opponent's efforts. Of course, she could not foresee exactly what would happen, but she was presumably able to develop a complex mental map that underpinned and sharpened her perceptual and psychomotor schemata. This was complex enough to pre-alert her to most of her opponent's moves.

One of the techniques considered particularly useful for beginners in a sport has been called 'the inner game'. Here, the learners are encouraged to observe closely the quality performers whom they admire. When they practise the sport, they think of themselves as if they were those players. They will not be able to perform like their favourites, but they will absorb non-consciously some of the basic skills necessary for playing the sport. This is what Jackendoff (1995) is suggesting when he writes about people being born with a mental acquisition device that enables them to acquire psychomotor skills efficiently. Many of the young people who become competent footballers have possibly been doing this non-consciously when watching matches on television.

Actors and directors often rely on similar techniques to improve the quality of performance in films and plays. Many of the great Hollywood films of the 1950s and 1960s were trained in the 'Method Acting' techniques taught by Lee Strasbourg at the Actors' Studio in

New York. In this method, which was influenced by the great Russian director, Konstantin Stanislavsky, actors use techniques that enable them to live inside the mind of the character they are playing. They draw on their own deepest emotions and experiences to bring a character alive in a quasi-real world. It is as if they are 'taken over' by the character. That generates powerful schemata that underpin and drive the practice of 'method' actors, such as Robert de Niro. Rehearsals then become 'inner-directed' by the way the actors experience the practice situations emotionally and mentally.

Of course, this is only one theatrical tradition in acting and may be in conflict with your own tradition. But as one way of transforming young adults, so that they grow in confidence and personality, it is a very powerful technique. It is a process of transformation observed in young people who have learned to act in dramas and have then transferred these understandings and skills into their everyday behaviour. Of course, successful experience of the performing arts in any tradition will probably transfer into everyday life at one level or another.



## Activity 1.2

(about 20 minutes)

Go back to Self-help question 1.1, where you wrote your own definition of learning.

Review your definition in the light of the aspects covered in this section of the study guide:

- inner process
- competence and performance
- change
- inbuilt abilities
- intentional and unintentional learning
- meaning and understanding
- transfer
- practice.

If possible, discuss with colleagues or your tutorial group.

Now write your revised definition in your learning journal. We will ask you to review your definition again later.

## Key learning theories

Now that you have thought about your own experiences of learning and looked at aspects of learning that need to be considered in reaching a definition, it is time to consider theories that can help explain and define learning.

Many theories of learning have evolved as psychologists and others have tried to account for what happens when learning takes place. In describing the evolution of learning theories, we could go back as far as the ancient Greeks.

However, as we explained in the unit introduction, we are not trying to give you an in-depth understanding of theories of learning, only introducing you to some of the key concepts. Reading this should help you to construct your own theory of how people learn, because this will act as a schema that you can use throughout this module, and in your work as a learner and as a facilitator of educational opportunities for young people.

Learning theories alone could be the subject of a complete module. We will limit our discussion to some of the main theories, those that have been developed by psychologists, starting at around the late 1800s. An important thing to keep in mind is that the earlier theories are not necessarily wrong and later theories right, but that understanding about learning has become more and more complex as research has grown. There are useful aspects to all of these theories.

Learning theories can be broadly classified as:

- behaviourist
- cognitivist
- or humanistic.

Though the lines separating these types of theories are not always clear, using them is a useful way for us to begin.

Some of the important points about each theory are summarised below. These are followed by a reading that examines the theories in more detail. Then there are activities and self-help questions to help you explore each theory further or to apply it.

## Behaviourist learning

In a behaviourist analysis of learning, the idea is that we learn primarily by responding to external conditions.

Among human beings, behaviourist learning techniques are usually based on the principles of operant conditioning. Here, people are essentially free to choose their behaviours.

Learning methods derived from behaviourist theories tend to be focused on the change and/or development of specific skills. They are often involved with social skills and are product/outcome oriented. They stress external motivation and accountability.

A major limitation of behaviourist learning theory is that it describes only observable behaviours and insists on ignoring what is taking place inside the mind of the learner.

## Cognitivist learning

Cognitivist theorists want to know more about the processes that go on in the mind of the learner.

For them, the processes of learning are more important than behavioural changes. Their work throws some light on what is going on in the mind of the learner.

In this module, we will be advocating learning methods that, to a significant degree, derive from the cognitivist view: methods such as discovery learning, process-oriented learning, relying on internal motivation, networked learning and student choice. Learners need to be involved in thinking for themselves, developing tools for acquiring knowledge, problem solving and organising their knowledge.

In essence, cognitivist theories of learning look at three things:

- 1 types of learning or knowledge
- 2 information processing and memory
- 3 metacognition (awareness of the self as a learner; capacity to understand and monitor one's own cognitive processes).

## Humanistic learning

The humanistic models of learning are all concerned with the uniqueness, the individuality and dignity of each learner and the right to self-determination.

Humanistic theories emphasise:

- the inborn and powerful human desire to learn
- the importance of the educator's concern for the perceptions, needs and feelings of the learner,
- the desirability of self-determination: the need for the learner to have a strong measure of control over the learning process
- the need for the teacher to be a facilitator, rather than an 'authority'.

The humanistic emphasis is on the development of the social and emotional self, which is seen as the key supporting framework for underlying competence.



Read Reading 3: 'Key learning theories', by Dr G Gunawardena and revised (2007) by Lewis Owen.

Take your time over this reading, relating the ideas in it to your own definition of learning which you have been developing in the course of each unit. Do the related activity/ self-help after each section.



### Activity 1.3

(about 15 minutes)

This activity applies ideas about behaviourist learning.

Write a response to the following questions in your learning journal.

- 1 How might you follow Skinner's lead and use operant conditioning for improving the social and practical learning of young people?
- 2 With what other kinds of learning would the behaviourist approach be appropriate for youth development work?

If possible, discuss the behaviourist approach with others (co-workers and /or tutorial group).



### **Self-help question 1.5**

(about 15 minutes)

This question and Activity 1.4 apply ideas about cognitivist learning.

Based on what you now know about information processing and memory, try to think of teaching strategies that promote each of the following phases of cognitive learning:

- 1 motivation
- 2 attention
- 3 retention (remembering)
- 4 transfer.

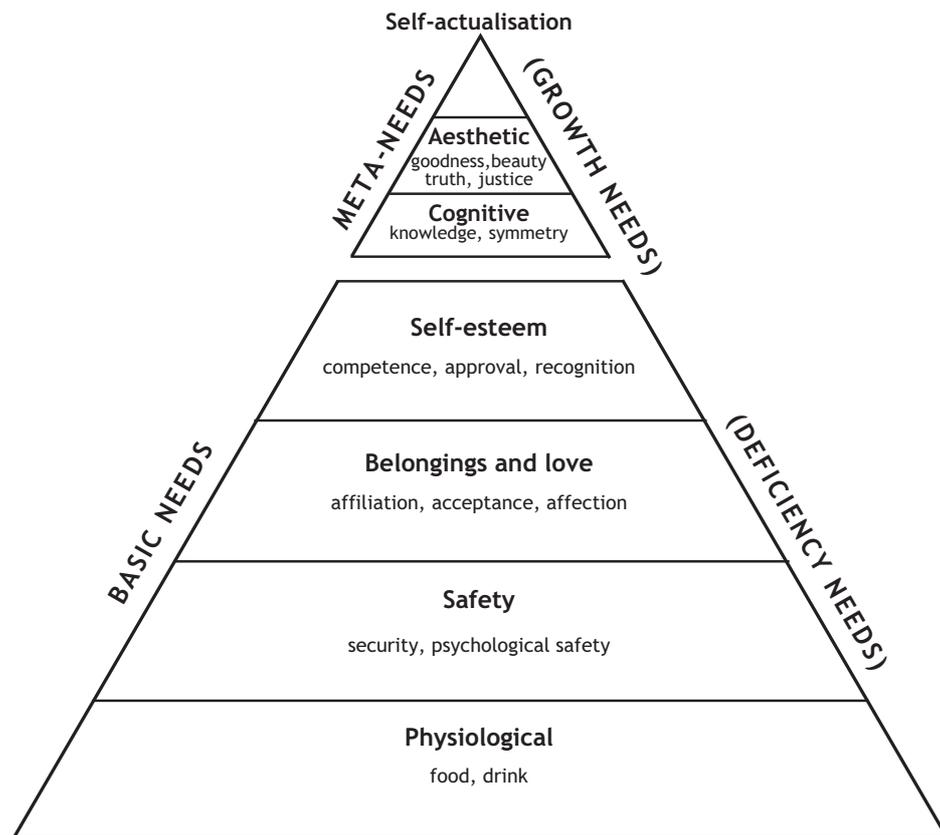
*Compare your answers with those provided at the end of the unit.*



### **Activity 1.4**

(about 15 minutes)

If possible, discuss the concepts of information processing and memory with others (co-workers and/or tutorial group) and write in your learning journal the ways that you could use cognitivist concepts to promote learning in your own work.



Maslow's hierarchy of needs



### Activity 1.5

(about 15 minutes)

This activity applies ideas about humanistic learning.

Look at the diagram of Maslow's hierarchy of needs and try to identify what motivates the majority of young people that you know. If a person's basic needs, such as food, shelter and a safe environment, are not being met, what effect do you think this will have on their ability to learn? If possible, discuss this with others (friends, co-workers and/or tutorial group). Write a response in your learning journal.

In Reading 3 and the related activities you have explored three main types of learning theories – behaviourist, cognitivist and humanistic.

The last activity in this unit asks you to reflect on how these theories relate to your own definition of learning, which you drew up at the start of the unit and reviewed midway through.



## Activity 1.6

(about 20 minutes)

Look again at your reviewed definition of learning in your learning journal entry for Activity 1.2. Add further comments in the light of what you have now learned. Think about the following points:

- Has reading about the three key theories changed the way you define learning? If so, how?
- How do you think you can apply what you have read to your work with young people? Aim to list at least three new things you might now try in your work.

Thinking about your definition and understanding of learning should have helped you bring together your learning in this unit.

## Unit summary

In this unit, you have covered the following main points:

- your own experiences of learning and your own definition
- aspects of learning that need to be considered in reaching a definition. These are:
  - inner process
  - competence and performance
  - change
  - inbuilt abilities
  - intentional and unintentional
  - meaning and understanding
  - transfer
  - practice.
- key learning theories and how they evolved. There are three main types of theories:
  - behaviourist approaches, which see learning in terms of stimulus and response structures
  - cognitivist theories, which are about types of learning, information processing and memory, and the process of learning to learn
  - humanistic theories, which focus on the individual and the importance of linking feelings and perceptions to thinking.
- and finally, how your own definition of learning has developed in the light of what you learned in this unit.

To check how you have got on, look back at the learning outcomes for this unit and see if you can now do them. When you have done this, look through your learning journal to remind yourself of what you have learned and the ideas you have generated.

In the next unit we will look at what is different about adult learning and at the role of experience in how adults learn – experiential learning.

## Answers to self-help questions

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### Self-help question 1.1

Given below are some definitions of learning:

‘... a relatively permanent change in the potential for performance as the result of our past interaction with the environment.’ (Lovell, 1982)

‘... a change in human disposition or capability which persists over a period of time, and which is not simply ascribable to a process of growth.’ (Gagne, 1977)

‘... the process whereby knowledge is created through the transformation of experience.’ (Kolb, 1984).

‘... the process which individuals go through as they attempt to change or enrich the knowledge, values, skills, strategies and behaviour possessed by each individual.’ (Brundage and Mackeracher, 1980).

What are the common elements in these definitions? Three of the definitions (Lovell, Gagne, and Brundage and Mackeracher) use the term ‘change’ while Kolb uses the term ‘transformation’.

Transformation is an important word because of its implications. English educator, James Britton, said that, for him, learning consists of:

‘... reconstructing your previous knowledge in a new form and then thinking about this new form and seeing where it leads.’

Definitions of learning indicate that:

- learning is a process and not an end result
- present learning is always based on previous learning, and
- learning is a continuous process that takes place throughout a person’s lifetime.

Some theorists say that by the time we are about eight or nine years old we have already got all the basic experience and mental tools to create any new form of the knowledge available to human beings. All that learning facilitators need to do is to help learners think about what they know, and then reformulate this at a higher level of understanding.

It does not matter if a learner is illiterate or unskilled. By using this approach you can always begin the process of opening up the innate and completely open-ended learning systems of the human brain.

There are no known ceilings on human learning for anyone who has not suffered serious brain damage, and even for those with brain damage, science is beginning to discover all sorts of new possibilities.

### Self-help question 1.2

All these, except 7, will probably contain some intentional and conscious learning, also some unintentional, unconscious elements.

1 and 6 are the most deliberate or intentional.

2 and 4 are very deliberate, but they may depend on a lot of small unconscious aspects of learning to plough and drive, which have been absorbed by watching other people, etc.

### Self-help question 1.3

Of course, there are situations where it is almost impossible to change attitudes such as these, without major changes in society, but let's assume the situation isn't as bad as that.

What you've got to do is to alter the young people's understanding of the meaning of the conceptual framework (the way they tend to see things usually). Language and meaning are closely related, in the sense that they act upon each other to bring about mutual growth.

The trick is then to get the group discussing the specific problems of gender relations they are experiencing. Let them do the talking (because they have to own the ideas). You can keep the discussion developing by asking questions about factual information such as:

- Are there any examples of... ?
- What do women do when men ...?

When the discussion deepens, you can ask more searching questions such as: 'What would it mean if... ?'

Handled properly (and you can only learn to do this through practice), most of the underlying assumptions can be brought out and examined. What you then have is a basis for change. Of course, it may take a long time to get there properly, and working together on equal terms is essential to reinforce the ideas, but talking themselves into change really is feasible. (Later in the module, you will meet the ideas of Paulo Freire, which discuss this further.)

This consciousness-raising process is partly based upon the research of Lev Vygotsky who, as we saw earlier, discovered in the 1920s that although the development of language is essentially automatic, it requires human interaction for that automatic process to work.

### Self-help question 1.4

- 1 The children have been able to acquire this knowledge because of two things:

- the tasks they do are always meaningful, so there is no block to learning in the mind
  - they are doing these tasks all day, watching others do them, and discovering constantly whether they are right or wrong by the feedback from customers. They are experiencing immersion and immediate knowledge of results.
2. What they have acquired mathematically are the following crucial mathematical principles:
    - knowledge of the additive composition of number
    - the concept of a 'set'
    - the concept of a 'function'.
  3. The problem with their learning is that they are unable to transfer it to a new situation, such as school maths, because they have not discussed and thought about the abstract mathematical principles underneath what they are doing. Therefore, they are stuck with the maths of the practical situation.

Because of the meaningfulness of what they are doing and because of the endlessly repeated activities, the mathematical principles have been formed in their minds by their automatic learning systems until they have become second nature. However, school maths is neither meaningful, nor, because they can't do the sums at school, is there any immersion process.

What the school has done is taught them certain rules that they can't apply accurately because these rules don't have any meaning for them, therefore the automatic system is blocked off. So, what they've got is a first class mathematical 'grammar', but it's limited to the concrete situations they know.

4. The youth development worker, knowing that the learners need transferable abilities to cope with changing conditions and the chance of getting a skilled job, has to:
  - help them understand objectively the principles, which they have developed and use automatically
  - help them to develop the skills of transferring these principles to other situations.

You could use Vygotsky's scaffolding technique to develop transfer of learning. One way of doing this is to get the learners to work in groups to write down the steps by which they do a calculation. Even better, get them to teach newcomers, using only paper and pencil to describe what has to be done. They can use drawings to help them, but they must invent their own number systems to describe the process, so that a beginner can follow the right steps.

Once they have done that a few times, they will have grasped the problems involved in developing a notation, and, by setting their own systems alongside the school method, they should soon be able to see

just what the school method is doing. In that way, they will begin to be able to bring their intuitive sense of what to do out onto the surface so that they can observe it and use it in different situations.

The conclusion for the youth development workers is that the people with whom they will be working are natural creative thinkers. If the conditions are appropriate, then learners should be capable of learning almost anything and learning it quickly. Where there are learning blocks, then those have to be unblocked first, of course.

Bruner (1966) says that slow learners are blocked learners, but once they are unblocked they can cope as well as anybody else.

The act of putting an idea into words, trying it out and getting feedback from someone you trust, seems to make that idea meaningful. That is the first stage of shifting any blocks and getting the automatic systems moving; it's also the first stage of exposing the idea in a way that makes it transferable to other things.

### Self-help question 1.5

1. Motivation – start with an attention grabber; arouse curiosity.
2. Attention – link what's being taught to previous learning or experience; state the goals of the task, lesson or workshop; make it meaningful to the learner – use the learners' context.
3. Retention (remembering):
  - present information in small chunks (minimum of five, maximum of seven items at a time)
  - include interesting activities that encourage complex processing rather than rote learning, after each chunk (the activities need to be relevant to the type of learning)
  - encourage practice (rehearsal)
  - give feedback to maintain motivation and encourage self-monitoring.
4. Transfer – activities that require learner to recall and apply new knowledge or skills to new situations (elaboration).

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# Unit 2: How do adults learn?

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## Unit introduction

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Welcome to Unit 2 *How do adults learn?*

As a youth development worker, you should be able to understand how adults learn best. You may well already have heard that adults, when compared with children, have special needs and requirements as learners. A significant body of research has shown that learning is a unique activity for every learner, even among children. This is much more true by the time we reach adulthood in our late teens, because our unique patterns of learning will have become more marked as we developed into individuals with unique sets of experiences and attitudes.

This unit will help you to understand how adults learn and the factors that have to be considered when dealing with adult learners. It builds on the understanding of learning in general that you developed in Unit 1.

This unit has a longer activity at the end, involving a meeting and discussion with a group of young adults from your community.

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## Unit learning outcomes

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When you have worked through this unit, you should be able to:

- outline the main principles of adult learning and the characteristics of adult learners
- explain what is meant by experiential learning and evaluate the theory against your own experience
- relate ideas about adult learning to the experiences of young adult learners
- select teaching-learning methods that take into account the characteristics of adult learners.

## Adult learning – what’s special?

During the 1960s, European adult educators invented the term ‘andragogy’ to describe the learning of adults, to take account of the growing body of research knowledge and the applications of new technology related to adult learning. The term ‘andragogy’ presses us to ask, ‘What is special about the way adults learn?’ Malcolm Knowles (1975 and 1978), considered to be the pioneer of modern adult learning, developed a theory of adult learning that distinguishes it sharply from the learning of children.

The main principles of Knowles’ theory of adult learning are that in adults:

- the self-concept moves from dependence towards self-direction/independence
- there is a reservoir of accumulated experience, which becomes an increasing resource for learning
- readiness to learn is increasingly associated with social roles (e.g. the work place, neighbourhood, parenting)
- the orientation towards learning becomes less subject-centred and increasingly problem-centred (Knowles, 1978).

The most important of these principles is that adults already have a very significant store of experiences and knowledge, which can be restructured or used as building blocks for new learning. If used skilfully, this can accelerate new learning significantly.

For example, adults, unlike children, can learn a new language well enough to speak and think competently about everyday matters after a very few weeks – but only if the conditions are right. Think about the example of successful adult learning in the following case study.



### Case study 2.1

#### Learning French

Michel Thomas, language tutor to the rich and famous, is shown in a BBC television investigation successfully teaching basic conversational French in five days in a school setting, to a group of older British adolescents who had previously failed to learn any foreign language.

Although he does not fully explain his methods, they are clearly based on some of the recent ideas about language acquisition, including pragmatics (the importance of understanding the everyday, social patterns of language). He is above all a specialist in social communication.

But his methods are also based on systematic analysis of the subject itself, as suggested by the cognitive theorists. He creates an

environment which is above all relaxed, with easy chairs, no boards for writing on, no information technology. There is nothing to block the working of the innate language acquisition system. He tells his students never to try and remember anything, because that will impede the natural process of acquisition. The language will stick in the mind of its own accord when the new structure has properly formed. For the same reason, he asks them never to practise or test themselves, only to talk in genuinely communicative situations.

Before teaching, he has prepared himself, over eight months, for this process by cognitive analysis of the structure of the French language (something he has done with all the main European languages). He breaks it down to its core patterns and reconstructs those in a simplified, schematic way. He teaches by getting the students to use in English the basic conversational phrases that they will now learn in French. He shows them in English how the French say those things, then word by word he inserts French vocabulary in place of the English. Eventually he uses a full English sentence, gets them to translate it into French a word at a time, then a phrase at a time, then to reassemble it as a whole sentence. He never tells them a phrase or a pronunciation, but gets them to work it out from what they already know. The cognitive, problem-solving processes are always uppermost ('learning is based on understanding'). At the same time he shows how much of the French language is actually the same as English (the two languages have many elements of common ancestry, of course), just with different pronunciation. All the time, the students are building on what they already know, a piece at a time.

What his students say is illuminating. The great film director Woody Allen, who was taught French by Michel in a weekend, says that his learning was 'unblocked by the quality of Michel's relationship with me'. His adolescent students said: 'I don't need to remember the words – they just pop into my head'; 'You can see the words'; 'He doesn't make you feel lost; he always takes you back to what you know'; 'Because you say it in English first, you remember each piece and it's easy to build up from there'.

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How does the Michel Thomas case study compare with any of your own experiences of adult learning or language learning?

From the point of view of motivation, it's clear that the learning process itself provides the motivation. The students can see an objective they need and want to reach at every point in the process; that objective is just at the edge of their ability; it stretches them but doesn't scare them; they achieve continuous mastery. All this is clearly a source of intrinsic motivation. But it's also crucial that the extrinsic motivation of the human relationships is supportive and helps build confidence, and that the physical conditions are right. The students are made to take on the roles, under Michel's guidance, of being self-teachers. They are the roles of adults capable of solving

problems and achieving the reward of proper communication with a teacher of high quality.

## Experiential learning

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It is often said that we learn a certain amount from what we hear, we learn more from what we see, and we learn most from what we do, but we learn best from what we hear, say and do.

Experiential learning is an approach that focuses on the importance of learner participation – on the learner experiencing and doing things for themselves. This is at the heart of Michel Thomas' method. The process of experiential learning emphasises learner involvement in all aspects of the learning process, including decision-making about what is to be learned. This takes us beyond Michel Thomas' method.

The important aspects of adult learning, stated by Carl Rogers (1969), are:

- Experience is very important in the process of adult learning.
- Feelings are very important in adult learning. Learning needs to involve both thought and feeling.
- Learning is an internal process and therefore very much linked with all our other experiences.

What is crucial in experiential learning is that the learners should reflect on their experience: in other words, they should think about and discuss it, preferably in a group. Then they can mentally reconstruct and re-present it in a form that reveals more and more of its meaningfulness. This is a natural enough process in the human mind, for we are always thinking back over the rights and wrongs of what has happened to us. As a youth development worker, you can help your clients to do this more systematically, and to do so with specific learning objectives in mind.

Carl Rogers explores the idea at length and identifies ten principles that underpin experiential learning:

- 1 Like all human beings, you have a huge natural potential to learn.
- 2 Significant learning will occur when you perceive the relevance of the subject matter to your own perceptions and needs.
- 3 True learning involves a change in the way you see yourself and the way you organise your life.
- 4 Learning that threatens the way you see yourself will be more easily accepted and assimilated when external threats are at a minimum.
- 5 Learning occurs when the self is not threatened.

- 6 Much significant learning is acquired by doing.
- 7 Learning is facilitated when you participate responsibly in the learning process.
- 8 Self-initiated learning will involve you as an emotional and social whole.
- 9 Independence and creativity and self-reliance are all facilitated when self-criticism and self-evaluation are present.
- 10 Much socially useful learning is learning how to learn, and staying open to new experience. In that way, you can easily incorporate the process of change into yourself.

The very strengths of adult learning groups, the richness and variety and depth of their experiences, can also present you with problems. They can be challenging. In fact, you would hope that they will be, because that is an excellent basis for self-learning. Many adult learners have developed a strength and confidence from having entered and survived in the challenging adult world. They may, however, also have sustained a few scars during that process, from failures and uncertainties that they faced and perhaps did not manage to cope with. But these issues can also be the real key to their development – by your helping them to reflect on and reconstitute their uncertainties and failures in terms of what can be learned from them.

These challenges are more complex because adult groups are so diverse, partly through the range of their age differences, but also due to differences in their experience of:

- employment/unemployment
- social and economic status
- marital status
- educational level or attainment
- mode of learning and ability to learn (usually preferred learning styles)
- orientation to learning.

The basis of an experiential approach in youth development projects is to draw upon the different experiences, knowledge and skills and hang-ups that adults bring with them. Past experiences provide a wealth of case studies and examples – especially useful for exploring and developing members' attitudes. In building a team your main aim will be to discover and integrate the individual strengths of each member. Learn how to use these individual strengths as teaching resources.



## Activity 2.1

(about 20 minutes)

In your learning journal, say what you think about the truth and practical application of the ten principles identified by Rogers, measured against your own experience as a learner. If possible, think of examples when they have been true for you. (You may find it useful to look back at your response to Activity 1.1 in Unit 1 *What is learning?*).

So far in this unit, we've looked at how adult learning is special, and particularly at the importance of experience. The next sections consider what adults need to help them learn best.

## How adults learn best

“Adults learn best when they feel the need to learn and when they have a sense of responsibility for what, why and how they learn. Adults use experience as a resource in learning – so the learning content and process must bear a perceived and meaningful relationship to past experience. What is to be learned should be related to the individual’s development changes and life tasks.”

(Brookfield, 1983).

Use adults’ experience as the building blocks of their learning – this message comes across time and time again from researchers and theorists about adult learning. We believe this should also be true of children, but it is vital with adults. However, Brookfield is saying much more than that here. His vision is of adult learners being incorporated into the planning and control processes as well. Their learning programmes need to be ‘owned’ by them. They will then take responsibility for their learning.

So what do adults need to help them learn best? The next sections outline the characteristics of adult learners and what they mean for adult learning. They are grouped into six themes.

- Treat each person as an individual.
- Tap into inner motivation.
- Understand the learner’s orientation.
- Recognise readiness to learn.
- Value previous experience.
- Self-directed learning.

As you read, think of examples from your own and your learners' experiences.

### Treat each person as an individual

Brookfield's statement means that the youth worker should develop some understanding of each learner's psychological state in the light of the stage of growth they have reached and the problems they face, and then to build on that. That's not easy, of course.

For example, if a young person has just been rejected by a loved partner, then they may face a genuine sense of 'grief' and a deep crisis of confidence, just at the threshold of what should be a stable interpersonal life. We are being asked then to engage with that dilemma, in order to enable the learner to deal with it and move on. We have to be very sensitive, but perhaps above all to allow any of that hidden agenda to surface when the learner clearly wants to allow it, and to create the supporting conditions for such feelings to be integrated into the group culture and the group's tasks. And we have to be prepared to be as practically helpful as we can be.

- This is essentially a mentoring role, and will be aided by the acquisition of counselling skills.

### Tap into inner motivation

Knowles stresses that adults are characterised by strong existing motivations in the form of more or less clear life goals. They create the basis for a much broader set of learning motivations that often influence them towards an interest in formal learning, in a way that is not common among children. They will develop strong inner motivations to learn only when these are not under stimulus control from outside.

Children can be motivated by external factors like parental pressure, rewards from teachers and by being compelled to learn, whereas adults can not. When adults come into learning they seek to satisfy often clear, personally felt needs, which may at first be imposed by changes and demands from outside, such as losing one's job or getting divorced. Once the need is established, this generates clear goals and encourages them to sustain the activity until the goals are attained.

- Satisfaction of a need gives a sense of completion and growing maturity. It is this that learning facilitators should work towards.

### Recognise the impact of life events

As explained above, the adult educator must engage with the whole person and with the social and psychological effects of the key events in adults' lives. According to Knowles, these life events are a fundamental source of motivation to learn. Often, the most significant learning we undergo as adults results from some external event; this acts as a stimulus that motivates us to engage in an activity. It may produce an uncomfortable reassessment of our lives, which

our psychological schemata have to accommodate, because it is most unlikely to be easily assimilated. This external stimulus may well be a 'calamitous event' such as losing one's job, experiencing the death of a loved one, going to war or coping with a divorce.

- As a teacher, to work within the context of learners' life events is very challenging but also deeply interesting.

### **Give unconditional support to those who have learning problems**

Many adults have experienced a high degree of educational failure and are marked by it. Therefore their motivation needs sustaining by giving their learning as much support as you can afford. Our own experience is that occasionally this support is needed to a remarkable degree, but that eventually there always comes a point when the learner will take over and then you can be happy to let go.

- The standard advice for educators is that the learners should be given only a brief framework of support, but we have found that this is adequate for only very few adults. Let them tell you when they are ready to go it alone.

### **Make learning meaningful**

Making learning meaningful, by relating learning to the needs and experience of the learner, is something that all teachers should aim for. Youth workers particularly should always seek to do this.

Establishing that a piece of new learning is meaningful creates motivation, providing that what is to be learned is just beyond the learner's present knowledge, but not so far beyond that it looks too difficult to attain. If learners become really interested in the new knowledge, they will want to establish its meaning by applying it to real situations, and to check it against their experience. This is of course what professionals do in their work, and it's a fundamental aspect of being educated.

- The problem for educators is finding out ways to make learning meaningful, because it varies from group to group and from person to person. But this must always be at the centre of your learning and teaching. Then the learner can use the structures already in the mind to engage with and retain the new knowledge.

### **Understand the learner's orientation**

Our orientation to learning is the way that we look at it as an activity. It is influenced by our previous experience of learning as young people. It has a big influence on our initial ability to learn something, so we need to try and get our orientation focused in a way that will unblock the learning path.

Our learning orientation tends to be affected strongly by the result we want. For example, in studying this course you may simply be hoping

to get through the assessment to get a diploma and the chance of a job. That is a perfectly acceptable form of orientation. But unless you then become orientated towards the content of the course and towards solving the problems it is trying to address, you will find the experience very hard, slow work. You may learn very little that is of practical value. It helps to think of it as a form of professional development, rather like that of a doctor or engineer, but in a mainly social field.

The essence of adult learning theory is not only that adults build new learning onto previous schemata, but that their true learning orientation is towards an intrinsic interest in what is being learned. While children can often be persuaded to learn simply by passing examinations or gaining adult approval or other rewards, this does not work with adults. This is why adults are capable of learning faster and more effectively than children.

Houle (1984) has identified three types of general orientation in adult learning:

- 1 Goal orientated – for accomplishing fairly clear objectives. Learners do not restrict their activities to any one type of teaching or one method of learning. The need or interest appears, and they satisfy it by taking a course or joining a group, reading a book or going on a trip.
- 2 Activity orientated – just to be engaged in an activity. Participation and social contact are the goals, rather than learning a particular subject.
- 3 Learning oriented – seeking knowledge for its own sake. May participate in higher education to develop understanding rather than for qualifications.

We have to convert these general orientations into specific orientation to our own programmes. It is therefore important as a learning facilitator to know what the learner's individual orientation is and to be sympathetic to it. Then you can help them to relate what they are learning with you to their individual pattern of needs and goals. It's also crucial however, for the reasons suggested above, that you use their general orientation to get them to develop an intrinsic interest in the course content (though sometimes this is difficult) because this will make the whole of the learning experience meaningful.

### Recognise readiness to learn

Motivation and orientation provide the learner with the driving force to start learning. One other major factor that promotes learning is readiness to learn. Motivation is one aspect of readiness. Readiness is really decided by the amount of previous learning and experience that is related to the proposed new learning; you must try to establish what that is when you start work on the programme. The learner may not fully realise how much they already know and may need careful counselling to establish what that is.

Take as an example a young woman who was offered the opportunity of a term's free university study if she could decide on a project that she wished to research. She had no idea at all and was baffled, though she definitely wanted to study for a term at a university, something that her social background had made impossible before now. It took half an hour's discussion with a family friend, who was also an adult educator, and going through her previous experience, to hit upon the fact that she had spent a period helping to set up a textile mill for South African workers, and that she had been very excited by that experience. She had lots of important questions in her mind about what all that meant in the global economy and what the results would be. But those things needed teasing out of her, until they could finally be formed into a plan for a project.

Readiness is also affected by the learner's ability and capacity to learn. This is a problematic area, because, as we have already suggested, people have far greater powers of learning than is generally accepted.

- The challenge is unblocking powers of learning by finding where the learning blocks are: these may be cognitive, emotional or even physical.

### Check prior learning

All learning theorists, but especially Piaget and Gagne, argue that prior learning facilitates subsequent learning. In Unit 1 (Reading 3: 'Key Learning Theories') we looked at Gagne's theories about classes of learning and learning hierarchies. He explains that it is important to learn pre-requisite skills and knowledge before moving on to the levels above, and finally to problem-solving and other high order learning skills. Gagne's theories are useful in assessing what people can learn next and what may be going wrong for a learner.

Apart from the mental processes, the information required for any type of learning also forms a part of readiness. During learning, people usually find it much more effective to go from simple to complex and known to unknown, because the present state of knowledge and experience forms the foundation and readiness to learn more.

The intrinsic interest in the knowledge can take learners to a much higher level than we might expect. Learners can jump up several levels in the right circumstances. Role is often the key to this. Where learners take on the role of expert or teacher (like the boy who trained the hawk in Kes – Unit 1, Case study 1.2), they will usually be able to assimilate the appropriate attitudes and some of the expert's understanding.

An example of this is where a learning group is subdivided into small groups, each of which is given the task of teaching an aspect of the subject being investigated to the rest of the large learning group. The groups are given access to learning materials, such as audio-visual

supports, books, computer access where possible, people with specialist knowledge who they can question, and so on. They are then asked to prepare short teaching sessions, handouts, learning games or whatever they can manage that is relevant.

We have found that this raises not just their knowledge levels but also the levels of their mental operations significantly. The reason appears partly to be that it increases their commitment to the learning process and their motivation. More importantly, the goal of having to give expert explanations seems to sharpen their thinking patterns, giving these a shape that would normally belong to the expert teacher. They also take on the formal language of the subject much more readily than in traditional class teaching, releasing the language acquisition system from the constraints of being in the subordinate, learner role. In fact, this method is part of an ideal culture of learning which should be as close as possible to the culture of the practitioners in that field – a sort of apprenticeship in the field of knowledge (Seely Brown et al, 1989).

- Teachers need to understand the distinct kinds of mental processes involved at each level if they are to help learners operate at that level. In this way, a course can become a kind of training in thinking.

### Allow for physical, psychological and health factors

Especially in the case of older people, physical and health conditions can be deciding factors in readiness. Poor health and debility may prevent a person from learning, in spite of strong motivation (as shown by Maslow's motivational hierarchy seen in Unit 1). Teachers can help by making time allowances and arranging whatever support may be made available.

Among adult learners there are often people with physical disabilities, for example visual and hearing impairments, or problems with movement that affect walking or writing. Where possible, such learners should be given access to special equipment or facilities, or it may be possible to improvise. No matter how severe the disability, these learners still have motivation and experience.

This may not appear to be as true where the disabilities are psychological. These may manifest themselves as resistance to particular kinds of learning, through learners' fear of new experience, or their inability to understand the teacher/learner relationship. In cities especially, you may find a rise in conditions caused by isolation and drug-taking. The roots of this may be in autistic problems, but may simply be the result of social conditions. If you can learn about the nature of the disability, sometimes from the learner or from a psychology professional who has supported her, that should help to shape your behaviour. Failing that, then openness of mind is important.

- Try not to judge someone's behaviour until you have learned more about their condition, and try to adjust your behaviour to accommodate theirs, as far as is acceptable within the learning group.

## Value previous experience

As we have already mentioned, in Knowles' adult learning theory, previous experience occupies a high position. It is considered to be the major resource and prerequisite for learning. Adults possess a wealth of experience, developed throughout their lives.

How can we use this experience? As an example let's look at adults from different trades and occupations and consider the importance of making the link between their experience and new learning. Read the following case study about farming, drawn from the work of farming support services in Kenya.



### Case study 2.2

#### Pest control: linking experience and learning

People who have been engaged in farming over a period of time have gained first-hand experience of learning by doing and reflection. This experience helps them in the general process of developing concepts for themselves, understanding processes and solving problems (for example: forecasting weather, supplying water to the crops, fertilising, weeding, using different types of crops, working in harmony with the seasons and change of seasons). These processes show that they have constructed a series of mental systems, often without formal learning, which they can use as a method of working.

Much of the detail of that learning has been absorbed at the level of non-conscious learning, on the skeleton of the things they have thought about and done consciously. That detail is important and they need help in reflecting on the non-conscious process and in bringing it to bear on new areas of knowledge.

Suppose that you are helping these farmers to use organic methods of farming for the control of pests. They may know nothing about using formal botanical science to prevent the next generation of a crop predator. They will, however, have absorbed a great deal about the life cycle of the predator because they will have noticed its eggs, then its larvae and so on.

This semi-systematised knowledge can be explored by first asking them to represent in some way what they already know. The predator's life cycle can be clarified with drawings or objects used to represent the stages of growth. Then the principles of how a botanist can intervene in this cycle can be inserted into the model. This can be done inductively. If the life cycle is clear and detailed enough, and if enough is known about the life conditions for these stages of growth, then it should be possible, by guided questioning, to see where the life

cycle can be broken. However, you may have to insert the crucial bits of scientific knowledge if they are at all specialised. The learners can ask questions, toss ideas about and so on. To monitor and evaluate the processes of using organic methods, they can add scientific observation and testing to the normal methods they use for evaluating their own crops.

(The Open University, UK has some excellent case studies of this kind of programme from the Mount Kenya area).

Jarvis (1987) further emphasises the importance of experience when he says:

“... learning then, always begins with experience; there can be no learning that does not begin with experience, although the level of consciousness of the learner plays a significant part in both the experience and the learning.”

What the Kenya farming support services are doing is to raise that level of consciousness.

Knowles stresses the application of contemplation and reflective practice – the learning processes used in problem-solving.

- Experience forms a strong foundation for learning, if the facilitator can help learners make the link between their experience and the new learning.

### ***‘Unlearn’ negative experience***

Experience can also have a negative effect on learning (Knox, 1977), creating a necessity for ‘unlearning’. By ‘unlearning’ we mean, for example, getting rid of habits, myths and erroneous methods and attitudes. This can be difficult. In such instances, experience has a negative effect on adult learning and this can be compounded by the difficult experience of unlearning.

- ‘Talking it through in a group’ can help in this process. So can the process of ‘reflection’ and ‘representing our knowledge to ourselves’ in some form.

## Self-directed learning

Finally, the most important characteristic that Knowles has identified in adults is that they can become self-directed and that they often prefer this. The tendency towards self-direction is within every learner to varying degrees, but it is usually more evident in adults than in children. This is particularly obvious when we compare adults and children in formal learning settings.

The earliest definition of self-directedness given by Knowles (1975) is: 'a process in which individuals take the initiative, with or without the help of others, in:

- diagnosing their own learning needs
- formulating learning goals
- identifying human and natural resources for learning
- choosing and implementing appropriate learning strategies
- assessing learning outcomes.'

The learning facilitator's main purpose in using the process of self-directed learning is to produce lifelong learners. Knowles suggested that the process will develop in learners an abiding interest in self improvement and confidence.

As a teaching technique, self-directed learning is indispensable in the education of adults for a number of reasons:

- It allows learners to work on individualised programs that accommodate their developmental stage, capacity, needs and experiences.
- Adults have individual identities based on past experiences of success or failure in educational situations, and they may have anxieties to deal with. Self-directed learning allows learners to progress at their own comfort level and speed.
- Self-directed learning frees the teacher from trying to motivate and address the needs of all members of a group at the same time. Learners can work independently on their special learning programmes, with support from the teacher, facilitator or peers.

### **Self-directed learning skills**

So what does self-directed learning involve?

When starting someone on an individualised self-directed programme, the facilitator must assess whether the learners have the required self-directed learning skills. If they don't, the facilitator can teach these skills them.

Learners need to be able to:

- identify their own needs and learning goals
- identify gaps in their knowledge and skills
- identify and use learning resources
- self-assess their own progress.

### ***Identifying needs and learning goals***

Learners need to be able to:

- state the learning goals or objectives very clearly

- make them meaningful by putting them into a meaningful context.

For example, a learner may need to get a loan from the bank to start a business. The learning goal may be developing the ability to write a business plan. To make this meaningful, the learner should be able to visualise, then analyse the precise nature of a specific business, identifying all the elements where the borrowing and repayment of money are involved. It would help if the learner were to talk to a business person running the same kind of business.

### ***Identifying gaps in knowledge and skills***

Learners need to develop the ability to identify gaps in their knowledge and skills, especially those that they have identified as pre-requisites. They also need to learn how they can fill those gaps, perhaps by using other people's expertise or turning to another learning resource.

### ***Identifying and using learning resources***

Finding and using available resources is another skill that can be developed through the use of a self-directed learning programme. Facilitators need to help learners become aware of the resources that they can use, for example, peer expertise, family members, libraries, browsing in bookshops, newspapers and TV. Of course, there are also more formal education settings that may be appropriate at some stages of learning.

Developing such strategies is crucial, and can be done very readily after a bit of experience. Teachers and learning facilitators do this frequently as part of their preparation.

### ***Self-assessing progress***

Self-directed learning also lends itself to self-assessment of progress. Learners need to judge whether they have really understood something properly, and if they haven't, the reasons why. If the learning objectives are understood very clearly and they are meaningful, then it is much easier for learners to self-assess whether or not they have achieved the right level of learning.

Learners may find this difficult. At school, learners are almost always told by their teachers whether they have got something right or not, and that may be a difficult expectation to change. It helps to give the sort of feedback that gradually facilitates self-assessment of progress. Once the habit of self-direction is established, this process becomes a lot easier.

Now test out the ideas you have learned about in this unit, by talking to some young adult learners.



## Activity 2.2

(This is a longer activity. Allow time for the discussions, plus about 30 minutes to write up findings.)

Meet with a small group of young adults from your community and discuss with them the sort of things they would like to learn and why. Then describe some non-formal methods of learning that they could use. Find out their different learning preferences and the reasons for these preferences.

Discuss your findings with others (friends, co-workers and/or tutorial group). Try to relate your findings to the concepts you have learned in Units 1 and 2, about learning and how adults learn.

Then describe your findings in your learning journal (about 30 minutes).

In this unit we have looked at the adult learner from different perspectives. You have seen that when the nature of the adult learner is taken into consideration, the principles of teaching have to differ significantly from those of the traditional forms of teacher-centred education.

With this distinction in mind, go back over the unit again and revise the characteristics of adult learners and the teaching-learning methods that take into account those learner characteristics. Then do Self-help question 2.1.



## Self-help question 2.1

(about 30 minutes)

Draw up a table like the one below. In the left-hand column, describe some of the characteristics of adult learners and against each of these in the second column describe what you would do to facilitate their learning. Discuss this with others (friends, co-workers and/or tutorial group).

Characteristics of adult learners	Teaching / learning methods

*Compare your answers with those provided at the end of the unit.*

## Unit summary

In this unit you have covered the following main points.

The ways in which adult learning is different from the learning of children:

- The role of experience in adult learning (both as a mode of learning and as a resource that adult learners bring with them).
- The characteristics of adult learners and what they need to learn best.
- The concept of self-directedness.

You have learned that opportunities for self-directed learning satisfy the needs to:

- diversify the learning environment
- individualise the learning experience
- tap diverse learning resources in the community
- establish lifelong learning skills and attitudes in the learners.

You have also been introduced to some strategies that facilitators can use for adult learning programmes.

To check how you have got on, look back at the learning outcomes for this unit and see if you can now do them. When you have done this, look through your learning journal to remind yourself of what you have learned and the ideas you have generated.

In the next unit we will look at the philosophical and psychological ideas that underpin this Diploma's approach to learning.

## Answers to self-help questions

### Self-help question 2.1

Characteristics of adult learners	Teaching/learning methods
They have many differences.	Use an experiential approach, i.e. project participation. Draw on experience and differences. Use individual strengths to build a working team.
Inner motivation.	Use dialogue to establish: <ul style="list-style-type: none"> <li>● needs</li> <li>● life events that have prompted the needs</li> <li>● what will make the learning meaningful.</li> </ul> Build on what is known. Apply to real situations.
Orientation (goal-, activity- or learning-oriented).	Encourage dialogue and reflection to develop awareness of learners' orientation to learning.
Readiness.	Use observation and encourage dialogue and reflection to establish: <ul style="list-style-type: none"> <li>● what the learner already knows (stage of learning)</li> <li>● what they are ready to learn now</li> <li>● their capacity to learn.</li> </ul>
Previous experience.	Make full use of learners' previous experience, through: <ul style="list-style-type: none"> <li>● contemplation</li> <li>● reflective practice</li> <li>● dialogue</li> <li>● problem-solving (real situations).</li> </ul>
Self-directedness.	Teach learning skills (required for independent, self-directed learning): <ul style="list-style-type: none"> <li>● identifying needs and goals</li> <li>● identifying gaps in knowledge and skills</li> <li>● identifying and using learning resources</li> <li>● self-assessment of progress.</li> </ul>

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# Unit 3: Education for all

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## Unit introduction

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Welcome to Unit 3 '*Education for all*', which outlines a philosophical and psychological perspective that supports the aim of education for all.

In Unit 1, you were introduced to some of the attempts to define learning. You also learned about key theories of learning. Unit 2 focused on how adults learn.

This unit outlines the positive philosophy of 'education for all' and explores what this means in terms of developing the whole person and lifelong learning. It develops the themes from Unit 2 about characteristics of adult learners and how they learn best.

The unit introduces abstract philosophical and psychological ideas that explain the theoretical basis for the practical approaches in later units. It also brings in practical activities to help you to relate the ideas to examples and your own experiences.

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## Unit learning outcomes

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When you have worked through this unit, you should be able to:

- outline the principles that underpin the ideas of education for all, developing the whole person and lifelong learning
- apply the principles to practical examples and problems to do with developing the whole person.

## A positive philosophy of learning

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Education around the developing world has often consisted of systems where limited resources and post-colonial values have meant excluding large numbers of people from experiencing the deeper levels of learning. This has tended to limit to an elite what could be made available to very large numbers of people. Of course, resources are still limited, but we now know from physiological, social and psychological research, that, approached properly, the deeper levels of learning can be made available to a wide spectrum of society without massive increases in funding.

Read the following extract. The argument here is based on a good deal of research and also influenced by the ideas of Marx, as discussed later in this unit.

### No limits to learning?

“So far there have been discovered no limits to the human capacity to learn. From earliest times, however, men in positions of power or influence have suggested that the learning capacity of certain individuals or groups is severely limited and that they should not be expected to profit greatly, if at all, from education. These so-called ‘uneducable’ individuals have usually been members of minority or disadvantaged groups. However, repeatedly, when their cultural disadvantages have been removed, these groups have shown that their previous failure to learn has been due not to lack of capacity but to lack of fully realised opportunity.”

“These findings have led educators to be much more modest and less hasty in their labelling and classifying procedures. It has been realised that labels affixed to children tend to become self-fulfilling prophecies, that those who are expected to learn usually do so, and those who are expected to fail to learn also usually do so. Hence, when educators resort to classifying children at all, they increasingly tend to use their labels as temporary rather than permanent, as saying something only about a quality of the child rather than about his person, and as something to be abandoned as soon as the child’s performance proves the label wrong.”

“Similarly, no one has been able to confirm any certain limits to the speed with which people can learn. Schools and universities have usually been organised as if to suggest that all students learn at about the same rather plodding and regular speed. However, whenever the actual rates at which different people learn have been tested, nothing has been found to justify such an organisation. Not only do individuals learn at vastly different speeds and in different ways, but also they seem capable of astonishing feats of rapid learning when the attendant circumstances are favourable. It seems that, in customary

educational settings, one habitually uses only a tiny fraction of one's learning capacities.”

Philosophies of the Branches of Knowledge, Encyclopaedia Britannica (1996)

It's important to remember that the philosophical position adopted by the writers of this Diploma is very much a part of the intellectual history of the northern hemisphere. You may come from the southern hemisphere and different intellectual and religious traditions. Therefore the principles outlined here may feel partly alien to your sensibilities. That is perfectly understandable, and if it is the case, we hope that you will still gain much from the material.

What we want above all is that you develop a philosophical view of your own that helps you get to grips with the real problems that you face in your work. That view may well be drawn partly from the religious and/or intellectual traditions of your society. Providing that it is coherent and gives you realistic support in fulfilling the aims and objectives of the Diploma, then that is fine. We do, however, ask you to work your way through this unit carefully, to understand and evaluate the guiding philosophical influences on the Diploma material. Take your time over the ideas and compare them to your own ideas and experiences.

The quotation from the Encyclopaedia Britannica explains why the writers of this Diploma consider that an educational philosophy that supports elite and exclusive learning is totally contrary to youth development work. The concept of youth development was generated in the democratic ethical framework summarised by 'equal social justice for all': for us, this also means 'equal education for all'. Youth development workers are involved in both formal and informal training and education, and we work with young people who are generally marginalised by the effects of current global economics. We see education for all as the keystone to successful youth development work. In this unit we start by exploring education for all from two perspectives:

- developing the whole person, or total development
- lifelong learning, or developing people throughout their lives.

## Developing the whole person

All the major philosophies of education in the Northern tradition have begun with the assumption that the purpose of education is to develop the whole person. The emphasis may be 'empiricist' (as in behaviouristic theories) or 'rationalist' (as in holistic theories). These terms are explained later in this section.

The practical reason is that when someone is being educated the whole person is involved all the time, even on a specific programme such as training for work skills. We also bear this in mind when we

talk about ‘learning domains’ and ‘types of learning’. It is convenient to break things down in this way when we analyse what is involved in learning. But the end purpose is to educate and empower the whole person, not only with marketable skills, but also with self-esteem, social skills and positive attitudes, and with thinking and learning skills that will develop over a whole lifetime.

In Unit 1, we looked at the work of Benjamin Bloom and the three domains of learning: psychomotor, cognitive and affective. While it is convenient to compartmentalise the learner’s abilities, the individual does not really function or develop within compartments. The individual is a thinking, feeling, doing ‘whole person’. The aim of education, therefore, should always be to manage the learner’s development in all of the three domains together.

As we saw in Unit 1 when we looked at the automatic learning systems in the mind, the unconscious mind tends to work as a whole, even though we see that the conscious mind, at any point in time, tends to operate in small compartments.



For further background, read Reading 4: ‘The nature of knowledge’. Here, Dr G. Gunawardena explores further the nature of knowledge in the light of the three domains and ways of applying the ideas.

## Total development

The concept of ‘total development’ in all three domains has implications for the learning process.

Over the last decade, the idea of ‘emotional intelligence’ has become a major theme in education. For example, in the education of children it is understood that unless teachers can teach children to manage the emotional aspects of their learning behaviour and mental attitude, their emotions can impede their cognitive learning. It has become much more obvious in turbulent schools in rich countries that teachers have to manage their classes’ emotional education if they are to teach anything successfully. But taught properly, these abilities can enable learners to use their emotional energies as a powerful tool to shape their social and cognitive learning.

This would also be true of their psychomotor abilities, which are so important in physical activity of any kind, from playing for the school basketball team to becoming a brain surgeon. For example, the pioneering work of Rudolf Laban, the great dance teacher, began with a study of how to improve the quality of the work experience of manual workers. Fine-tuning their physical movement fed into the quality of their emotional and social lives, as well as enhanced job performance.

The theory is that the fine-tuning of each of the three domains within a powerfully integrated framework means that all domains are enhanced and the whole person develops more rapidly – holistic

learning. To achieve this there is a need for a diversity of teaching-learning approaches at most points within the learning situation.

Read the following explanation of holistic learning, which sums up the general position in contemporary philosophy.

### Holistic learning

“Human learning concerns the whole person. The intellect is not the only agent of learning. The body, the emotions, and the will share this activity. Moreover, the process cannot be limited to any one of these domains without affecting the others. Educators are most conscious of intellectual learning, which tends to play the largest part in their plans and intentions. But there is increasing evidence that makes clear the folly of attempting to confine education to the training of intellects. If the teacher does so, s/he is destined to fare badly, for the child who is emotionally frozen or whose stomach is empty or who is determined to thwart the teacher will not perform intellectually as the teacher intends.”

“Educators are also becoming aware of the other side of the coin – that is that the learner’s powers are vastly enhanced when not only his intellect is stimulated but also when his feelings are respected, his body is nurtured, and his will to learn is strengthened. Effective education, therefore, is found when the learner is regarded as a person to be respected, nurtured, strengthened and stimulated, rather than just as an intellect to be trained.”

Philosophies of the Branches of Knowledge, Encyclopaedia Britannica (1996)

These ideas have their philosophical origins to a significant extent in the work of Karl Marx and the humanistic aspects of Marxist theory, and in the educational ideas of Jean Jacques Rousseau (outlined later in this unit).

### The influence of Marxist theory

Marxism sees human beings as agents who continually construct the world anew around what they find there and around their understanding of what is possible. In doing so, they at the same time construct themselves and their abilities anew. To do this they have to be organised into a social structure, and that structure is sometimes hostile to the changes that people would like, so conflict arises between those social classes that are moving forward and those that are controlling the present system for their own benefit. Marx saw no real limits to human development other than the potential of the material world’s resources. But he did see how powerfully reactionary social classes controlled the ideas and actions of the progressive classes.

The essence of holistic education is in the last sentence of the Encyclopaedia Britannica quotation – that the learner should be regarded as a person, not just an intellect. The heart of the holistic learning process is a relationship of mutual respect between learner and teacher. Read the following case study about the work of Mrs Muriel Pyrah.



### Case study 3.1

#### Mrs Muriel Pyrah

Mrs Muriel Pyrah, one of the UK's finest primary teachers (from the 1930s to the 1970s), used to say that what children needed from teachers most of all was love – the love of equal spirits who listened to each other with respect and attention.

Given this, her children, from a working-class, coal-mining town called Castleford in the north of England, became the subject of films, television and radio programmes around the world, for the quality of their artistic work, their writing and scientific investigations. This love expressed itself in the creation of an environment where children worked concentratedly on learning projects, art, scientific investigation, writing, voluminous amounts of reading and at the same time were engaged in public classroom talk about their discoveries and about intellectual topics of immediate interest.

Whatever they said (and they spoke very freely but always seriously, managing intuitively the rules of sustained oral interaction) was listened to with great attention and responded to either by Mrs Pyrah or by other children. This talk was always focused and of a high, formal quality which somehow served to sharpen and intensify their perceptions of whatever they were doing. Throughout, her focus was on the quality of the social relationships in the class and on the process of drawing out children's insights. The level of emotional intelligence was very high throughout the class; their physical movements, in and around the classroom and in their scientific experiments and art work, were deft and precise, and their cognitive work highly focused and powerfully reasoned.

Over many years, Mrs Pyrah's work epitomised the attainment and integration of the objectives in all three domains. Her work showed that learners need to be exposed to experiences that help them to acquire insight and a sense of meaningfulness, so that the automatic learning processes can be switched on. This must be the explanation for the remarkable linguistic expertise and astonishing depth and range of the children's learning, which could not possibly have been acquired from what they were told. Once they had established the basic cognitive, affective and psychomotor schemata of their studies, the intrinsic motivation of that classroom meant that they did an enormous amount of work effortlessly, which effectively meant a

remarkable amount of practice, far more than one might find in a formal classroom.

As we saw in Unit 1, the cognitive theorist Jean Piaget says that the process of laying down neurologically the basic patterns (schemata) for an activity is done through assimilating new examples to the existing schemata. In the process, the schemata are made to accommodate the new examples. Although this is true in principle for all three domains, cognitive abilities are approached somewhat differently from affective and psychomotor abilities. It is important that the facilitator understands how to create the best conditions for learning in each domain, as well as holistically. That involves analysing what the nature of the form of knowledge is, and what part of that knowledge is being dealt with at a given time.

### What kind of knowledge? What kind of learning?

To tackle the question: ‘What kind of knowledge?’ we need first to explore the concepts of ‘rationalism’ and ‘empiricism’. Underpinning the work of teachers like Mrs Pyrah was an intuition that children had enormous inbuilt potential for mental development, an intellectual power that would grow irresistibly if it were given the right circumstances in which to grow. She realised that it couldn’t be taught as such, because of the sheer volume of knowledge and mental strategies involved, which no teaching system had time to implant. What she felt was that it would unfold from the general mental structures that everyone is born with. The roots of that lie in a particularly modern version of classical rationalism.

#### **Rationalism**

Rationalism consists of various philosophies that emphasise that the part played by people’s ability to reason when acquiring and evaluating knowledge is more significant than the part played by experience, and that we are born with this abstract power to reason.

The twentieth-century version of this philosophy was the theory that we are born with pre-structured general categories of thought in our minds. These determine the structure and remarkable speed of our linguistic development and the rapid development of structures of thought. All we need to develop thought and language and number systems is the kind of experience and conditions that trigger the underlying, rational, inborn, creative processes. (You have already met this idea in Unit 1, in the account of Chomsky’s and Jackendoff’s theories. It is also there in the work of the cognitive theorists, though slightly more subdued.)

- If this is true and if we can build our learning facilitation around this then we can accelerate young people’s learning significantly.

## ***Empiricism***

Empiricism is a very ancient philosophical argument but still central to educational thought. It says that knowledge is always at base founded on sense experience. Therefore our concepts depend upon the experience our senses provide for us. Of course, in education we often have to rely upon the sense-based observations of others who are researchers and thinkers. Our sense knowledge of these ideas is second hand but it is still knowledge gained from sense experience.

For educational facilitators, what follows from this idea is that they must try to understand how sense experience can best be formed into mental patterns, and how patterns of reasoning can be built up from sense experience. The emphasis is always on increasing the quality of learners' experience of the world and reflecting back skilfully on that experience in order to build up thought.

A powerful strand of the educational ideas in this module is based on this view. The psychologists who are entirely empiricist are, of course, the behaviourists. In practice, most educators use a combination of rationalist and empiricist theorising, some with more emphasis on rationalism, some with more emphasis on empiricism. A facilitator such as Mrs Pyrah placed enormous emphasis on empirical scientific and social research despite her strong rationalist approach, which expressed itself in the talk-based curriculum: for example, her pupils did an enormous amount of practical scientific investigation.

The self-help questions and activities that follow are designed to help you think about conditions for learning in the three domains – cognitive, affective and psychomotor – and to apply the theory to practical examples.



### Self-help question 3.1

(about 20 minutes)

A youth leader in your country is preparing a young woman who is seeking election on the local council. She has to:

- prepare a written manifesto
- speak several times on public platforms
- go from house to house in the local town meeting individual families who work on local agri-business cash crop farms
- speak to local small farmers.

What kinds and levels of knowledge must she master, and how best can the youth leader get her to master these quickly?

Discuss this with others (co-workers and/or tutorial group) and then make some notes in your learning journal.

*Before reading on, compare your answers with those suggested at the end of the unit.*



### Activity 3.1

(about 10 minutes)

Discuss with others what you think some of the elements of emotional intelligence might be, and then write down your thoughts in your own words, in your learning journal.



### Self-help question 3.2

(about 10 minutes)

Think of a situation in which you are doing something as a group. One of the youths in the group, with whom you have had a few awkward moments in the past, suddenly starts fighting with another youth.

You ask them to stop and he shouts some very rude words at you and tells you that you are hopeless as a youth leader. How do you handle this?

Discuss with others (family, peers, co-workers and/or tutorial group) and write a response in your learning journal.

*Compare your answers with those suggested at the end of the unit.*



### Activity 3.2

(about 20 minutes)

Observe the process of skill learning in any situation familiar to you. For example:

- learning to drive a vehicle
- learning to write a letter
- learning to operate a sewing machine
- learning to make a cake
- learning to repair electronic equipment
- any other skill relevant to you.

Record your observations in your learning journal. Consider what the different forms of knowledge involved consist of.



### Self-help question 3.3

(about 15 minutes)

Imagine that you are working with a group of young people on a project building small dams for preventing soil erosion of the river beds and banks in a hilly area. This involves quite heavy physical activity, using sledge hammers to break rock and arrange it in shock-absorbing screens of netting wire. Strong hands and arms are needed to move them into position, but also sensitivity to the soil structure, so that minimal damage is done.

How would you teach the appropriate psychomotor skills?

*Compare your answers with those suggested at the end of the unit.*

## Symbolic processes

### Symbolic emphasis

“... it is to be noted that human learning is largely dominated by symbolic processes. Much of the learning that human beings acquire during their lifetimes is gained through their growing ability to understand and manipulate symbols – verbal, mathematical, artistic, musical and so on.”

“This symbolic emphasis gives human learning much of its power... The symbolic emphasis also brings dangers. It can trap people into circling around at a high level of generality without ever feeling the need to tie abstractions to concrete applications.”

Philosophies of the Branches of Knowledge, Encyclopaedia Britannica (1996)

This quotation is a timely warning for youth workers as well as teachers, about the dangers of over rationalising and not being based firmly enough in empirical experience. You should also think about the notion that in all activities, even in physical activity, there is a sense in which all actions can have a symbolic quality. This can be utilised to great effect to intensify the quality of empirical experience.

It was noticeable in Mrs Pyrah’s classes (Case study 3.1) that the children used socially high language registers in their public speech. However, their talk always had a firm basis in first-hand empirical experiences, through their practical investigations, or in second-hand empirical experiences, through their reading. So the meaning of what they were reading and saying and writing was always clear. Their use of language meant that they very quickly became skilled with the sorts of formal written registers of academic subjects. They did not

find this a problem, because they were subjected to formal talk daily on television and they were reading so many books that complex written registers became very familiar to them. As contemporary rationalists (such as Chomsky) argue, children have an in-built language acquisition system that rapidly enables them to formulate the grammar of high registers until they become their own.

For example, if you live in a country that is multi-lingual, you will have experience of how children learn two or more languages at the same time without any problem, despite enormous differences in grammar. If you have trained to become an expert engineer or nurse, you will also notice how quickly and easily you acquired the formal language of that role. This is what the contemporary rationalists are commenting on.

However, this high-level language has the symbolic weight of authority and expertise – public confidence. Choosing to talk in that way, under the guidance of the teacher, had the symbolic effect of the children's taking on of formal roles, the sorts of roles that teachers, managers, experts have. That role-taking in turn made accessing the knowledge of specialists much easier.

Take another example, which looks at utilising the techniques of the 'inner game'. If you pretend to be your favourite cricket player when you go out on the field, doing this will very rapidly improve your grasp of basic skills. The skills you are emulating are those of your favourite players and they symbolise the glamour and power of great cricketers. This symbolic role-taking is powerfully energising to your usual skill-acquisition process.

In the example of the young street mathematicians from Sao Paolo (Unit 1, Case study 1.3), the balance was too much on the concrete world and needed a little more of the symbolic to allow them to move forward. The balance was empirical and needed rational reflection to facilitate progress.

In this section we have looked at what is meant by 'developing the whole person' particularly in terms of the three domains – cognitive, affective and psychomotor. We have looked at rationalist and empiricist philosophies about ways of acquiring knowledge and the influence of these in learning and teaching.

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## Lifelong learning

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'Education for all' means that as well as developing the whole person, learning should be possible throughout life.

Lifelong learning is vital to our economic and social development, particularly in poverty reduction as people lose their livelihoods and jobs in the global economic revolution. The lifelong learning principle

is based on the psychological research that shows that it's never too late for learning.

As currently understood, lifelong learning is a concept that covers all forms of learning, both within and outside the formal education system. Adult or continuing education are just two illustrations of the use of lifelong learning opportunities. The lifelong learning principle also shifts the attention from the learning 'system' or 'institution' to the nature of the learner; it encourages learners to take more responsibility for their learning.

- **Economic necessity and more:** it has become an increasing economic necessity for many people to upgrade their skills continually wherever technological and social development occurs: some skills learned through school education can become outdated even by the time the learner enters the world of work. However, the philosophy of lifelong learning is meant to serve a purpose much broader than social and psychological necessity.
- **Self-realisation:** even formal education is now considered a preparation for lifelong learning, through 'self-realisation'. It has to develop skills, attitudes and interests, and a whole set of personality characteristics that will enable learners to continue to extend their capacity for controlling their own development throughout their lives.
- **Democracy:** despite the current wide-ranging critique of the political use of the concept of democracy in the new world order, democratic philosophy seems to be the only political philosophy that entails access to education as a fundamental individual right. When democratic philosophy's main entailments – individual autonomy, individual responsibility and the need to abolish privilege – are considered, it becomes clear that lifelong learning must be essential to realising the democratic ideal.
- **Skills for growth:** For young men and women to 'self actualise' (which is the top of the Maslow hierarchy and is the first of Rousseau's principles of education – see box below) they will need help (the third of Rousseau's principles of education). They will need help in acquiring the ability to select, plan, execute and evaluate learning activities to satisfy their own individual needs but also the needs of the community. Consideration of community needs is essential, as there is no self-actualisation independent of the communities to which we belong: we are a social species.

Personality characteristics that contribute to lifelong learning are:

- self-awareness
- interest in the world
- interest in other people

- desire to internalise standards or criteria for making judgements.

None of the skills or personality characteristics mentioned above is contradictory to the learning processes advocated in adult education. In fact, these are fostered in adult education. This makes adult education programmes an appropriate means for equipping learners for a lifelong learning journey, prompted by the inner necessity to fulfil more of one's potential, a motivation that should be intrinsic to democratic systems.

## Guiding principles

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So what are the principles that underpin the idea of 'education for all' as applied to adult learning? This section looks at six aspects of adult learning (some of which you have met already) and examines some of the philosophical and psychological principles on which they are founded.

- 1 Maturation and readiness.
- 2 Learner needs and motivation.
- 3 Participation.
- 4 Teaching as guidance.
- 5 Discovery and experiential learning.
- 6 A positive learning environment.

### 1 Maturation and readiness

The educational theories of the French philosopher, Jean Jacques Rousseau were a major philosophical influence on the thinkers and researchers discussed so far in this unit. In almost all the progressive movements in education in rich countries, Rousseau's philosophy has been central. A key feature of his philosophy is one that is absolutely central to the work of this Diploma: the importance of people developing ideas for themselves, making sense of the world in their own way, which he felt was at the heart of democracy. Educational facilitators should encourage learners to reason their way through to their own conclusions and not rely on the authority of a teacher (a central plank of the theory of discovery learning, as described later).

### ***The educational philosophy of Jean Jacques Rousseau***

Rousseau's ideas were an important influence on the 1789 French Revolution. This was effectively a liberal bourgeois revolution against an incompetent aristocratic regime, and eventually brought about the birth of the first modern capitalist state.

Rousseau's *The Social Contract* begins with the famous statement: 'Man was born free, and everywhere is in chains.'

Of course, he was writing from within a Europe finally emerging from the broken structures of feudalism, dominated by royal and aristocratic landowning families. He argued that a free society would be one in which everybody accepted the domination of 'the general will'. We would now call this 'the will of the people', representing the general good of all citizens. In such a society, no citizen should put their private interests and ambitions before the general good of all. Living in that sort of spirit, says Rousseau, will promote liberty, equality and fraternity. This is, of course, one of the highly proclaimed ideals of democracy. It is, however, an ideal that is in frequent conflict with the main thrust of capitalism, which is also argued to be essential to democracy.

The basis of Rousseau's philosophy is that all people as children are born with an original, perfect nature. The aim of education, in order to build the ideal society, is to preserve this essential nature by adapting education to the natural stages of growth of this perfect nature. He sees education as occurring on the basis of three principles:

- 1 The inner growth of our organs and faculties is the education of nature.
- 2 What we gain by our experience of our surroundings is the education of things.
- 3 The use we learn to make of our growth is the education of men.

Principle 1 is rationalist by implication. The use of the word 'faculties' suggests that there are interior mental abilities that grow naturally, though they need to be shaped by education in society, as suggested in Principle 3.

Principle 2 is empiricist in implication, though again needs to be shaped by education.

Principle 3 is the only one we can control.

A true education has to harmonise all three of these principles. The skill is in adapting the third principle to follow the directions suggested by the other two principles.

Crucial to Rousseau's model of growth of the person is that what is to be learned should be determined by an understanding of the person's nature at each developmental stage. This is the central part of Piaget's model. Rousseau also argued that individuals varied considerably within each stage, and therefore that education should be individualised. He extended this to argue that children should not be presented with ideas that are beyond their grasp. Research has shown that this is possibly a mistake. The right social environment can advance almost anybody's real learning beyond what appear to be the limits of the stage of growth. This is shown clearly in the work of Mrs Pyrah (see Case study 3.1) and Lev Vygotsky (see Reading 2).

Rousseau's model is clearly embodied in the concepts of maturation and readiness to learn which are important aspects of a positive philosophy of learning. In psychological research and theory, the physiological and psychological patterns of change that occur with the stages of maturation are broadly associated with various age levels. They are felt to influence the nature of one's readiness to learn. The characteristics of each stage are constructed as norms and are used to describe the normal general abilities at particular age levels.

The work of Piaget, Bruner and Erikson has yielded a useful psychological framework for mapping out the developmental stages of infants, children, adolescents and adults.

The stage of development indicates:

- an individual's probable level of readiness
- their probable ability to make use of instruction
- the types of instruction that are most likely to motivate learners and help them achieve learning objectives.

The following table summarises learner readiness in terms of general psycho-social findings – physical maturation, cognitive development and psychosocial development, for individuals from the age of seven.

Age	Physical	Cognitive	Psychosocial
School age (7-11 years)	Motor skills increasingly coordinated. This age brings together physical, cognitive and psychosocial skills so that learning is enthusiastically undertaken.	Concrete operational stage. Logical thought processes and reasoning develop. Can see cause and effect of concrete processes. Learn strategies for concentration and remembering.	<b>Stage</b> - Industry vs inferiority. Mastery of academic work, peer relationships and physical skills. Becomes aware of society at large.
Adolescence (12-18 years)	Rapid physical growth temporarily resulting in poorly	Stage of formal operations. Ability to abstract, conceptualise	<b>Stage</b> - identity vs identity diffusion. Struggle to assert

Age	Physical	Cognitive	Psychosocial
	<p>coordinated muscle movements and clumsiness. Secondary sexual characteristics appear and develop.</p> <p>Skills become increasingly refined and highly developed.</p>	<p>and internalise develops. Complex scientific theory related to cause and effect and process can be understood. Ability to interpret and use language, understand implications of future outcomes and evaluate past events and present implications etc. develops. Growth of cognitive structure is complete.</p>	<p>independence, establish one's own values and determine self'. Group belongingness high. Personal values are shaped by what is important to others. Concerned about privacy, confidentiality. Authority figures, including parents, approached with conflicting attitudes.</p>
Adults (20-40 years)	<p>Growth of physical structure is complete. Changes continue but not dramatic.</p>	<p>Will continue to learn formally or informally. Concerned about society's values and lifestyle. Perceptual and cognitive capacities allow critical analysis and problem-solving. Past experiences provide foundation for further learning. Can learn things of various levels of difficulty but interest is in things that are both relevant and have immediate application. Independent, self directing. Can be involved in planning, content and methods of learning.</p>	<p><b>Stage</b> - intimacy vs isolation. Young adult is expected to be independent, achieve self-sufficiency, make decisions about education, career, marriage and family. May wish to learn about nutrition, physical fitness, preventive health, occupational safety, stress management, societal issues and other relevant areas of interest.</p>

## 2 Learner needs and motivation

Naturally, people spend time and energy on a task when they are motivated (as discussed in Unit 2). Motivated behaviour is characterised by:

- a high level of emotional involvement
- energetic activity
- goal-directed behaviour.

If you want to design learning, especially for adult learners, the usual way to ensure adequate motivation is to make them aware of the importance of the learning by establishing the relevance of the programme to their perceived needs.

Sources of contextual motivation for adult learning identified by Lieb (1991) include:

- social relationships: to make new friends and to meet the need for associations and friendships
- external expectations: to obey instructions from someone else; to fulfil the expectations or recommendations of someone with formal authority
- social welfare: to improve the ability to serve the community and to participate in community work
- personal advancement: to achieve higher status in a job, secure professional advancement, and keep abreast of competitors
- escape stimulation: to provide a routine of home or work and to relieve boredom
- cognitive interest: to learn for the sake of learning, seek knowledge for its own sake, and to satisfy an inquiring mind.



### Activity 3.3

(about 20 minutes)

Think back to your school days. Discuss the following questions with others and write a response in your learning journal.

- Did all the children in your class get readily involved in the learning activities?
- How many of them spent adequate energy and time on learning?
- Why do you think some students spend more time and energy in doing the set work in the learning situation?
- What were your own goals in doing the set work?
- What differences have you observed in groups of adult learners? Give some examples of how these differences illustrate ideas discussed in this unit.

According to Knowles (1985), 'Contextual motivation to learn in adults is closely tied with the motivation to do better work. Training courses must tap this inspiration. Courses that are seen by learners as closely tied to present or future work responsibilities are always considered relevant. Inappropriate, boring, or seemingly peripheral training programmes can actually reduce, or temporarily extinguish, the motivation that participants bring with them to the course.'

Once they have selected the content of a study programme, learning facilitators need to create a general motivational atmosphere. Then they have to clarify meaningfully the precise goals and objectives of the learning. However, the use of an objectives model of learning does not mean that the learning method should be a behaviourist one, rooted in empiricism, though that is where the objectives model originated. Many of the ideas in this unit have been inspired by the rationalist philosophy that underpins the work of people like Piaget and Chomsky. Objectives can be designed and stated along rationalist lines as well as empiricist ones.

### 3 Participation

Democratic systems mean that anyone approaching adult life should have the ability and right to participate as partners in anything that affects them, especially their own learning – which includes more than mere preparation for a job. Their learning needs and capacity for responsible behaviour are not the same as those of children, and therefore they should learn by methods matched with their needs and capacities. In other words, they need participation, not just preparation.

The concept of education as preparation comes from the connotations given to the word in different languages. For example, in Latin, education means to lead out or to draw out. While this has rationalist implications, it nevertheless assumes the facilitator to be in authority. This implies that the educator knows what learners are to be prepared for and how they should go about it. The relationship implied is one of authoritative leadership.

The facilitator in adult education has to give up this traditional role of teacher, which is why we use the term facilitator ('one who makes things easier') rather than educator. Moreover, the facilitator may be an authority but is not in authority, so must relinquish the leadership role as well, in favour of a learning management role. Adults in the learning situation should not be led by a leader, but instead treated as participants in a managed process that leads to the acquisition of certain negotiated objectives.

Looking at education as participation entails the principle that the learning facilitator is responsible for creating an environment that is conducive to participation.

Climate setting (creating the right atmosphere) is extremely important and will be discussed in more detail later in this module. Adult education research in the UK has shown that to get adult participation the atmosphere needs to be informal. It has been found that a 'formal climate' discourages participation. This may not be the same in other cultures, where there may well be a range of specific, well-established techniques to encourage participation. It's important that you understand what these are and how they work in your own community.

It's probably true in all cultures that, to encourage participation, the climate must also be mutually respectful. There must be a general consensus of opinion about the objectives of the learning, so that, even when participants disagree on some of the specific objectives, they can collaborate in the process of working towards the overall objectives. When participants make the decisions regarding objectives, it guarantees the relevance of the objectives to their needs and thereby supports basic motivation.

The preparation view of education, as a process loaded with cultural information, decided by an outside authority figure, is no longer considered acceptable, even in the case of children. Today, learners must get the opportunity to contribute their reflections on their personal experience. They now see themselves as learning resources in a cultural framework that is familiar to them. Within such an environment, collaboration, support and consensus are normal. When education is considered as participation, the learners themselves steer the process. They become, in a sense, their own educators. It is a point of view that satisfies the ethical and psychological considerations in adult education, and it endorses the liberal humanism of Rousseau's philosophy and the humanistic Marxism of Paulo Freire.

### **The work of Paulo Freire**

The great Brazilian educator Paulo Freire's mode of development of literacy among poor peasant communities was through the world of action (or practice). The peasants learned to read and write because reading and writing were essential tools that allowed them to understand what actions to take in order to change their oppressive conditions. Freire's method was to get his subjects to 'name the world' as the first step. He argued that once you name something and understand what you mean by the name, you then have some power to change it.

Freire began by making a representation of issues in the real world in concrete form, such as a picture, or drawing, or an actual bag of coffee beans. Words were then attached to these representations as labels. He established with his learners that these written forms were based on basic elements of meaning that could be broken down and recombined in different ways to produce different meanings.

By doing this to the concrete representations of the generative themes, he showed how reality and language in combination could be used to demonstrate how the real world could be changed. In the case of the price of coffee beans, for example, he could show from analysing the concept of price and its associated terms – market, trade, competition, value – how a local market monopoly could accentuate and exploit competitive tendencies among farmers, and they could see, from the detailed nature of the representation, what elements of the situation might be altered and brought under their own collective control, while also realising the importance of keeping that monopolising company in the field, if possible. At the same time, they were using this to learn to read and write.

There is more about Freire's approach in Reading 9.

### **4 Teaching as guidance**

The concept of education as instruction creates a picture of the learner as passive, merely absorbing what is prescribed by those in control. This may be appropriate in some cases: for example, for teaching soldiers basic skills such as how to fire a gun. However, nowhere in the contemporary philosophy and psychology of education is learning conceived as merely accepting the ideas of others. Learners are expected, by the help of supportive learning environments, to forge for themselves, through their own activity, the knowledge and skills necessary to deal with being in the world. That requires critical engagement with the ideas of others. This principle is a central feature of the philosophies of Rousseau and Freire and of rationalist theories of learning. Even formal teaching has become considered more as guidance than instruction.

When teaching is seen as guidance, the role of the teacher assumes a special focus. It does not mean that the facilitator totally relinquishes a managing role. As Rousseau says, his third principle of education is the only one where we have genuine control of the education process. But we must make sure that the other two principles have room to work. The facilitator is the one who most fully understands the aims and objectives and essential mode of the learning process. It is the facilitator's task to guide learners into and sometimes through the process. In the case of the adult, for all the reasons discussed so far in this unit, this is necessarily a self-educative process, hence the use of the term 'facilitator' rather than 'teacher'. Instead of instructions or directions, in general such guidance will take the form of suggestions or tentative statements such as '... in my opinion it might help you if you adopt a different approach.' Such guidance never seeks to suppress a learner's liberty to choose or her individuality; nor does it exert an influence that is not morally justifiable.

Of course, as you will have realised, this is a culturally loaded model. It may be contrary to some of the basic assumptions of your own society, as it is to some of the assumptions of the northern hemisphere, where these ideas have developed since Rousseau. However, the model is one that the designers of the Diploma believe will help most in the critical youth development tasks that we now face.

## 5 Discovery and experiential learning

In Rousseau's novel *Emile*, the hero is taught by encouraging him to draw conclusions from his own experience: for example, he learns the consequences of breaking a window that is not then repaired, by suffering from the cold air that gets through the broken glass. We call this the principle of 'discovery learning'.

Educational theorists, since the time of Dewey, have urged educational reforms that engage learners in hands-on (experiential) learning activities. These are used to question learners and enable them to discover ideas for themselves, as the best way to develop intrinsic motivation, and to stimulate deep-level understanding of the principles involved.

Two examples of this follow.

- Canada's McMaster University Medical School pioneered the training of doctors through a series of highly organised and researched, practical, problem-based simulations of actual standard medical conditions. These gave very good results in the preparation of medical students for professional life.
- In the UK, the most recent demonstration of this is the General National Vocational Qualification (GNVQ) at age 16+ for certain practice-based school subjects such as Forensic Science. The learners spend much of the learning time engaged in simulations of investigating crime scenes. This is awarded as the equivalent of

several GCSE subjects. As part of the UK's National Vocational Qualification (NVQ) framework it is also an important policy strategy that attempts to unify the world of work and its levels of achievement with the world of education and its levels of achievement. It attempts above all to foster and reward work competence, which includes practical skill but also understanding.

If you examine trends in your own country and region you will find similar educational innovations.

Learning through guided experience at its best enables learners to:

- discover for themselves satisfactory solutions to practical and theoretical problems
- acquire independently, appropriate methods for discovery learning and for arriving at solutions to problems.

Thus, as a learning technique, experience and discovery are very appropriate to the aims and objectives of adult education. Learning through experience means there is no need to use instructional methods that are culturally unfamiliar, irrelevant or contradictory. However, in some cultures, discovery methods as a mode of learning may be alien, and may well need careful introduction.

### ***Project-based learning***

Vygotsky's research showed the importance of the social context of learning. When learners work together, exploring and discussing ideas, suggesting tentative solutions to problems, trying these out and evaluating results, then there seems to be a significant and rapid improvement in linguistic and learning skills. For example, Richard Owen (Lorac and Weiss, 1981) investigated groups of secondary school children engaged in film-making and constructing tape/slide projects. The process involved children translating cognitive and affective ideas into visual and oral form. This confirmed Vygotsky's views, but also showed that the process of finding visual and sound equivalences of the children's ideas promoted the use of technically sophisticated language, which in turn aided the deep understanding of concepts.

Such experiential group learning meets the learners' social needs as well as motivational needs. It generates and sustains intrinsic motivation towards the problems to be solved, because, while these problems stretch the learners' abilities, the technology used facilitates solving the problems. There is positive involvement, sufficient quality conversation, the use of reasoning, shared problem-solving and group discovery. These abilities therefore become integrated into the mainstream learning culture and do not remain the domain of technical experts and inaccessible. Learning by experience and discovery also increases the overall intellectual potency of learners as they acquire the principles of how to learn and solve problems.

The account of project-based learning in groups shows clearly an application of Rousseau's three principles of education.

### ***Memory and information processing***

You may remember from Unit 1 the importance of memory paths: when items to be remembered are a day-to-day feature of pathways that we use regularly, then they are easily accessed. Equally, when they form an intrinsic part of a cognitive map, then providing we have a clear understanding of the whole map, we can access individual items on the map quickly.

Learning by experience and discovery is a powerful aid to memory. Learners actively seek knowledge rather than passively receiving it. This means that they build up powerful cognitive maps of the knowledge, maps that are well marked in the neuronal structures because the learners have committed considerable effort to making the essential connections on the maps.

Experiential and discovery learning can promote self-monitoring, too. They can be used to promote individual control of the learning processes, especially if the facilitator applies the intervention principle sensitively. The facilitator can for example ask How? and Why? questions about what learners can observe in the learning environment and can encourage them to expose their thought processes and indicate where these might be improved, or whether they might be accepted as workable.

Treated in this way, such learning can also encourage the development of systematic, long-term metacognitive strategies for information processing. Strategies might include, for example:

- paying appropriate attention
- the habit of self-questioning
- rehearsal
- review
- evaluation.

Therefore, the possibility of transfer of the abilities acquired through experiential and discovery learning is also high.

## **6 A positive learning environment**

A positive learning environment is one where there are no physical, social or psychological barriers to learning. Thinking of the learning environment holistically, as composed of these three elements, promotes higher levels of achievement of learning outcomes.

### ***Overcoming barriers***

This approach also helps to remove barriers to learning. To understand this problem of barriers, you need to think of the learning

context as one full of possible tension. Learners are being required to stretch themselves as whole persons. For example, in situations involving physical exercise when others are present, you have to test whether or not you can manage the exercise against human norms and in the presence of others who are watching you, and may be better than you. It is similar in all learning situations. You are on trial, in your own mind if not in the minds of those around you. The aim should be to reduce that tension.

To do that, learners need to be relaxed in the way that Michel Thomas created when teaching a foreign language (described in Unit 2, Case study 2.1). What Thomas did was to use informal seating arrangements: chairs that actually encouraged people to ‘flop’ when they felt like it, but with enough support for when they wanted to sit up. We realise that you may not even have chairs, possibly not even a room. But you can set out to make the situation as informal as possible, and encourage people to relax their bodies in order to let their fears go. Thomas’ relationship with his students was one of felt personal equality. This may be difficult, for example in Islamic cultures where the status of the teacher is very high indeed and respect for the teacher is paramount. What we have done with Islamic students is to establish a feeling of strong and clear mutual respect between facilitator and students, which abides by the cultural norms. But it stresses the role of the facilitator as increasingly ‘learning’ from the students, as well as being initially the ‘leader’ and ‘teacher’ of the students.

One of the great barriers to learning has been the level of social control exercised by dominant intellectual elites over the main population of learners. This has been through processes like ‘intelligence testing’, and using the normal assessment and grading techniques to ‘stream’ and ‘band’ learners. Often, use of these procedures has not been genuinely to test people’s potential but to allocate scarce resources in ways that society has agreed upon. The very best IQ tests undoubtedly can pick out key features of learner’s underlying mental skills. This can be useful if it is recognised that these tests also miss out significant areas of human ability, for example in social intelligence and visual creativity. But they are rarely used like that in streaming and banding procedures. Many of your learners may have been subjected to these processes, and they may have resulted in dangerous labelling effects. You need to do your best to treat these ideas critically if you are to break down the barriers to learning.

### ***Social conditions***

Knowles (1980) suggests four basic social ingredients to produce an environment that is conducive to learning:

- respect for personality
- freedom of expression and availability of information
- participation in decision-making

- mutual responsibility in planning, setting goals and evaluating activities.

These are all characteristics that adults value. From the point of view of democratic ethics, they preclude the possibility of moral and ethical problems that could arise from an attempt to impose another's point of view on adults who already have their own values.

### ***Psychological conditions***

Psychological factors that need to be considered in creating a positive learning environment are:

- the past experiences that learners have had with success and failure
- their beliefs about what was responsible for such success or failure
- whether they believe that such factors are under their control or beyond their control.

If their experiences have been positive, learners will be intrinsically motivated to face future learning situations readily and confidently. They should already know how to achieve certain goals, and how to initiate and regulate learning activities to produce desired results.

There are a few other factors that you need to consider regarding the learning environment:

- the learners' perceptions of and attitudes towards the facilitator
- the extent to which the educational programmes receive recognition and support from employers
- the interest expressed in such programmes at local and national level.

In Unit 5 there is a further discussion on how facilitators can prepare learning environments that encourage learning.

Now that we have looked at what developing the whole person and lifelong learning and their underlying principles mean for adult learning, the final activity in this unit asks you to bring together your ideas and present them in your own words. This is a very effective way of checking that you have mastered and absorbed new concepts.



### Activity 3.4

(about 30 minutes)

Imagine that a colleague (another youth development worker, but one who is not studying on this diploma) says to you:

‘What’s all this about developing the whole person and lifelong learning? How can all these theories help us in our real life work?’

What would you reply? Look back through the ideas outlined in this unit and write notes in your learning journal about the main points you would make in response.

## Unit summary

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In this unit you have covered the following main points:

- The psychological and philosophical principles underlying the methods considered suitable for the teaching of adults, in particular the ideas of education for all, developing the whole person and lifelong learning, which underpin this Diploma.
- The importance in adult learning within an holistic perspective of:
  - maturation and readiness
  - learner needs and motivation
  - participation
  - teaching as guidance
  - discovery and experiential learning
  - a positive learning environment.
- The value of these principles to promote total development and lifelong learning.

To check how you have got on, look back at the learning outcomes for this unit and see if you can now do them. When you have done this, look through your learning journal to remind yourself of what you have learned and the ideas you have generated.

All of these topics are developed further in the units that follow. In the next unit, we will look at the nature of the informal education of learners, the agents of education and the different forms of education.

## Answers to self-help questions

### Self-help question 3.1

**Cognitive domain:** In order to answer constituents' questions, the young woman will have to grasp the 'meaning' of the situation, so she has to have a very clear 'cognitive map' in her head of the overall economics of the area in which she is campaigning, and this means that she must also be able to understand it within the national economic framework. She therefore needs to understand and remember a lot of economic facts, because she must be able to deal, for example, with very specific economic questions relating to queries that an individual small farmer might have about the likely effects her activities might have on his farming strategy, when she is in office. For this, she needs considerable analytical skill, being able to break down the question into component parts and to analyse it in terms of the overall map of the economic issues. This is a high level of mental organisation, because she will have to synthesise lots of information into a whole pattern in such a way that any part of it can be retrieved. These two things she must be able to do very quickly on the spot and to repeat them in varied forms with many different people.

**Affective domain:** This requires considerable social intelligence and knowledge. She will need a very clear map in her head of the local political balance of power, including the different levels of power, so that she knows what she can say, to whom, and in what way. She needs to know what actions will be politically feasible when in office, and she needs to know how to get this across to people in a way that will convince them that she knows what she is doing and can make things happen.

**Psychomotor domain:** Not only does she need the social skills to handle large public meetings in different locations, and small face-to-face interaction with people of different levels of knowledge and different status, she needs to integrate this with movements and gestures that are crucial in social interaction.

In addition, you have to help her writing her manifesto. Because this is a learning situation, she will have to do the bulk of the work by herself, but you could help by first doing a more detailed analysis of what we have covered above, so that you know the essential framework for the learning.

As a motivated adult, she will already have a lot of social knowledge and intelligence, and probably some basic understanding of the economic and social issues. The first stage is to get her talking to people with relevant expertise (who will help her get inside and master the zone of proximal development) and/or direct her to readable but knowledgeable texts on the economic situation. She can then be helped to develop a structured flow diagram (a 'mind map') of all the economic issues. By exploratory talking with her, you can help each other to create a supportive scaffold for the new ideas.

Because this requires an ability to select key underlying aspects of the economics, you can help her in the scaffolding process by using a Socratic questioning method (i.e. you never tell her anything, you only ask her questions, and, when she answers, you ask a further question until she has built up the picture). A flow diagram would help to synthesise the ideas into a whole pattern, and, if she has that in her head, she should quickly be able to answer any individual questions.

She will need practice to develop interactive skills, which can be done through role-play sessions with the youth group members, followed by exploratory evaluation of her answers. Those sessions can also be general practice for public speaking. Here you will have to think about the different skills involved (cognitive, political and social) and then use role-play to practise weak skills. Her political map is best developed by research, talking to skilled political figures in the town, but again role-play will help to crystallise the issues and to enable her to communicate them effectively. This all sounds very complicated. However, it is an obvious procedure once you have begun to break down the activities into a structure.

With the use of the mind map, what you are relying on is making each aspect of the situation clear and meaningful in relation to all the other aspects. That will then switch on all the automatic learning systems. British psychologist Tony Buzan (1995) explains how personally constructed, meaningful flow diagrams are the best ways to mirror the actual processes in the mind, and therefore make the meaning of what you are doing clearer, and memory access much more powerful.

### **Self-help question 3.2**

This question is designed to help you develop your emotional intelligence. It's a difficult problem to deal with because your authority and even your competence are being questioned. You will have also been hurt emotionally, and your natural reaction may be to order the youth out and to refuse to let him ever join in again. However, it may well be that the roots of this reaction is in problems he is experiencing. Alternatively, it may be that your relationship with the group is breaking down, or that your treatment of this young person has not been completely appropriate.

It is important to take the immediate heat out of the situation by being calm and stopping the fight gently and telling the offender politely to calm down and take a bit of time out, and then to arrange to see him privately. That private meeting should be an equal and adult occasion – two adults meeting to explore, understand and resolve a difference. Hurtful emotional claims may be made against you, and you must deal with them coolly and with acceptance, and explore them objectively, rather than reject them angrily. That way, emotional learning can take place on both sides and the relationship reformed.

This may, of course be very difficult, especially in some cultures, and you have to judge what is possible. However, the general principles do usually work.

### Self-help question 3.3

The physical movements themselves are best taught through demonstration, because that gives the overall pattern (in psychology this is often called the ‘gestalt’ of the movement).

By watching a skilled person perform, and imitating the pattern yourself, you are effectively learning by the ‘inner game’ approach. There is a rhythmic element to heavy labour with sledge hammers, shovels and picks. When the learners have grasped the pattern, the instructor can then fine tune the rhythmic elements, analysing the movements as a sequence (a ‘learning chain’ of stimulus-response units), emphasising the point at which to put maximum effort, and letting that be the stimulus for the reinforcement of an effortless ‘follow through’ in which the momentum of the tool carries the movement forward. This then becomes the stimulus for the upward swing of the pick or the sledgehammer, all the time letting the vibrations in the handle of the tool tell you about the quality of the action.

But this work needs more than that: it needs ‘knowledge’ of the materials being worked: the sedimentary rock that has to be broken in the most energy-effective and sensitive way; the mechanics of the soil, so that you don’t break up its substructure any more than absolutely necessary; and the best way to arrange the broken rock in the netting wire so that it will absorb the frightening energy of water that is run off on steep slopes during storms such as those in the monsoon.

This is scientific knowledge, held at first in cognitive mode, but then integrated into the intuitive psychomotor knowledge of the body and affectively controlled by the pleasure of doing qualitatively good work. The point is that, though we tend to split mind/body/feelings conceptually, and for analytic purposes Bloom does the same, this is really only for convenience and manageability.

Deep-structure psychomotor ability gains immeasurably from this sense of holistic meaningfulness. The skills of the subsistence farmer and the housewife have this kind of depth to them. If this is so, then, as we said earlier in this section, by exploring people’s experiential knowledge and exposing its nature, we can use that to move on to almost anything else that we choose, providing we can create the appropriate steps, understand the types and levels of difficulty involved and find different ways around the various learning obstacles. In this way, we can move freely back and forth among the cognitive, affective and psychomotor domains.

Once the psychomotor skill is in place, the deep-structure capacity for it never really disappears. However, it can only be refined and maintained properly through regular practice.

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# Unit 4: Informal education

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## Unit introduction

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Welcome to Unit 4 *Informal Education*. As you've seen in Units 1, 2 and 3, learning is not just about acquiring knowledge. It's also about developing attitudes, values, and physical competencies.

Learning, especially adult learning, is not just restricted to what happens at school. A great deal of informal learning takes place outside formal educational institutions, in just about any setting, regardless of the organisation's or individual's intentions. More importantly, informal education works through, and is driven by, social interaction and conversation. It involves exploring and enlarging our experiences.

In this unit you will learn about different learning settings, focusing on informal learning. You will look at the agents of learning and opportunities for informal learning, even within formal settings.

## Unit learning outcomes

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When you have worked through this unit, you should be able to:

- distinguish between formal, informal and non-formal education
- identify agents of learning and the ways they provide informal learning
- analyse examples of informal education
- suggest ways of providing informal education opportunities for young people.

## Types of learning and education

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Learning takes place in a variety of ways and in many different places: formal, non-formal and informal settings. While these different forms of learning might all be available throughout a person's life, the importance of each may vary at different points. Formal, school-based education is usually more important during childhood than in adult life. The process of learning will also vary as a person progresses through life from childhood to old age.

The term 'agents of education' is used to cover organisations, institutions and people that provide education (or opportunities of education) for individuals to learn. The importance of each of these agents may vary depending on the characteristics of the social context – traditional or modern, agricultural or industrialised, developed or developing, technologically advanced or not, urban or rural.

The agents of education can be:

- the family
- village elders, folklore, folk drama
- religious organisations
- educational institutions
- peer group
- cultural institutions
- community organisations
- the workplace
- the mass media.

Education that is provided by the agents listed above can be classified into three types:

- formal
- non-formal
- informal.

The usual criteria for classifying them are:

- whether the educational programme is organised
- who decides what kind of education should be provided
- whether learning occurs within a specified time structure, or not
- whether the form of education is institutionalised.



## Activity 4.1

(about 20 minutes)

Complete the table below by answering the questions for each agent. Note how the agents of education differ from each other according to the criteria.

Make notes in your learning journal about your findings. Did the activity help you understand the differences between the agents. Were there any surprises?

Agent	Is it an organised programme?	Who makes decisions?	Is there a specified time for learning?	Is there an institution involved?
The family				
Village elders/ folklore/ folk drama				
Religious organisations				
Educational institutions				
Peer group				
Cultural institutions				
Community organisations (including clubs, health centres, youth centres)				

Agent	Is it an organised programme?	Who makes decisions?	Is there a specified time for learning?	Is there an institution involved?
The mass media				
The workplace				

## The three types of learning

The three types differ in the following ways:

- Formal learning occurs where learners have no control over the objectives or the means of learning.
- Non-formal learning occurs where learners control the objectives but not the means of learning.
- Informal learning occurs where learners control the means but not the objectives of learning.

One of the outcomes of UNESCO's embracing of lifelong education and the principles of 'the learning society' is the use of this three-fold categorisation of learning systems.

**Formal education:** the hierarchically structured, chronologically graded 'education system', running from primary school through to the university and including, in addition to general academic studies, a variety of specialised programmes and institutions for full-time technical and professional training.

**Informal education:** the truly lifelong process whereby every individual acquires attitudes, values, skills and knowledge from daily experience and the educative influences and resources in his or her environment – from family and neighbours, from work and play, from the marketplace, the library and the mass media. It is not organised.

**Non-formal education:** any organised educational activity outside the established formal system – whether operating separately or as an important feature of some broader activity – that is intended to serve identifiable learning clienteles and learning objectives.

Bear in mind that even in formal educational settings such as schools, a considerable amount of informal learning (positive and negative) takes place. For example, even though it is not necessarily the

intention of teachers, children develop attitudes towards the learning process and about their place in educational institutions, from what has been called 'the hidden curriculum'. They may also learn a great deal from their school-mates.

But do all educational experiences promote learning? Not always.

The famous educationalist John Dewey (1938/1997) referred to 'miseducative experiences', which do not result in learning. Situations where there is little time for reflection on what we are learning and little time for focused interaction with other learners will tend to be miseducative (for example, when the situation offers only repetitive activity and the environment is oppressive, as one can find in workplaces where workers engage in routine, mechanical tasks). Similar situations exist in education where knowledge transmission is routine and over-controlled by teachers, and learners are passive. Learners may well feel that what occurs is meaningless and unrelated to their lives.

What is important is not just providing educational experiences but, with the participation of the learners, choosing meaningful experiences that can be used to enhance their being and their capacities.

## Learning processes

Here are some of the learning processes that operate in different settings:

- imitation
- observation
- dialogue
- rejection
- reflection
- modelling
- memorisation
- presumption
- problem-solving
- experimentation
- identification
- communication
- non-consideration
- contemplation

How effective these processes are will vary with the age of the learners and the characteristics of the setting.

Jarvis (1987) categorised contemplation, experimentation and reflection (reflective practice) as higher-order learning processes than processes such as imitation or memorisation. Yet he also cautions against evaluating the effectiveness of a learning process in isolation of its setting. Even a formal lecture provided in an egalitarian setting might result in contemplation or experimental learning. An egalitarian environment promotes learning not only for the learner but also for the facilitator, who will focus on other elements that influence learning.

However, some general tendencies can be noted:

- There are some settings that obviously provide informal learning opportunities: for example, the family, peers and village elders.
- Community organisations and cultural institutions generally provide non-formal education.
- Others, such as educational institutions, deliberately focus on delivering formal education.

Look back at your table in Activity 4.1 and see if you agree with these three statements.

## Agents of informal education

First, here is a task that asks you to reflect on your own experiences of informal learning.



### Self-help question 4.1

(about 10 minutes)

Below is a list of the agents we previously identified. Next to each, note when each was important in your life (childhood, adolescence, adulthood).

Agent	Stage of life
The family	
Village elders, folklore, folk drama	
Religious organisations	
Educational institutions	
Peer group	
Cultural institutions	
Community organisations	
The workplace	
The mass media	

*Compare your answers with those suggested at the end of the unit.*

An important aspect of informal education is that it works through, and is driven by, social interaction and conversation. It involves exploring and enlarging our experiences.

You may be surprised at how much focus is being given here to this approach. This is because informal education has always been a vital element of practice within youth work. Please note, however, that this does not imply that the formal and non-formal approaches are unimportant. On the contrary, all three approaches complement one another, and together contribute to a more effective education process.

This section looks at each of the agents, focusing on how they provide informal education. There are several activities to help you analyse examples of informal education. You will also notice how ideas from earlier units, for example about learning processes and how adults learn, participation and experiential learning, reappear here within the discussion of informal learning.

## The family

Most individuals learn their social roles (the roles of being a son, daughter, brother, sister) and acceptable social behaviour in the family setting. This kind of informal learning enables children to change their behaviour from being at first self-centred, to becoming more socially aware, and eventually to caring for the needs and rights of other family members.

At its simplest level, the family uses a system of rewards and punishments, and from that the behaviour of the child is shaped until it is socially acceptable. It is at this level that parents or parent substitutes can use behaviourist tactics (e.g. ignoring bad behaviour where possible, and rewarding good behaviour). However, the child learns much more than this from 'observation', 'imitation', 'memorising', 'modelling' and 'participating'. Through these learning processes, plus the key one of taking on the roles of other family members, or through empathy with their situations, the child learns to understand the deeper levels of accepted norms in social groups, especially adult-child relationships, gender roles, and social skills and cultural values.

There have been significant changes in these processes as the extended family has been eroded through industrialisation, urbanisation, migration of labour and poverty. More recently, this process has broken down much further with even the nuclear family being threatened due to changes such as ease of divorce, the growth of single-parent families and the threats from accelerating global economic processes.

The good news is that the loosening of traditional gender role-taking means that gender stereotypes can be broken down. This must be seen as a precondition for involving men and boys in achieving gender equality. This is very important, particularly when we consider that

the process of socialisation begins in the family. Thus, the new social attitudes and norms that are transferred to both boys and girls will influence their perceptions of their own roles, as well as the roles of others.

The contemporary home needs to become a more consciously educative environment. This is partly because of the need to support the learning of the young people who are faced with the challenges of making their way in a demanding adult world, and partly because the parents are facing more complex financial and occupational challenges which mean they need to keep upgrading their own knowledge. The home can also provide an important setting for the education of both boys and girls on issues of sexual and reproductive health, as well as alcohol and drug abuse. There is an urgent need for the family to increase the awareness of boys and girls of the consequences of uninformed sexual behaviour and the spread of HIV/AIDS.

### **Village elders, folklore, folk drama and oral traditions**

The role of non-formal and informal education was very significant in the past and still is, in traditional societies. But today, the dominance of the written word throughout the Commonwealth (with all the advances in technology that help spread written information), have made folklore and oral traditions less important means of educating younger generations.

Nevertheless, oral traditions (story-telling, songs, drama, poetry, and dance) which have been used by traditional societies for centuries to pass on information from one generation to the next, still occupy a vital niche that has not been filled by other media. This method of educating and learning is still particularly important in some cultures, but needs to be adapted for contemporary purposes, such as passing on the scientific and social findings about health and economic problems (for example, the AIDS crisis and dealing with environmental damage).

A wealth of folklore exists in most societies. Folklore often grows in association with religious traditions: Buddhist Jataka stories, Hindu mythology and stories relating to Judaism, Christianity and Islam. When they were created, those stories represented abiding truths for their contemporary world. The major religions are all still adapting them to the problems of making religious and social sense of the world we now live in.

Parents and grandparents tell these stories to children to help them internalise personal and societal traits that are admired by the elders of the society. The desirable traits are exemplified by folklore heroes and heroines, and undesirable traits are displayed by the villains. Through identification, children learn to adopt the norms of behaviour that are approved of by their community or society, and reject socially deviant behaviour.



For further background on oral traditions, read Reading 5: ‘Oral Traditions and Rules of Evidence’, by Glen Custred.

This considers in more detail what is meant by folklore and oral tradition, how they are transmitted and ways in which they can be treated as reliable evidence.

As you read, consider whether this piece helps explain your experience of the way folklore and oral traditions are used.



## Activity 4.2

(about 20 minutes)

Can you recall an oral tradition in your family history that has affected your learning? How has this oral tradition affected you?

How might you as an elder express in story form to your children and grandchildren what you feel should be admired and feared today?

Write your responses and an outline of your story in your journal and discuss them with your family and colleagues.

## Religious organisations

Religious organisations, such as churches, temples, mosques or synagogues, may be agents of all three types of learning:

- informal learning through personal interactions with individuals and groups of different social classes
- non-formal activities such as Sunday schools, Daham Pasals, sermons and religious festivities
- formal learning opportunities offered by religion-based schools.

Religious organisations can also be agents of informal learning through social events and community service projects. Participation in such activities helps young people to broaden their vision and develop their social and inter-personal, decision-making and problem-solving skills.

## Educational institutions

Although educational institutions, such as schools, universities and technical colleges, are generally thought of as agents of formal learning, there are many opportunities for informal learning too, especially through interaction with peers.

Children learn a great deal informally through their interactions with teachers and through participation in extra-curricular activities.

In addition, the school brings together children and youths from diverse social, ethnic and religious backgrounds, with different prior learning. Informal and incidental learning often occur as a result of peer communication and interaction. This learning can modify the learning received from the family. With their peers, the process of interchange is more powerful than in adult-child relationships.

When children encounter new or different ways of thinking, they may learn new behaviours or remain unaffected – the process of non-learning. According to Jarvis model of learning (1987 and 2001), a non-learning response occurs when one of the following reactions take place: presumption, non-consideration or rejection.

Presumption reinforces the established patterns of behaviour, as the person presumes that the current situation is the same as the previous one and therefore no variation in behaviour is necessary. Piaget would see this as a failure of the accommodation process, which he felt essential to building flexible mental schemata.

Non-consideration is explained as a non-response to a potential learning experience due to a variety of reasons, either because the point made has evaded the learner's attention, or because they are too pre-occupied to consider it.

Rejection occurs when people are unable to comprehend a situation and are therefore unable to learn from it.

Consider this short case study and answer the questions that follow.



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## Case study 4.1

### Alisha, an only daughter

Alisha, the only daughter in a conservative family with three older sons, has entered a prestigious school in the city for her secondary education.

She now associates with several friends from more liberal backgrounds than her own.



## Self-help question 4.2

(about [?] minutes)

1. What would have been the likely gender role expectations of Alisha's family?
2. What kind of informal learning is likely to occur from Alisha's mixing with peers from more liberal backgrounds than hers?
3. What behaviours by Alisha might indicate that:
  - new learning has occurred?
  - Alisha has experienced non-learning?

*Compare your answers with those suggested at the end of the unit.*

### The peer group

It is mostly during adolescence that the peer group becomes significant in someone's life. During this phase, when young people start interacting with male and female peers, they face new situations, and new responsibilities are thrust upon them. As we have mentioned already, the peer group provides plenty of informal learning opportunities.

Through mixing with equals, young people get essential preparation for adult life. They learn necessary social skills, appropriate gender roles and acquire the skills needed for courtship and a stable marriage. They also learn to achieve and accept status in a group on their own account, rather than because of what they have inherited from their family.

### Cultural institutions

Cultural institutions, for example museums and arts centres and libraries, provide new experiences that help people to discover their latent talents, new interests and avenues for meaningful leisure time activities.

The following case study is about a young English man. It illustrates the non-formal and informal learning opportunities provided by cultural institutions.



## Case study 4.2

### The Midlands Arts Centre

“I joined the Midlands Arts Centre because my girlfriend at the time (who came from a middle-class background) wanted to join. When I read about the opening of the centre in the local press, I wasn’t particularly interested. All that seemed alien to my pattern of life. I was intimidated at first by the general atmosphere and didn’t know how to behave.”

“However, this experience eventually changed my life. With a developing cultural awareness came the need for academic work. As time progressed, I became very interested in all forms of drama and was active at the centre for a period of six or seven years.”

From Michael Scully, ‘My Experience at the Midlands Arts Centre Changed My Life’ in UNESCO (1980), *Young People and Cultural Institutions: A UNESCO Survey*. UNESCO, Paris.



### Activity 4.3

(about 20 minutes)

Discuss the case study and the following questions with others (friends, co-workers, tutorial group) and then make notes in your learning journal.

- 1 What role did Scully’s middle-class girlfriend play in his overall education? What were the long-term positive benefits that Scully received through participating in the centre activities?
- 2 Which of those benefits could have resulted from informal education?
- 3 Can you describe any similar cases from your own or others’ experiences?

### Community organisations

Community organisations tend to pursue programmes with specific objectives aimed at target groups in the community (for example, boys’ and girls’ clubs, health centres, youth centres, gramodaya mandalaya, mahila samakhya, lions’ clubs, jaycees, rotary groups and soroptomists).

Through participation in programme activities, members of a particular target group can learn a great deal informally. It is in this setting that youth development workers can best facilitate learning

opportunities for young people using an informal, experiential approach.

Participants are first helped to identify what they want to achieve within the organisation. They then set themselves some achievable objectives, focused on their area of interest. Having analysed the issues from different angles, they consider possible solutions. Then, through preliminary planning and experimentation, they make decisions about which solutions to implement. They quickly become experienced and skilled in these abilities because of the high level of motivation, which sharpens their awareness, and because of the fact that their proposed solutions to difficulties are tried out and checked against results. These are warrantable and empowering life skills because they can be applied with variations across many activities. Learning from experience takes place in this manner.

Participants are also involved in problem-solving. Knowles (1980) considers problem-solving situations to be the basis for adult learning. Contemplation and reflective practice are the main learning processes used in problem-solving.

Here, 'contemplation' refers to considering mentally how to respond to a problem situation. It does not necessarily mean acting upon any intellectual decision made about it, but mentally storing the decision until a parallel situation stimulates its recall. The process of contemplation should take place continually and become part of our mental habits.

Reflective practice is the process of solving practical problems or performing practical tasks in the real world, and analysing and theorising on the basis of what happens. In other words, learners construct their own theories from the practical activities that they do rather than from reading them in books. This is a method widely used in teacher-training in the UK, because trainee teachers at first find it difficult to connect educational theory with the very vital and challenging business of working with children.

The great Brazilian educator Paulo Freire introduced problem-posing and dialogue in his conscientisation model, as a method that leads to empowerment. He was very successful in raising the literacy and political skills of poor Brazilian farmers by this approach. (For more on Freire's work, see Unit 3 and Reading 9.)

All of these learning processes are activated through participation in projects and experiential learning methods.

## The workplace

The workplace offers many opportunities for education and learning. Many workplaces offer on-the-job training. Workers constantly learn informally from each other by sharing tasks, observing each other, asking questions. Trade unions in the metropolitan countries also provide training and informal learning opportunities in negotiation and problem-solving. Many workplaces have formal, professional development programmes. They may offer development workshops, for example on health and safety issues, as well as seminars and conferences.

Marsick and Watkins (1990) examine four different levels at which informal learning can take place in the workplace:

- individual
- group
- organisational
- professional.

The pace of change means that there are enormous requirements for learning in the contemporary workplace, which will require increasingly informal learning processes throughout the entire organisation of work. Individuals grow by being open to others. Through feedback, they learn how others see them. Through self-disclosure, they open themselves to the potential for more intimate relationships. The vision is one of holistic informal learning for the contemporary workplace.

The quality of learning in groups is very different from other situations, because of the inevitable processes of interaction. The process of learning here is one of multi-tasking. Groups learn about group processes and their roles in these, because they monitor the effectiveness of the group interaction. They simultaneously learn about the effectiveness of work processes through attending to getting tasks done. One of the barriers to learning in groups is the pressure to conform to group norms, because individuals form strong common values and bonds, which may not encourage them to subject controversial ideas to a thorough hearing.

Within the general ideal of the learning society, there has developed the concept of the learning organisation. When organisations are structured so as to learn, individuals become agents who influence the way others in the organisation think and act. It's a bit like the football team that plays total football. Along each line of production, each worker on the line knows what the person before them, and the one after them, is doing and requires of them. They also know what the company is producing, the problems it faces and their place in the whole production and distribution process. A learning organisation is open to learning from internal and external feedback from its environment. At the professional level also, feedback and disclosure are central to the learning organisation.

Because standards are set by governmental and market requirements outside the organisation, the professionals within the organisation can create a higher-order set of norms, practices, values and attitudes that influence the culture and practice within the organisation. So the organisation is learning both within itself and from the social context.

Overall, Marsick and Watkins (1990) argue that the distinguishing feature of workplace learning is collective learning, and that it plays a particularly strong role in informal and incidental learning, because people learn through collective interaction in defined social groups that are connected by common organisational goals.

### The mass media

The mass media, particularly television, radio, and the internet if you have access to it (internet cafes are becoming widespread even in very remote or poor countries), are an enormous resource for information and education. For example, remote areas such as the highlands of New Guinea may well be accessible by educational radio programmes, using wind-up radios that do not require batteries, provided that programme transmission problems can be solved.

#### **Information**

Entertainment is only one of the functions of the mass media. They also provide an enormous amount of information. They are used for informing audiences about:

- products and services (commercial advertising)
- topical issues – news, current affairs programmes, documentaries
- campaigns, interviews, panel discussions and public debate etc.
- culture (programmes on sports, music, drama and the arts)
- scientific and technical matters for rural workers and businesses.

#### **Education**

Many educational institutions, for example the Indira Ghandi Open University, offer formal learning at a distance, using various media such as TV, radio and the internet. There are many opportunities for non-formal and self-directed learning also, as people follow their interests independently through the media.

In all of their functions, the mass media act as agents of informal education. When we watch a film, a TV serial or a teledrama, we probably tend to identify with the characters who would normally be accepted in society. We may also gain insight into the lives and ideas of people who are different from us, and who may not easily fit into our societies.

For example, television in Pakistan is notable for its dramas, which use dramatic story-telling to explore problems of relationships between town and country and the conflict of values and lifestyles

between old and young, rich and poor. These are an important source of national dialogue, particularly as they use traditional dramatic forms and expose the arguments thoroughly.

The media can provide people with a unique opportunity to observe people and situations they would not otherwise meet. Through this identification, they may experience either new learning or non-learning.

### ***Persuasion***

Mass media may also convey subtle messages that lead to social or anti-social behaviour, depending on the manner in which the messages are perceived and received. The sponsorship of amusing and enjoyable sports programmes by tobacco companies is a good example. However, as Katz (1989) points out, the effectiveness of mass media as agencies of persuasion depends on the ability of audiences to evaluate what is happening, in their selective exposure, perception and retention of messages. These media experiences can be used by youth workers to explore and develop themes with their groups.

The potency of mass media as an agent of informal education is strongest in the case of children, who imitate the characters who appeal to them. Often, children are seen imitating mannerisms, gestures and language used by popular film and television characters.

In the case of adolescents, imitation involves adopting new fashions, products, ideas, interests and behaviours. The media create motivation for action by altering people's values, preferences or perceptions of themselves.

### ***Agenda setting***

The agenda-setting function of mass media has an effect even in the case of adults. Here, it is argued that media tell us what to think about. The media can set the agenda – political, social or otherwise. Priorities for society are often set by the media, and the public is socialised to accept these priorities as important.

More than any other agent of education, the media have succeeded in creating a global culture, which transcends national boundaries, and creates a new awareness, new aspirations and visions for their audiences.

To get you thinking about the part the mass media can play in informal learning, read the following short case study and then do the activity that follows.



## Case study 4.3

### Using TV drama

In one popular TV drama, the major actors are from two families from the two main ethnic groups in the country.

The two fathers work in the same organisation and the families occupy official quarters, adjacent to each other. The members of the families gradually become very close, sharing joys and sorrows together. Children become friends; adolescents become sweethearts.

When communal violence erupts, one family shields the other from the assailants, braves their death threats and provides refuge.



## Activity 4.4

(about 20 minutes)

Discuss the following questions with others (friends, co-workers and/or tutorial group) and then make notes in your learning journal. If you prefer, you could discuss an equivalent TV drama from your country instead.

- 1 What do you consider to be the goal of this drama?
- 2 What might be its effect on a person who has never intimately known a person from another ethnic group?
- 3 Why would this case study fit what we call 'agenda setting'?

## Implications for youth development work

Let us look again at what we have discussed in this unit. We found that informal education can take place in any setting. We also found that learning is most effective when it is participatory or experiential, in whatever setting – formal, informal or non-formal.

As a youth development worker you will work with young people, often through community projects, for example those related to health, the environment, planning educational and training programmes, income generation, community development, recreation and sport. You are in a key position to facilitate experiential learning opportunities so that the young people become empowered to participate in every aspect of the youth projects: identifying problems, generating solutions, planning and implementing the solutions, evaluating the outcomes and teaching their peers how to do the same.

Through the processes of working with a supportive team, they will also learn many invaluable social skills that are transferable to the workplace, the family and the community.

Many of the young people you will be working with will be disenchanted with formal education; others may not have had the opportunity of a formal education. Trying to engage these young people in formal education is unlikely to be appropriate for them, especially early on, whereas the informal learning they can do through experiential programmes could prepare them for and reignite an interest in formal education later in their lives.

The last activity in this unit aims to bring together your learning from the unit and apply it. The purpose is to get you thinking about how to make best use of informal learning opportunities for young people.



### Activity 4.5

(about 30-40 minutes)

Make a list of the situations of informal learning for youth with which you are involved (check against the list of agents given in the section on Types of learning and education).

Then take the list of learning processes given earlier in this unit:

- imitation
- observation
- dialogue
- rejection
- reflection
- modelling
- memorisation
- presumption
- problem-solving
- experimentation.
- identification
- communication
- non-consideration
- contemplation

Make notes about which learning processes take place in the situations you have identified, and the ways in which they happen.

Finally, suggest ways that other processes on the list could be used to improve the informal learning of the young people involved in the situations you have listed. (For example: could you develop specific problem-solving activities in a youth centre?)

## Unit summary

In this unit you have covered the following main points:

- There are different types of education/learning – formal, non-formal and informal.
- There are many different agencies of education providing learning opportunities, including: the family, village elders, folklore, folk drama, religious organisations, peer group, cultural institutions, community organisations, the workplace and the mass media.
- Different learning processes operate in different settings.
- Experiential programmes, such as projects, offer great opportunities for informal learning.

To check how you have got on, look back at the learning outcomes for this unit and see if you can now do them. When you have done this, look through your learning journal to remind yourself of what you have learned and the ideas you have generated.

In the next unit we look at the factors that help and factors that hinder learning.

## Answers to self-help questions

### Self-help question 4.1

The response here may differ from country to country. For example, in a traditional society, the family may continue to be an important agent of informal education in adolescence.

It is also interesting to note that informal education may persist at later stages in life, long after the agent's influence no longer exists. For example, strong values or attitudes learned from family or a religious organisation may persist throughout life.

Agent	Stage of life
The family	Childhood, adulthood
Village elders, folklore, folk drama	Childhood, adulthood
Religious organisations	Childhood, adulthood
Educational institutions	Childhood, adolescence
Peer group	Childhood, adolescence
Cultural institutions	Adolescence, adulthood
Community organisations	Childhood, adolescence, adulthood
The workplace	Adulthood
The mass media	Childhood, adolescence

### Self-help question 4.2

- 1 Alisha's family would probably expect her to fulfil the traditional role of marrying and becoming a housewife. They might also expect her behaviour to be passive and obedient.
- 2 Alisha may learn from her friends that there are other alternatives to what she has learned from her family about the role of women. She may consider a career an alternative or addition to the role of wife and mother. She might even consider an independent life preferable, and she might question the sexual morality that she has been taught.
- 3 If learning has occurred, Alisha might try to discuss the new ideas with her family. If the family is open and has good communication, they may approve of some changes and not others. Or, through discussion, with her family, Alisha may

choose the traditional ways she has been taught, while appreciating the alternatives. Or she could become hostile or depressed if she feels trapped or treated unfairly by her family. If non-learning takes place, Alisha could simply presume that her peers have the same beliefs that she does. She may not understand the new ideas and so miss or avoid any discussion that is too challenging, or she might reject the ideas without further thought.

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# Unit 5: What helps and what hinders learning?

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## Unit introduction

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Welcome to Unit 5 *What helps and what hinders learning?*

By now you will have seen that there is some controversy involved in defining learning. As we indicated in Unit 1, however, most psychologists agree that the one basic requirement of learning is that some change must take place in the learner. It could be a change in knowledge or skills, a change in attitude or a change in beliefs.

Learning is often not a conscious process. You have been asked to consider that different forms of learning are continually taking place in everyday situations, and in formal, non-formal or informal settings. You have also learned that learning can take place at any age, and that learning how to learn is a most important goal in adult education.

While the earlier units in Module 1 have focused mainly on the positive aspects of learning, this unit introduces some of the factors that can either help or hinder learning. You will learn how to cope with and manage these factors, which can be environmental or personal.

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## Unit learning outcomes

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When you have worked through this unit, you should be able to:

- identify the factors that help or hinder people's learning, particularly in informal settings
- suggest ways to create a good learning environment, including physical, social and psychological conditions.

## A good learning environment

In Unit 2, we touched on the importance of creating a good learning environment. Environmental factors generally fall into two categories:

- physical
- social.

We discuss some psychological factors later in this unit, when we consider facilitator-related factors.



### Activity 5.1

(about [?] minutes)

Before you continue, go back to Unit 3 'Education for all' to the section headed 'Guiding principles' and reread '6 A positive learning environment'.

Think of any classroom or outdoor activity that you really liked during your childhood or adolescence. What characteristics in that social and physical environment made it easy for you to learn?

Ask a group of young people you work with to do this exercise, too. Compare your answers with theirs in a group situation and encourage general discussion.

Then make notes in your learning journal about both sets of experiences.

As you saw in Unit 2, the term 'andragogy' (rather than 'pedagogy') is often used to differentiate between the curriculum development needs of adults and those of children. Knowles (1980) identifies the need for adults to be motivated to learn, to be active in the learning process, and to have their past experiences respected in the learning environment.

The following case study illustrates the general nature of an environment that is conducive to learning.



## Case study 5.1

### A motor mechanics course

A group of teenagers following a course in motor-mechanics was housed in a well-ventilated building situated not far away from the main road. The general surroundings were pleasing. Travelling to and from this place was convenient, and conditions necessary for practical work were favourable. The course manager only enrolled a group of eight students at a time, so everyone had the opportunity to interact with the instructors one-to-one.

The course manager always made point of selecting each group so that they had a similar socio-economic background and similar likes and dislikes. The two instructors were friendly and their approach was flexible. The students had plenty of opportunities to learn from the instructors as well as from their peers. Each individual was given the opportunity to learn at his own pace. The social atmosphere in the group was essentially informal and democratic.

Learning in the group was a pleasant experience and the students learned effectively.



### Activity 5.2

(about 10 minutes)

Discuss Case study 5.1 with others (co-workers and/or tutorial groups).

Then in your learning journal, list the conditions, physical and social, that you think are conducive to learning.

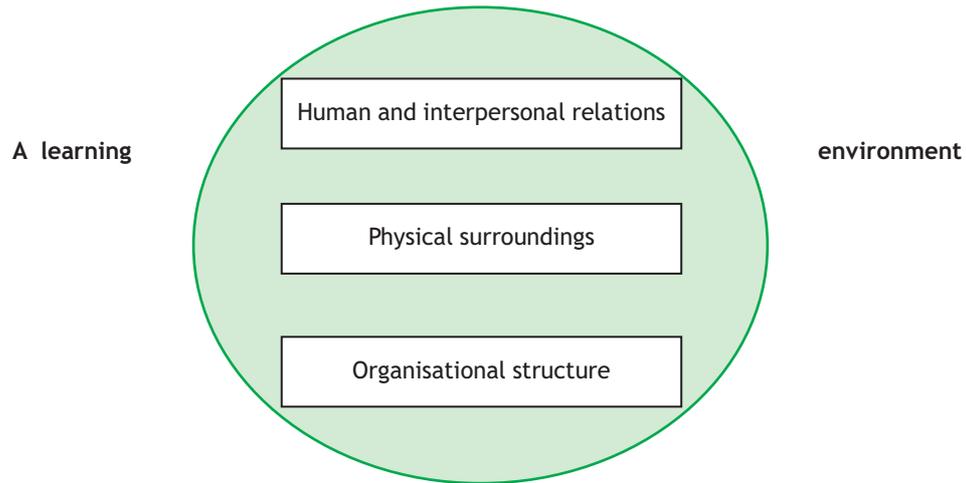
Is there anything in this case study that you think may hinder learning? If you think there is something, how could it be resolved?

### Setting the climate

It is an important part of the facilitator's job to set the climate of the learning environment. It is particularly important for the environment to be relaxed if it is going to encourage effective learning. The reason is that the crucial supportive automatic learning processes will not be switched on if there is tension. This could be created by over-formality or by fear of the situation, particularly if there are physical, social or psychological barriers.

Ingalls (1973) says that '... climate setting consists of the integration of three perspectives of the learning environment: the physical, the human and the organisational.'

He illustrates it as follows:



From *A Trainer's Guide to Andragogy: Its Concepts, Experience and Application* (rev. ed. 1973) Social and Rehabilitation Service, US Department of Health, Education, and Welfare, U.S. Government Printing Office: Washington, DC.

Taking into account the differences in learners' life styles, personalities, learning styles, domestic backgrounds, socio-cultural situations and access to learning resources, makes climate setting a challenging task. The facilitator has to make special efforts to create a relaxed learning environment that will suit everybody.

The best way to do this is to spend time developing the group as a social unit and deepening your own relationship with the learners. There may be many sharp differences of personality, belief and culture among the members of the group, but effective group-building should convert these differences into group resources rather than blockages to communication.

### The facilitator/learner relationship

The facilitator/learner relationship will only become relaxed if the organisational structure within which the learning takes place is flexible. The facilitator should mediate between the learners and the organisation in such a way as to reduce any barriers. It's also important that the facilitator is an authority in the learning process but not in authority over the learners.

In formal and non-formal learning situations where facilitators and learners interact face-to-face, it is a good idea, if it is possible, to have the learners take part when selecting and setting up the physical environment.

The most important element of good relationships is open, inclusive dialogue and shared decision-making. We will explore this further in Unit 7.



### Self-help question 5.1

(about 20 minutes)

Describe how the following people might prepare a good learning environment for their sessions:

- a driving instructor
- a swimming coach
- a karate instructor
- a music teacher
- a computer teacher.

Think about how the learning environment has to be planned and adjusted depending on the discipline, subject matter, skills and professional attitudes that are being learned.

For example, why do swimming instructors always coach swimming in or around a swimming pool? Would it be possible to teach any aspect of swimming away from the pool?

*Compare your answers with those suggested at the end of the unit.*

## Factors that hinder learning

So far, we have concentrated on positive characteristics in the learning environment. Now we consider conditions that can hinder learning, both learner-related and facilitator-related.



## Activity 5.2

(about 20 minutes)

List all the ways you can think of that a learner could be disturbed in his studies by characteristics of the physical environment (for example, sounds, sights, other people, space restrictions, disorganisation). Also think about any social conditions that can hinder learning (for example, poor relationships with tutors or peers).

Then survey the place where you are studying and identify any such distracting features.

Discuss with others how the situation could be corrected and make notes in your learning journal.

### Learner-related factors

Some of the learner-related factors that can hinder learning are:

- beliefs and attitudes
- emotional factors such as anxiety and fear
- motivation and needs of the learner
- learning styles.

The impact of learner motivation and needs, and learning styles, are discussed further in Units 6 and 7. Here, we focus on emotional factors, beliefs and attitudes.

#### ***Beliefs and attitudes***

Adults bring a range of experiences, skills, attitudes, values and knowledge to a particular learning situation. These experiences can be a rich resource. When an individual's past experiences form the starting point for new learning, the individual is better equipped to learn successfully. However, when contradictions or dilemmas result, perceptions based on prior learning must be reappraised. In the adult learning process, each individual has the option to reject the contradictory new information, or to revise their previous views.

While Piaget would have considered this an issue of accommodation versus assimilation to existing schemata, Cranton (1996) describes the process of making positive adjustments to prior learning as 'transformative learning'.

While positive attitudes and beliefs will facilitate new learning, negative attitudes (for example, the view that certain jobs should not be done by women), prejudices (beliefs so dominant that they cause you to make judgments before examining all the evidence) and habits (set patterns of doing things) can lead adult learners to resist. They may not be willing to accommodate their thinking to new ideas. This

can, in extreme cases, cause them to withdraw from the learning situation, or it can cause them to fail at the task in hand.

Reflective practice and openness of dialogue in the learning group can help learners to adapt to the new ideas and behaviours. But sometimes they may need counselling to explore and perhaps overcome their negative attitudes.

### ***Emotional factors: anxiety***

Anxiety is a major factor that hinders learning. Creating a positive learning environment, where there is mutual trust and respect, and open dialogue, and where fears can be safely expressed, is the best way to help learners overcome what can be debilitating levels of anxiety.

Consider the following example.



## **Case study 5.2**

### **‘Butterflies in my stomach’**

“The whole point of drama is that you step out of yourself and this is what I wanted to achieve, but the self-consciousness, which I hoped to lose when I joined the class in the first place, was the most severe barrier to shedding it.”

“Every time I came to my turn, I’d get butterflies in my stomach, though I tried desperately to conceal my nervousness. Everyone in the class was a colleague of mine and I did not like them to see how afraid I was.”

From Rogers J. (1997), *Adults Learning*

This learner was not confident about his abilities and was nervous about performing in the presence of peers, and experienced anxiety. This is a common characteristic among adult learners.

Rogers (1986) highlights several reasons for anxiety:

- the fear of disappointing someone (teacher, parent)
- low assessment of one’s abilities (others are better)
- a lack of trust in oneself (I cannot do that)
- too high a sense of emotional need (need for love or reassurance)
- difficulty in memorising and recalling something
- fear of failing before the group
- over-concern about one’s age.

In all these, fear can be identified as a factor which causes anxiety.

Over-anxiety is highest when the learner is faced with intellectual or creative exercises (for example, sitting an examination), and is lowest when faced with physical tasks. This is an important reason why experiential learning involving physical activity is appropriate for adult learners. Intellectual tasks can often be given a physical dimension by arranging objects to model a problematic pattern of ideas.

The evidence suggests that a degree of anxiety can have a positive as well as a negative impact on adult learning. A certain amount of anxiety is desirable, provided that it motivates learners to work. However, someone who is too anxious, with a low opinion of their ability to work successfully, will become so anxious that they may perform poorly, or fail.

### **Facilitator-related factors**

Even though adults may be happy sometimes to engage in a formal process of learning, generally they need to experience learning as part of their everyday lives. They like to feel that what they are learning is going to be meaningful and relevant. Therefore, learning by performing, rather than preparing to perform, is more appropriate for adults. This is a key function of experiential learning.

Rogers (1986) states that a teacher or facilitator should be aware of the normal learning processes of adults (which we have looked at in earlier units), as well as their unique characteristics. This will allow learners to:

- build up and enhance their existing learning techniques to make them more efficient
- make the learning more permanent and more available for later use
- progress to further purposeful learning.

### **Teaching style**

Genuine, friendly interaction between the facilitator and learners, and also among the learners themselves, helps to improve the self-confidence and motivation of adult learners, increasing the opportunities for success.

The type of interaction that facilitators have with learners will depend on their personality, experience and training, and also their awareness of the individual differences of the learners – that is their needs, motivation, abilities and disabilities. On the other hand, learning will be hindered if the facilitator is:

- inexperienced
- anxious or fearful of their role
- under pressure from outside or within the organisation

- coping with a large group (which does not facilitate close interaction)
- using unsuitable methods and aids.

Teaching style includes the choice of teaching method, teaching aids, preparation, evaluation techniques and so on, for a particular situation. When facilitators use methods such as group discussion, role-play and project work, learners have to engage actively in the process. Active participation will help them to learn things more effectively. (We will look at active methods in Unit 7.)

The case study and activity which follow explore a number of factors that hinder learning.



### Case study 5.3

#### Course design and performance

The transition from school to a course at the Community Development Centre was a shattering experience for the group of school leavers. The group, whose members had completed secondary school, was used to a more supportive, tutorial style of teaching. Nobody from the staff at the centre seemed to care about them as individuals, or their problems.

In designing the course, very little consideration had been given regarding the pre-existing knowledge and experiences of the group, so much of the new information was presented as lectures or in written handouts. Coping with lectures, the main mode of instruction about theory, was difficult. The students were very keen on a problem-centred orientation to learning, and were looking forward to opportunities for immediate application of their new knowledge to practical situations.

The course developers had paid very little attention to these aspects. The ultimate outcome was poor performance at the final examination by the majority of students in the group.



## Activity 5.4

(about 20 minutes)

Discuss Case study 5.3 with others (co-workers and/or tutorial group) and then make notes in your learning journal in response to the following issues.

- 1 List the facilitator factors that you think are related to the poor performance of these learners at their final examination.
- 2 Make suggestions to change these factors, so as to make a positive impact on groups of similar adult learners.
- 3 What methods might be more suitable for this group to facilitate the immediate application of theory to practical situations?

The last activity in this unit aims to bring together your learning from the unit and apply it.



## Activity 5.5

(about 25 minutes)

Look back at the activities you have done in this unit to identify the characteristics of a positive learning environment.

As a learning facilitator, what could you do to create such characteristics in a learning environment with which you are familiar?

Discuss your ideas with others (co-workers and/or tutorial group) and then make notes in your learning journal about what you would do.

## Unit summary

In this unit, you have covered the following main points:

- the characteristics (physical, social and psychological) of an environment that is conducive to learning
- factors that may hinder learning, including both learner-related factors like prior experience, anxiety and negative attitudes, and facilitator-related factors, including teaching style
- the importance of creating a good environment for learning and ways of doing that.

To check how you have got on, look back at the learning outcomes for this unit and see if you can now do them. When you have done this, look through your learning journal to remind yourself of what you have learned and the ideas you have generated.

In the next unit we look at learning styles and how you can take them into account when dealing with adult learners.

## Answers to self-help questions

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### Self-help question 5.1

A driving instructor could prepare a classroom with a display of all the different road signs and other educational materials relating to driving. They should arrange the room by having the desks or chairs placed in such a way that will enable everyone to see the instructor. Practical instruction should take place in a real vehicle that is equipped with dual controls for safety intervention if needed. The vehicle should be clean and instruction should take place on quiet roads to begin with.

The swimming coach should book the swimming pool where the session will take place, so that there will be no other people using the pool when the class is there. Classes should not be too large. The coach might need to organise transport to get the learners to the pool, which should be well-maintained and have clean changing rooms.

The karate instructor needs to make sure that the training room is clean, and that any equipment needed for the session is ready and in good condition.

The music teacher could create interest in the room, and in music, by setting up a display of the different musical instruments, or by putting posters of them on the walls. They should have the chairs and other equipment ready, and while waiting for everyone to arrive, could put on some music to relax those who are already there.

The computer teacher will have to check that all computers are in good working order, that the software needed for the lesson is loaded correctly, that printers are operational and sufficient paper is available for student use. They will also have to have all instructional material prepared and support staff on hand for any mechanical failure.

Any room used for instruction, no matter what the subject or skill is, has to be prepared in such a way that is interesting and conducive to learning. The instructor has to set the scene so that the learners are tuned-in to what is to be learned. The setting is very important, as it can help to motivate the learner.

In the case of a swimming coach, lessons will mainly have to be taught in a swimming pool because all the skills must be practised in water. However, there are some aspects of swimming, for example some safety and life-saving skills, which could be taught in a classroom.

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# Unit 6: Learning styles

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## Unit introduction

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Welcome to Unit 6 *Learning Styles*.

In this unit you will be introduced to different modes of intelligence and different learning styles and the importance of adapting learning and teaching methods to suit them.

The unit focuses on the different ways in which people think and learn. It's very important to consider this, as often the styles that facilitators use and some of the learning styles of their learners may not work well together. Moreover, learners may have modes of learning that make it difficult for them to learn well in some situations. We need to think about how to provide the range of individuals in a group with the mix of learning experiences needed to take account of their preferred learning styles.

After looking at what is meant by the term 'learning style', we introduce a range of learning style models, with readings that provide a fuller discussion of the underlying ideas and research. The activities give you the opportunity to identify your own and other people's learning styles.

Finally, the unit looks at how socio-cultural factors can influence learning style.

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## Unit learning outcomes

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When you have worked through this unit, you should be able to:

- identify the characteristics of your own learning style and your own spectrum of factors of intelligence
- use learning models to analyse learning styles
- outline learning strategies for a variety of individuals and groups.

## What is learning style?

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In Unit 1, we explored the general concept of learning by looking at theories of learning. However, that doesn't tell us enough about why individuals choose the patterns of learning that they do. A more complex view of learning is evolving, based on the notion that people process information and solve mental problems in a variety of ways, depending on their personality, socialisation, previous intellectual history and so on. In this unit, we will look at how that takes place.

Much of current research into learning focuses on the advantages to be gained by discovering how different learners approach learning. Although each of us is in many ways a typical human being, in some significant ways each of us is also unique and processes information in unique ways.

In your study on this course, you will notice that, while you are required to do quite a lot of reading, we have included activities so that you have an opportunity to learn in a variety of ways:

- You may prefer to learn by observing others – an effective method for absorbing both the overall pattern or 'gestalt' of a behaviour and some of the intricate detail.
- You may be more interested in representing something theoretical in physical form, for example, a drawing or a sequence of photographs or objects, which allows you to understand the ideas more deeply by translating them into a physical pattern. The process of having to re-present the ideas in a different form means that you have to get right into the core of the ideas. If so, some of the more practical activities in the module will help you to learn more effectively.
- You may prefer to learn in co-operative teams, where you can try out ideas with fellow students, facilitators and others. This is another excellent method for learners who feel comfortable and equal with their helpers.

Psychologists have discovered that individuals have characteristic approaches to learning, which are conveniently labelled 'learning styles'. A learner may consistently show a preference for one particular strategy when they perceive, organise, process and understand information, solve problems and interpret what is happening in a learning situation. They may switch this preference in other situations, or they may maintain it over a range of situations.

You yourself may consistently prefer one approach across a range of situations. If so, then you need to be aware that that is what you do. It is also worth finding out when it helps you learn effectively and when it is not so successful. In this unit, we will encourage you to reflect on your learning style preferences. This is part of a 'learning to learn' strategy that you might like to use with the young people you work with.

Start thinking about different learning styles with the following case study.



## Case study 6.1

### Learning and teaching styles

Tara, Elizabeth, Jane and Semi are chatting before the next session on their course. As you read their conversation, try to identify each learner's preferred approach to learning (learning style) as well as the characteristics of the instruction (teaching style) of the facilitators.

**Tara:** Who do we have today?

**Elizabeth:** Mr Arvind, that tall man.

**Tara:** Oh no, do we? I don't like the way he explains things. He's very dry – no anecdotes, nothing personal. It's all facts – there are no jokes. I don't seem to grasp what he's saying. He doesn't build a picture. It doesn't appeal to me at all.

**Elizabeth:** Oh, doesn't it? I think the opposite. I really like the way he analyses things and his structured approach. I like to learn in the same way as he teaches – I go step by step, rationally and logically.

**Tara:** I prefer Mr Alexander. He's more informal and he starts by painting the whole picture. And he's funny! He talks about his own personal experience, too. It's so descriptive and rich. Do you remember the anecdote he told about the household when he was explaining about women and development? Really interesting. His stories really help me see the point of what he is saying.

**Elizabeth:** Oh, no! I don't like all that flippancy. You have to sift through loads of stuff to get to the point. I think it's irrelevant. I can't follow his lessons so well.

**Jane:** I don't mind so much about their approach. I just listen to find out what they want me to do. I wait for the cues. I only study what I think will see me through this course. I'm more interested in the qualification. What do you think, Semi?

**Semi:** I'm just really keen to find out more. I'm always reading and asking questions. It's hard for me not to keep asking lots of questions in class. And I want to apply everything to real situations. I want to try everything out there and then. Learning is really fun.



### Self-help question 6.1

(about 15 minutes)

- 1 Describe how Tara prefers to learn.
- 2 How does Mr Alexander make his presentations?
- 3 Why does Elizabeth like Mr Arvind's presentations?
- 4 What can you say about learners that adopt Jane's strategy?
- 5 How would you describe Semi's approach?
- 6 Try to write a short definition of the term 'learning style'.

*Compare your answers with those suggested at the end of the unit.*

## Learning style models

A preferred learning style tends to become habitual, but is not just a habit. It has its roots in personality and neurological structure and can be influenced by genetic inheritance. However, it is mainly acquired over time, through experience.

Psychologists have described learning styles using various models, for example:

- cerebral dominance
- personality types
- sensory mode
- multiple intelligences
- structure of intellect (SI) theory

The complex interaction of these various factors determines what type of learner you are. Socio-economic background and the learning environment are also very important factors that affect learning preferences.

Below we give a brief outline of each of these five models. There are two readings that go into further detail. Don't be put off by the use of technical terms. Try to understand each term in the context of what is said, and judge its validity by comparing it with your experience. As before, there are activities to help you apply the ideas more practically.

## Cerebral dominance

With the development of brain scanners in the 1990s and sophisticated medical imaging systems, a great deal of research has been conducted into the various mental functions that are controlled by or located in different parts of the brain. Recent discoveries are still to be built into a sophisticated model, but much valuable knowledge about mental processes is emerging.

Of course, significant knowledge about the brain's structure has been around over a long period, for example from the field of linguistics. Most important, there is the division of the brain into two separate hemispheres – right and left, which are connected at the centre. They have very different functions and in most people either one side or the other tends to be dominant. This is referred to as 'cerebral dominance' – where one side of the brain tends to take control of most of the information processing. The table below highlights some differences between the two types.

Left-side dominant:	Right-side dominant:
<ul style="list-style-type: none"> <li>● analytical thinkers</li> <li>● tend to think logically, step by step, viewing things rationally, objectively and sequentially.</li> <li>● tend to focus on details</li> <li>● may at times miss the big picture.</li> </ul>	<ul style="list-style-type: none"> <li>● tend to take a global view of things</li> <li>● may like to learn through images, stories and personal experiences</li> <li>● tend to see the whole view first</li> <li>● may miss the details.</li> </ul>

As the learning style is determined to some extent by established neurological processes and pattern of cerebral dominance, people may find it difficult to switch from one type of behaviour to the other, even when that would be useful. The key to this problem is to be aware of it and to have some strategy in the form of learning aids that compensate for the weak faculty.

Here are some examples of strategies.

'Left-siders':	'Right-siders':
can be helped to get the whole picture by being asked to draw patterns to show themselves how the details hang together.	can be asked to justify their holistic view by putting all the supportive detail in a logical order.
<b>For both:</b> Simply getting both sides to share their insights and explain them to each other in a discussion group may be enough to make up any important deficits.	

## Personality types

This model argues that our personality tendencies help to determine how we prefer to learn. The model can help us discover how to select the best learning techniques for individual personality types. Current literature on this subject indicates that there are four major personality types, though these can be further sub-divided using various combinations.

People may be primarily:

- extroverted (outgoing) or introverted (shy)
- sensing (favour data from using the five senses) or intuitive (favouring instinctual responses)
- thinking or feeling
- judging or perceiving.

It is important to note that these personality types are tendencies, rather than being permanently fixed. The learning facilitator can use an understanding of these types to interact with individual learners and be sensitive to their personality, varying the interaction and the learning support accordingly.

## Sensory mode

We also seem to have preferred sensory modes for learning.

These are:

- auditory (ear-gate) learners who process information better when it comes through the ears, for example through tapes, films, videos and small group discussions
- visual (eye-gate) learners who prefer to see or read information , for example in the form of charts and diagrams
- kinaesthetic (event/activity) learners who learn best by physical activity, being actively involved or preferring practical demonstrations.

By being sensitive to these differences and using as many sensory channels as possible, learning facilitators can:

- optimise learning opportunities
- give equal importance to different learner preferences
- reinforce learning by enabling cross referencing from channel to channel.



Now turn to Reading 6: 'Learning styles'.

This reading looks at personality types, brain dominance and sensory mode. It also looks at overall learning style, which we will return to later in the unit.

As you read, start trying to identify your own characteristics as a learner.



### Activity 6.1

(about one hour to observe the group, plus about 30 minutes for discussion and writing)

Observe a group of learners. They might be in a classroom situation, or a group of young people with whom you are working.

Describe as far as you can the personality type and sensory mode preferences for at least six learners. Then do the same for yourself.

Discuss this with other friends, co-workers and/or tutorial group) and then make notes in your learning journal.

### Multiple intelligences

People vary enormously in their skills and capability. Intelligence testing and related subjects are part of the history of the attempt to understand these variations. The intelligence testing tradition is based on the idea that our ability to deal with problems in the real world depends on underlying general abilities in perception and reasoning. But one of the problems with traditional intelligence tests (IQ tests) is the assumption that there is a single universal factor – a general intelligence – and that intelligence is determined by your genes. This view does not allow the possibility of raising the level of people who do badly in traditional intelligence tests. Also, these tests do not measure emotional intelligence or people intelligence.

However, there are theories and models that are much closer to the rich and complex abilities of young people than the IQ model. Howard Gardner (1983) argues that our experience of the real world tells us that intelligence is not unitary, but multiple. When we develop the capacities of young people through project work, we need to be able to analyse how well they adapt their thinking and behaviour to the tasks that face them in order to know how to help them. A unitary view of intelligence is not helpful for that, whereas a ‘multiple intelligences’ model is.

Intelligence is the mental process by which we understand the situation we are in and deal with it. Gardner argues that:

- Each of us has available for use seven (or more) quite different kinds of intelligence and each one tends to generate a different learning style.
- All of these intelligences need to be equally valued.

- The level we can reach in each of these intelligences is not fixed, so they can all be taught, nurtured and strengthened.
- Where schools focus primarily on the linguistic and logical/mathematical intelligences and learning styles, this has a bad effect on a lot of children.
- Everyone learns in different ways, at different rates, for different reasons.
- When you have strengths in certain intelligences and weaknesses in others then you should use the stronger intelligences to awaken and strengthen the weaker ones.
- In any of these multiple intelligences, the ways a high level of ability shows itself can be very diverse, The central assessment question then becomes 'How are you smart?' not 'How smart are you?'

Gardner's multiple intelligences are described next.

### ***Visual/spatial***

Visual/spatial intelligence involves being able to deal intellectually with visual problems and to look at other problems and create mental images to analyse them. This is especially valuable with visual arts, navigation, architecture and certain games such as chess, where the logical structures of the game are overlaid by powerful visual patterns.

### ***Verbal/linguistic***

Verbal/linguistic intelligence relates to words and language. We use this intelligence to formulate our understanding of situations in listening, speaking, reading and writing.

### ***Musical/rhythmic***

Musical/rhythmic intelligence includes the ability to recognise and create tonal and rhythmic patterns and structures, and to formulate their expression in musical notation. It includes mentally processing environmental sounds, the human voice and musical instruments.

### ***Logical/mathematical***

Logical/mathematical intelligence deals with the analysis and construction of patterns of symbolic information, using propositional thought patterns.

### ***Bodily/kinaesthetic***

Bodily/kinaesthetic intelligence is the ability to use the body so that it expresses emotion(s) and ideas, plays sports, and deploys the ability to interpret and invoke effective body language. It deals primarily with physical activities and kinaesthetic learning experiences.

**Interpersonal**

Interpersonal intelligence is the ability to understand and manipulate person-to-person relationships. It includes the ability to communicate with others and to participate in group activities.

**Intrapersonal**

Intrapersonal intelligence is based on understanding and managing the self. With respect to learning facilitation, it concerns the attention needed by a person who is engaged in independent study rather than group study or group work.

**Naturalist**

Naturalist intelligence consists of the underlying general intellectual abilities that are embodied in the work of the farmer, countryman and so on. It enables human beings to recognise, categorise and utilise the natural environment. Gardner (1999: 48) uses the concept to mean a combination of ‘the core abilities with a characterization of the role...’

There are a number of criticisms of the multiple intelligences model. A common criticism is that Gardner’s theories derive more from his own intuitions and reasoning than from empirical research. Indeed, Gardner himself has noted that there is an element of subjective judgement involved. It has also been argued that Gardner treats very different kinds of intelligences in exactly the same way. There have also been questions about how Gardner’s criteria can be applied rigorously, and about the reasons he gives for their relevance.



Now turn to Reading 7: ‘Understanding intelligence’ by Dr G. Gunawardena.

At this point, read only Section 1 Intelligence Testing and Section 2 Multiple Intelligences, for a fuller discussion of the topics we have just covered. You can come back to the ideas in the reading later if you find them difficult to digest straightaway.

Section 3 of Reading 7 is about SI theory, which we discuss a little later in this unit. You will have the opportunity to read that section then.



## Activity 6.2

Try to identify which of the multiple intelligences tend to dominate in you.

Which of these intelligences can you identify among your friends and family?

What evidence do you base your judgement on?

Write notes in your learning journal.

## Structure of intellect (SI) theory

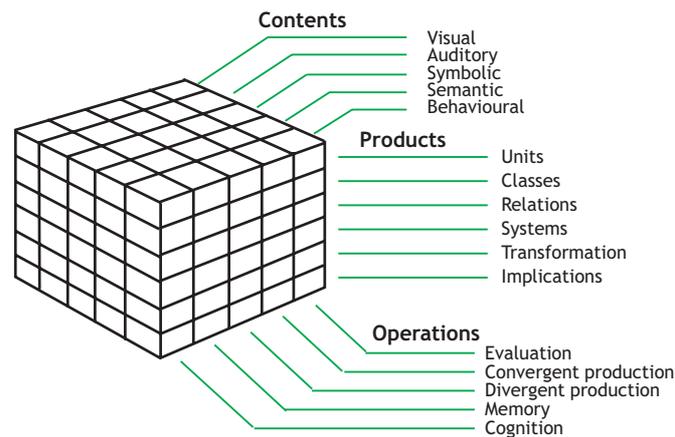
In youth development work, multi-modal theories of intelligence seem far more useful than the traditional intelligence testing approach. While multiple intelligences theory possibly does need to be developed and refined, the structure of intellect theory of intelligence (SI theory) has undergone an enormous amount of testing.

SI theory is a multi-factor theory of intelligence developed by J. P. Guilford in *The Nature of Human Intelligence* (1967). Guilford's model was based on intellectual categories derived from testing of Second World War recruits in order to give them rapid training for combat in the European and Pacific wars. Guilford researched and developed a wide variety of intelligence tests, very much in the way that the IQ testers had done. But he came up with very different conclusions from them. Instead of finding one underlying determining intelligence factor, his SI model found 120 separate general factors.

Though it was a model devised originally to solve the problems during the Second World War, it is today widely used in education and in personnel selection. It enables learning facilitators to analyse what the intellectual abilities essential to a piece of teaching are, and to ensure that the learners are able to access these before teaching. It is also used because it is an excellent diagnostic tool for specifying what aspect of thinking is blocking the learner's thought processes and showing how that can be overcome. Arguably, it is a very much stronger model than others from the rest of the intelligence testing community.

Today, the model describes 150 separate factors of intelligence, developed out of the original 120 factors as a result of repeated testing. Each of these 150 factors can be separate enough to block your thinking if it is a crucial step in a learning process and you have not developed it properly. One of the reasons why the model is used so widely in education is because it enables learners' information processing weaknesses to be identified and remedied.

For simplification purposes, Guilford structured his findings in the form of a cube, as in the diagram below:



SI theory: factors of intelligence, adapted from Wikipedia

In SI theory, intelligence is viewed as comprising five types of mental processing that Guilford calls 'operations'. These are:

- 'cognition' (which is really awareness or recognition),
- memory
- generative or creative thinking, which he calls 'divergent production'
- thinking logically and in a linear manner, which he calls 'convergent production'
- evaluation.

Guilford called the type of intellectual material with which the mind works 'contents'. There are five categories here:

- visual information
- auditory information (these two he originally categorised as one type called 'figural content')
- symbolic information, such as numbers or musical notation
- semantic information, which is carried in forms of language whose meaning has to be processed
- behavioural knowledge, which is where he locates social and emotional intelligence.

Therefore, the learner may be operating in any one or more of the five areas of knowledge and may be processing the information by one or more of five types of thinking. The learner's ability to do so will depend on underlying abilities to deal with what Guilford has classified into six kinds of products:

- units
- classes

- relations
- systems
- transformations
- implications.

It can be argued that although genetic inheritance undoubtedly has some part to play in determining the basis of our intelligence, there is no evidence that it sets definable limits to our intelligence. It may influence our early intellectual preferences and affect our interests, but we should use whatever evidence we find of our thinking and build the new thinking we need onto that. The methods of even the best intelligence tests or models are very crude in understanding the intellectual power we have. We should be much more concerned with using psychological and physiological insights to generate strategies that will raise people's intelligence to a high level. The SI model tells us that even if only one of these factors is at all developed, we can use that factor to connect up with other factors, to raise the level of the whole information processing structure of the intellect.



Now turn again to Reading 7 'Understanding intelligence' and read Section 3 SI theory.

Read the following case study and do the self-help question. This section gives a more detailed explanation of SI theory, illustrated by the example of a playgroup leader and how she uses her behavioural intelligence.



## Case study 6.1

### Applying SI theory

The author describes an example from experience:

“A part-time, in-service trainee learning facilitator came to me with a particularly awkward problem. She was working with young adults on a Pre-caring course, who wanted to become nurses and carers. She explained that she had a small group of learners who were particularly interested in working with old people in the scattered, deprived former mining villages around her centre. She explained that this was a priority area for the local health authority and that these were learners with very high people skills, but that they were hopeless at formal mathematics, and had to pass in Basic Statistics before they could be accepted on the full Caring course.”

“The facilitator and I were working with the SI model at the time, so we used the information from the tests she did on her

students to see what might best be done to raise their mathematical skills through giving them statistical insight.”

“The tests showed that they were excellent at most of the behavioural features of intelligence analysed by the SI model. So she constructed with the group a survey of old people and their needs and problems in five villages, got them to carry out the survey face to face with the subjects. Then she helped them to analyse the surveys statistically using a new method called ‘Statistics without Maths for Psychology’ (Dancey and Reidy, 1999) and to apply the numbers afterwards. This enabled them to conceptualise the ‘symbolic’ issues working from their ‘behavioural’ insights, and so they were able to ‘produce convergently’ ‘symbolic classes’ and ‘relations’ and to understand ‘symbolic implications’.”

“From that point on, they gradually became adept at Statistics.”



### Self-help question 6.2

When you have read Section 3 in Reading 7 about SI theory, turn back to Unit 1. Look at Case study 1.3 about the Brazilian street children selling food in the streets of Sao Paolo, and at Self-help question 1.4. Read them again carefully.

See if you can use the SI model to analyse the factors of intelligence that the street children have developed and which are strong, and the factors that are weak and need developing. Use the model to see if you can suggest how they might be taught to strengthen the weak factors.

*Compare your answers with those suggested at the end of the unit.*

## Overall learning style

From what you have learned in this unit, you will be able to see that an overall learning style is a combination of many factors. Next, we look at two models, each with four learning styles.

The four styles in Model 1 are:

- relational
- analytical
- structured
- energetic.

This model was described in Reading 6, where you read about how these factors co-relate to produce four overall types of learners, as described in the table below. (You may want to look again at the section on *Overall learning style* in Reading 6 now.)

	<b>Relational learner</b>	<b>Analytical learner</b>	<b>Structured learner</b>	<b>Energetic learner</b>
	Meaning-oriented	Theory-oriented	Solution-oriented	Activity-oriented
<b>Sensory preference</b>	Auditory/Visual	Visual	Visual/Tactile	Tactile/Auditory
<b>Brain dominance</b>	Right	Left	Left	Right

The four styles in Model 2 (which is similar to Module 1) are:

- analytic
- imaginative
- common sense
- dynamic.

Depending on their cerebral dominance and other factors such as motivation and attitudes, we can identify four main learner types. As you read, you will notice significant correspondences with the multiple intelligences model and the SI model. The characteristics of the four learner types are summarised below.

### ***The analytic learner***

Earlier, you learned that when the left side of the brain is dominant, the learner adopts an analytical style of learning.

### ***The imaginative learner***

When the right half of the brain is dominant, learners adopt a more divergent way of understanding and processing information. They are the ‘Picassos’ who produce radical new drawings, the ‘da Vincis’ who provide the details of a new creation, and the ‘Van Goghs’ who fill the canvas with bold and rhythmic colours.

### ***The common-sense learner***

Personality characteristics, motivation and other attributes also influence learning style. Some learners are concerned more about getting qualifications and satisfying examiners.

### ***The dynamic learner***

The dynamic learner is actively engaged in the learning process. Dynamic learners are interested in the learning activities and try to test out ideas, to find new ones and to search for knowledge.

<p>The analytic learner:</p> <ul style="list-style-type: none"> <li>● thinks of problems and processes information, in a linear step by step sequence</li> <li>● likes to analyse things and likes synthesis</li> <li>● prefers rational and logical thinking</li> <li>● views things in an objective fashion</li> <li>● is very committed to systematic thinking</li> <li>● likes clear structures</li> <li>● has difficulty in recognising overall patterns.</li> </ul>	<p>The imaginative learner:</p> <ul style="list-style-type: none"> <li>● looks at things from a broad perspective and in a holistic/global way, not part by part</li> <li>● generates new combinations of ideas easily</li> <li>● makes much use of intuition and insight in learning</li> <li>● relates learning to personal experiences, likes analogies, makes use of human interest</li> <li>● is flexible, innovative and sometimes radical</li> <li>● uses emotional attributes in understanding and presenting concepts.</li> </ul>
<p>The common-sense learner:</p> <ul style="list-style-type: none"> <li>● is dominated by course requirements</li> <li>● limits activities to those required by the course</li> <li>● concentrates more on rote learning</li> <li>● tries to succeed by only doing what is necessary.</li> </ul>	<p>The dynamic learner:</p> <ul style="list-style-type: none"> <li>● is brimming with ideas to put into practice</li> <li>● engages in purposeful activity most of the time</li> <li>● tries to solve problems, search for new ideas, experiment</li> <li>● is a keen competitor</li> <li>● plays a visible role, asserts leadership</li> <li>● gets involved with others in learning.</li> </ul>

Characteristics of the four learner types



### Activity 6.3

(about 20 minutes)

Look again at the descriptions of characteristics of different types of learners. Can you place yourself in either of these two overall learning style models:

- relational / analytical / structured / energetic?
- analytic / imaginative / common sense / dynamic?

Give examples of ways you have learned that illustrate your style. Perhaps your overall style of learning is a composite of more than one learner type.

Discuss this with others (co-workers and/or tutorial group) and then make notes in your learning journal.

## Meeting learner needs

Since people differ in the way they think, process information and solve problems, how are we going to meet all our learners needs? Obviously, we cannot facilitate learners if we stick to one narrow method. Good teaching and training satisfy learner needs, and this includes accommodating different learning preferences and adopting a variety of strategies. For example, the learner who does not like reading can be satisfied through discussion or through practical activity.

In this distance education Diploma, you are given a variety of activities: reading, observing, case study analysis, hands-on practical application, reflecting on your own experiences, gathering information and discussing with others. The variety should enable you to find ways that suit your intellectual development best.



## Activity 6.4

(about 20 minutes)

Think back to a situation where you have received training as a facilitator, and describe the various settings, for example, classroom, workshop, lecture, small group discussion, distance education modules.

- 1 What sort of learning activity was used in each setting?
- 2 What do you think are the advantages and disadvantages of each?
- 3 Which activities do you prefer?

Discuss this with others (co-workers and/or tutorial group) and then make notes in your learning journal.

From the last activity, you may have discovered what training strategies you prefer. Perhaps you like structured, sequential and analytical presentations. Perhaps you prefer workshops to lectures. Perhaps you choose highly imaginative and innovative activities, like role-play or creative writing.

As a facilitator, you should use a mix of activities so that the learning appeals to all learners. You can become a versatile learning facilitator by trying various facilitating and instructional roles and using contrasting activities:

- logical presentations/descriptions with analogies and anecdotes
- different sensory modes (auditory, visual, kinaesthetic)
- concrete illustrations to make concepts less abstract
- practical illustrations, related to real life situations
- freedom to experiment, explore ideas
- plenty of collaborative planning
- an environment with diverse activities (reading, writing, observing, analysing, teamwork tasks, role-playing, games, explorations).

Participation is the key word. As the Chinese philosopher Confucius said in around 450 BC:

*'I hear and I forget.*

*I see and I remember.*

*I do and I understand.'*

### **Metacognition**

Metacognition means being aware of how you learn, and the importance of controlling that process. Being able to identify your own learning preferences, and overall learning style, can help you to learn more effectively.

As a learning facilitator, you can help learners to learn by developing their awareness of their own learning preferences and overall learning styles, and their special intellectual qualities and how they can build new learning on these individual characteristics.

## **Socio-cultural background and learning**

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As well as psychological, physiological and neurological differences, socio-cultural factors can also influence learning style. For example, Taufe'ulugaki (2003) refers to Pacific learning and thinking styles which reflect a very strong emphasis on group and collaborative learning. Some influences may be due to socio-economic factors, others due to ethnic and or gender issues. What you need to do is to explore these kinds of influences on the groups that you work with.



Now turn to Reading 8: 'Pacific perspectives on learning: Pacific thinking styles.', by Ana Maui Taufe'ulugaki.

As you read, compare the findings with what you have learned about your own and other people's thinking and learning styles in this unit, and how they may be influenced by socio-cultural factors.

### **Stereotypes**

Traditionally, many cultures have sex-role stereotypes of learning. Explore them by doing the activity given below. (There is more on this in Module 5 Gender and Development).



## Activity 6.5

(about 30 minutes, plus interview time)

In your learning journal, write down some sex-role stereotyped ideas about learning, under the headings:

Females are:

Males are:

Make notes about what you think are the origins of differences in expectations for women and men. How do you think the patterns of social expectations for both genders affect their learning?

Interview some women colleagues to find out the factors that they feel have hindered their learning.

Write your responses in your learning journal.

Current research shows clearly that, with respect to learning, the social constructions of gender transcend the effects of biological sex. They include the values and practices of the social and cultural environments within which learning takes place.

Undoubtedly, men's and women's learning styles tend overall to differ. However, since research results are inconclusive we should certainly not accept any fixed sex-role stereotypes. It's worth noting, nevertheless, that current research seems to suggest that men tend to be more abstract learners, women tend to be more anxious about study success; men tend to present as more intuitive, women as more analytical; men are slightly more undirected, women tend to be more organised. Additionally, men have often been noted to dominate discussions as well as group work. However, be very cautious with any such generalisations. Use them only to help people develop in areas in which they may be weak.

### Socio-economic differences

Socio-economic differences, too, may hinder or facilitate learning. For example, people from more socially disadvantaged groups tend to have poorer verbal ability in standard and high status language styles. This may make it difficult for them to grasp abstract and complex concepts when these are not made clear by preliminary exploration. They can, however, very rapidly acquire expertise in such styles as the work of Mrs Pyrah's children showed (see Unit 3, Case study 3.1). There may be bias against more socially disadvantaged groups in assessment and testing.

## Ethnicity

Ethnicity may influence learning, since some cultures value individual achievement and competition highly, while other cultures value the group's achievements more than those of the individual. In some ethnic groups, the seclusion of women or religious beliefs may affect active engagement in some learning activities.



### Case study 6.1

#### Cultural issues

Ameena entered a teacher training college to be trained as a language teacher. She had to engage in many, varied activities.

At one stage, she was asked to dance in a role-play in front of male and female students. She refused, as her religion did not allow her to dance in front of males.

The instructor was angry with her and complained to the principal, adding that 'Ameena has trouble with listening activities, as she comes to class in the purdah and her ears are covered.' The principal asked Ameena to dress like the other students in the future.



### Activity 6.6

(about 20 minutes)

Discuss this case study and the issues it raises with others (friends, family, co-workers and/or tutorial group). Write your responses to the following questions in your learning journal.

- 1 Do you think that Ameena was right or wrong when she refused to dance in front of male colleagues? Give reasons for your answers.
- 2 Do you agree with the stand taken by the instructor and the principal? If you do not agree, what alternatives would you suggest?



## Activity 6.7

(about 30 minutes)

Review what you have learned in this unit about learning styles. Make notes about the following questions:

- How has it helped increase your understanding of how adults learn?
- How can you apply your learning in practice?
- How have your ideas now changed about how you and other people learn?

## Unit summary

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In this unit you covered the following main points:

- what is meant by 'learning style'
- different models used to describe learning styles:
  - cerebral dominance
  - personality types
  - sensory mode
  - multiple intelligences
  - structure of intellect (SI) theory
- how to identify your own overall learning style, for example using the models of:
  - relational / analytical / structured / energetic learners
  - or
  - analytic / imaginative / common sense / dynamic learners.
- helping and encouraging learners to become aware of their learning styles
- the socio-cultural factors that affect learning style.

To check how you have got on, look back at the learning outcomes for this unit and see if you can now do them. When you have done this, look through your learning journal to remind yourself of what you have learned and the ideas you have generated.

In the next unit we look at how better to facilitate adult learning and at designing, implementing and evaluating programmes.

## Answer to self-help questions

### Self-help question 6.1

- 1 Tara prefers presentations that include personal experiences and anecdotes. She concentrates on the total picture when learning.
- 2 Mr Alexander starts by painting the total picture, which is descriptive and rich. He also uses anecdotes to illustrate his points.
- 3 Elizabeth likes Mr Arvind's presentations because they are analytical, structured and logical.
- 4 Learners that adopt Jane's strategy are those who just concentrate on getting the work done. They just learn what they need to pass the tests and exams and are only interested in the qualification.
- 5 Semi's approach to learning is dynamic. He likes to find out more about what he is learning and to read more about the things he is learning. He asks questions and wants to apply what he learns to real situations. He enjoys learning for its own sake.
- 6 Here are two definitions of the term 'learning style':
  - '... a general tendency to adopt a particular strategy in learning' (Messick, 1976)
  - '... habitual modes of information processing and problem solving.' (Pask, 1988).

### Self-help question 6.2

The young street traders that you first met in Self-help question 1.1 were clearly very skilled with basic arithmetical processes and with the representation of money in terms of coins and notes of two denominations (old and new, which involved transforming from one to the other mentally). They also broke numbers down into constituent parts and moved the parts around to make adding and subtracting easier. They could also map these operations into sets of specific items and classes of food.

The traders are powerful convergent processors, memorisers and evaluators of visual items (units) and classes (of food and coins and notes). They understand the visual relationships between them and the transformations between visual denominations of notes, and at least part of the system of numbers represented by the visual money. This is a pretty sophisticated set of information processing abilities. However, it is limited at the moment to the visual domain.

To become adept at school maths, their abilities need to be moved much more firmly away from the visual content into the area of symbolic content, so that they become equally adept at convergent

production and evaluation of symbolic relations, systems and transformations.

To effect this, the facilitator has to free their undoubtedly skilled mental processes from dependence on the visual materials, perhaps by a halfway stage, where they are compelled to make explicit (to represent to themselves or others) exactly what they know. Which is why they should be asked to train other young people in the classroom without the presence of the food, using drawings to represent the money and the food.

By utilising their behavioural abilities, you could give them activities to move them into the evaluation of semantic classes and relations as a way of getting free of some of the dependence on visual content, before attempting to access the symbolic content.

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## Unit introduction

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Welcome to Unit 7 *Facilitating Adult Learning*.

In this unit you will learn about designing, implementing and evaluating learning programmes for adult learners, and your role as a facilitator of adult learning. This will build on what you learned about learning styles in Unit 6.

You will explore: why it is important for adult learners to participate in all aspects of the learning process, including its management; the relationship between learning needs and learning objectives; the selection of appropriate learning strategies and resources; and the evaluation of adult learning and criteria used to evaluate adult learning.

There are several very practical activities in this unit to give you the opportunity to apply your learning. Make sure that you allow time for the observations and discussions that are involved in the activities.

As you come to the end of this first module of the Diploma you will be asked to reflect on your learning so far.

## Unit learning outcomes

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When you have worked through this unit, you should be able to:

- explain the processes of communication and participation in adult learning
- outline stages in developing a learning programme and apply your learning to:
  - develop objectives
  - select learning strategies
  - choose resources
  - implement the programme
- explain why evaluation matters and how and when it should be carried out
- reflect on your learning from this module.

## Communication and participation

### Communication

Adult learning is not a process of one-way communication, where a facilitator only transmits knowledge to students who are expected to absorb that knowledge.

The last unit of this module is a good moment to reflect on the learning principles that underpin this Diploma.



Reading 9: 'Principles that underpin the learning on the Diploma' explores these principles. It is taken from the first Tutor's Manual for the Diploma and was meant as advice for those who were facilitating the Diploma programme.

You can read it now, or at the end of the unit if you prefer.

As you read, think about the following questions:

How far do you think the principles outlined in the reading are apparent in this module? How far has this reading helped you reflect better on the module content and process of your learning through the module?

Reading 9 compares the learning process for adults doing the Diploma to a self-directed apprenticeship in the modes of working of mature specialists in the fields covered by the thirteen modules. Of course, the self-direction is under the management of the learning facilitators running the programme and the writers of the modules. Nevertheless, self-direction is the ultimate aim of the programme.

In order to achieve self-direction, facilitation of adult learning needs to be a three-way communication process. This means attempts are made to match the learning needs of adult students with the learning objectives of the programme. This takes place within the general aims and policies of the organisation funding the programme, using the available communicative methods of specialists in the fields represented.

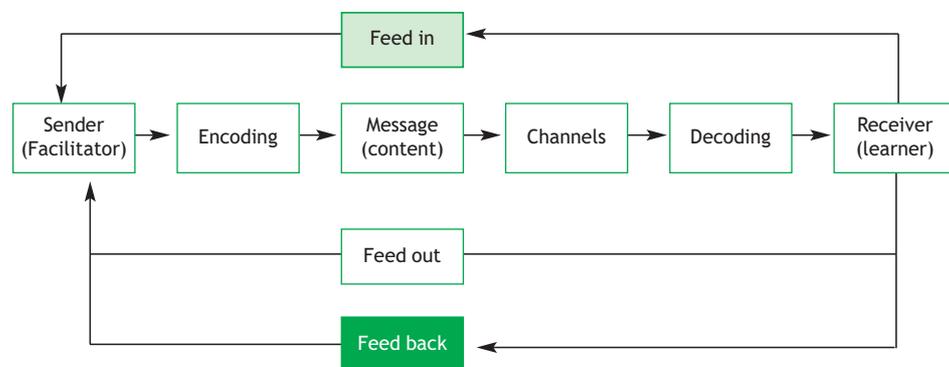
Consider the two communication models shown below.



In the one-way communication model, the teacher usually teaches the student items on a syllabus, which is designed by an educational specialist.

In adult learning, there has to be a three-way communication process between facilitator and learners.

- First, the facilitator has to develop insight into the learning needs and learning styles of the learners through the 'feed in' process.
- Second, the facilitator has to structure her 'message' so that it fulfils the learning needs of the learners as far as possible. In this facilitation process she has to consider what strategies will make the learning process active rather than passive, and relevant to the needs identified in the feed in process.
- Third, the facilitator has to find out whether she has fulfilled the learning needs of the learners, through evaluation during the 'feedback' process.



Three-way communication

The meaning of the terms in the three-way communication model is as follows:

- **Feed in:** Learners feed their profiles into the facilitator's (the sender's) pool of essential knowledge (for example, through group discussion). The facilitator estimates their knowledge levels, learning capacities, learning styles and socio-cultural backgrounds.
- **Encoding:** The facilitator prepares the learning content of the session in a form that is interesting, meaningful and understandable to the learner (receiver). (Traditionally, this was described in teacher education as the learning session's 'method'.)
- **Message:** The facilitator ensures that the full meaning of the learning content is received by the learner. The facilitator controls and monitors the processes she adopts, from start to finish of the learning session. It includes greeting, talking, gesturing, introducing learning activities, involvement in the learning activities (leading, listening, commenting), to the final goodbyes. Each act of the facilitator has an important effect on shaping the

learning. Developing expertise at this is perhaps the most important process a facilitator can learn.

- **Channel(s):** The facilitator uses a range of channels for learners to engage with the message. People learn through all their senses – seeing, hearing, touching, sensing, smelling and tasting, and kinaesthetic. The more the senses are used appropriately, the more effective the learning. So, a variety of learning activities have to be planned to involve the learners actively in the learning processes as whole persons who fully use their senses.
- **Decoding:** Learners must understand fully the content that they are getting through the message and channels. However, for this they need mental preparation. Their minds need to have in place a set of schemata that they can use to assimilate or accommodate the new material. The facilitator has to ensure that those are in place – for example, during the feed-in session in various ways.
- **Feed out:** Learner responses to the message – appropriate learner behaviours. The facilitator needs to prepare for these and to be alert to whether she is getting them or not. Evaluating them is often complex and this is an ability that needs to be developed over a period.
- **Feedback:** The facilitator checks to find out whether the intended message has been received as expected. This can be done orally, in writing or by some kind of evaluative test. If the message is not being properly received, the feedback loop should prompt the facilitator to get better information at the feed-in stage and/or to plan the feed-out more effectively.

The participation of learners is clearly required in the feed-in process and the feed-back processes. However, this tends to be a simplification of the actual facilitation process.

Now consider the following seven-step model of the facilitation process (Ingalls, 1973):

Organisation	Input
1 A climate for learning. 2 A structure for mutual planning, getting the participation of learners from steps 1 to 7.	3 Needs, interests, values of learners.
Activity	Output
4 Formulating objectives. 5 Designing. 6 Implementation	7 Shared evaluation of results, leading to a reassessment needs.

As mentioned in Step 2 of the model, the facilitator has to find ways and means of getting the participation of the learners in each of the seven steps.

Read the following case study, then do Activity 7.1.



## Case study 7.1

### Facilitating learning in community education

A team of trainee graduate teachers, who were learning the concepts of andragogy (helping adults to learn) and their relevance to community education, went on a field trip (on foot) to a rural village. Their assignment was to test whether learners' needs and objectives could be matched with the objectives of their institution. The institution was interested in helping the rural communities to learn basic literacy and numeracy skills.

As the team passed through a village, they saw a group of rural mothers seated under a large tree close to the pre-school. The trainee teachers asked them whether they would like to learn something while they waited until the children finished school. When questioned as to what they would like to learn, some said that they wanted to learn 'how to make flowers using paper tape.' A few others said that they wanted to learn how to make flowers using stockinettes. Two of the mothers said, 'We have a lot of left-over pieces of cloth at home. We want to learn how to make table covers by joining those pieces together.'

The team of trainee teachers thanked the mothers and promised them to come back two days later to help them to learn what they had mentioned. At the institute, they discussed their experience with their facilitator. Fortunately, there were some trainee teachers who knew how to make artificial flowers using paper and stockinettes. Most of the female teachers knew how to stitch pieces of cloth. So they taught each other and prepared for the mothers' learning session collecting whatever materials (like wires, sealing tape, stockinettes of different colours etc.) they could find in the neighbouring town.

When they discussed with their facilitator how they could help the mothers' group to learn letters, numbers, basic shapes, the names of colours and so on, he helped them to find their own methods. There were various suggestions: 'Let's take some foot rulers in our bags. When we tell them that the wires have to be cut into lengths of five inches, they want to know what inches are and what five is. Then we will pull out rulers and show them how lengths are measured'. They planned to help the mothers learn numbers up to five, and what triangles, squares and rectangles were. They could do this when cutting the pieces of cloth to stitch together to make table covers. They took all the necessary precautions in going from the known to the unknown.

The learning session was a great success. They were so interested in the learning process that they did not feel the time passing. Immediately after the learning session, most of the mothers – even the elderly women – blessed them, saying things like: ‘May God bless you. You have taught us many things today. Please come tomorrow also.’ ‘Now I can count to five. I want to count up to ten like my little son.’ ‘You are very good teachers. Please come again.’ ‘We did not think learning could be such fun.’



### Activity 7.1

(about 30 minutes)

When you have read the case study, describe the ways in which it matches (or doesn't match) the seven-step model above. Then answer the following question.

What learning strategies would you have planned to help the mothers to learn the use of numerals from 1 to 5 and the use of a ruler?

Discuss this with others (friends, co-workers and/or tutorial group) and then make notes in your learning journal.

### Facilitator as mentor

In Unit 6, we emphasised the importance of flexible teaching styles to suit learning preferences. We also emphasised the importance of learner participation in all aspects of the learning process, including planning. The facilitator has to find ways of involving the learners in the whole process so that the content, pace, intensity, application and environment of learning are controlled by the ethos of the learning group, rather than by the strength of the facilitator's plan and force of her personality.

Therefore, the role of the learning facilitator is ideally that of a mentor.

### What is a mentor?

In Homer's long poem, *The Odyssey*, the Gods intervene throughout the story of the return of the Greek lord and warrior Odysseus from the war of the Greeks with the city of Troy, to his own island home of Ithaca. Athena, the goddess of wisdom, takes the form of a mentor for Odysseus's son, Telemakhos. The mentor guides Telemakhos in his search for his father. She joins him initially in the first part of the adventure, appearing when she is needed and disappearing when she is not. Athena re-enters the scene at the end of the adventure to help with further advice for Telemakhos, his father

and grandfather so that they can recapture their island home from rival lords who had started to challenge for its ownership.

The mentor role is emphasised in the *Kularnava Tanta*, (an Indian Vedic text) where six roles are assigned to a teacher. One of the six roles is that of a ‘bodhaka’ – a person who lights a lamp in the mind of the student. This suggests two main types of overlapping support suggested for learners:

- Holding a lamp to illuminate the area of knowledge being studied. This is in order to show learners the way if they cannot find their own way through the learning material because they do not have the appropriate mind set for it (the developed learning schemata).
- Providing illumination, by way of examples and illustrations, so that a light starts shining in the learner’s brain, making everything that is to be learned very clear and assimilable as extensions to their existing knowledge. This is the approach taken by the mentor in *Panchatantra*, where this method was used in the education of the five princes in *The Arts of Stagecraft*.

The facilitator as mentor has to be there whenever the group needs them, but should not be continuously at their side. The mentor should have a transitional role, helping adult learners to start out on an independent road to achieve their own educational objectives. This transitional role may in some cases have to last for longer because learners vary in their readiness to take over an independent role.

During the ‘feed-in’ stage the facilitator/mentor has to find out what the learning problem is, both as it is understood by the learners and as it can be reconstructed into a manageable form with the help of the mentor. Like Athena with Telemakhos, the mentor has the advantage of being able to overview the problem in the broader learning context, but also knows that that is of no value to the learners unless they can also see it in the broader context from inside their own heads. So the feed-in time is spent on this process of asking and listening, proposing and checking – always with an eye to the way that the learners signal the level of their understanding.

You can pursue this process through a range of techniques.

- Whole group exploratory discussion is a principal way. Exploratory talk is marked by an emphasis on listening on the part of the participants, and a culture of presenting ideas tentatively rather than forcefully – this takes time to develop with a group.
- Having ‘buzz groups’, where the participants throw ideas at each other as these pop into their heads; these ideas are written down by a recorder and then evaluated for their usefulness half way through the session.

- Simple role-play can be tried for some human relationship areas. This highlights the underlying issues and they can then be worked on in discussion with perhaps more role-play and other clarifying techniques.
- Finally, to establish what needs to be done to move to the encoding process, you ask the questions: ‘What do we need to do to solve the problem?’ and ‘What resources do we need to solve the problem?’

This section has looked at the importance of communication and participation in facilitating adult learning and the role of the facilitator in this, especially in establishing learner needs at the feed-in stage. In the next section, we move on to the design of the programme.

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## Designing the programme

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### Developing objectives

You should now be able to generate a list of things that a group needs to do. These can be written as general objectives for the group, then converted into specific objectives that remind each learner what is being aimed at. The next case study shows what this means.



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### Case study 7.2

#### General and specific objectives

This case study is about learning how to work for a recruiting company under the best available conditions.

An important issue may be that the learners need ‘to develop expertise in dealing with the personnel manager’ of a multinational company. This company is setting up an oil storage and haulage centre near their rural town, and offering jobs to the local population. There is a shortage of jobs, but the company is known for not being clear in its dealings with lower-level and middle-level personnel.

One of the general objectives developed in the group is: ‘We need to be able to read and understand the employment contracts we are asked to sign.’

From the point of view of the learners, that needs specifying much more carefully if they are to understand what their contractual obligations are. So it needs to be written in a more specific form with the detail sketched in. This will generate several specific objectives.

One of these could be: ‘By the end of this training module, I will be able, when given a written contract to read, to understand the individual responsibility I carry, in national and company law, for any

breach of safety within my area of work and within the whole storage and haulage centre.'

Setting objectives is a key step in the learning process. Participation of the learners in setting objectives and designing the learning strategy is essential in adult learning, because the purpose is for them to learn, not for you to teach.

Unfortunately, this part of the work can sometimes cause confusion because the terms used overlap: 'objectives', 'goals', 'aims', 'purposes', 'targets', and 'outcomes', are terms that are often interchanged. Knowles (1980) proposes the following as standard definitions of different types of aims and objectives. These need to be considered in planning.

Aim/objective	Definition
General purposes or aims	The social and institutional goals of the programme.
Programme objectives	The educational or operational outcomes toward which a total programme will be directed for a prescribed period of time.
Learning objectives	The specific behavioural outcomes (or activity objectives) that an identifiable individual or group of individuals will be helped to seek in a particular activity (such as a course, a meeting or a tutorial session).

As you may have noticed, this Diploma uses the term 'learning outcomes'. There are 'module learning outcomes' (equivalent to the 'general objectives' in the case study above) and 'unit learning outcomes' (which are 'specific objectives' about what you will learn in any particular unit).

Knowles has also provided a set of guidelines to assist adult educators in translating needs into 'programme' or 'project objectives'.

- Organise the needs into a priority system and break them down into operational and educational categories:
  - operational – establish needs for physical facilities, time-scheduling, budgeting; take practical decisions and accept shared responsibility (the learning contract may be used here)
  - educational – list the educational needs and work toward consensus in decision-making and formulating priorities.

- Screen the needs through selected filters:
  - institutional – purposes and philosophy of education; try to meet organisation and community needs and avoid duplication of effort
  - feasibility – ensure that the programme can be operated with regard to time, cost, staffing constraints, etc.
- Include the interests of individuals – allow individuals to develop their own plans and establish their own training needs.
- Translate the final set of needs into operational and educational objectives:
  - operational objectives – work towards practical decision
  - educational (learning) objectives – work towards consensus as to what these should be.



### Self-help question 7.1

When you have read Section 3 in Reading 7 about SI theory, turn back to Unit 1. Look at Case study 1.3 about the Brazilian street children selling food in the streets of Sao Paolo, and at Self-help question 1.4. Read them again carefully.

See if you can use the SI model to analyse the factors of intelligence that the street children have developed and which are strong, and the factors that are weak and need developing. Use the model to see if you can suggest how they might be taught to strengthen the weak factors.

*Compare your answers with those suggested at the end of the unit.*

## Operational model

The operational five-step model that follows shows how programme design can start once the objectives are mutually agreed upon. At this stage, we have to concentrate on what the learners need (or want) to learn rather than what we feel they should be taught. Adults learn what they want to learn, and therefore the lessons and instructions have to be planned in relation to the learners' needs, interests and values.

While sharing the planning process with the learners, you should also bear in mind that some institutions or organisations may have their own standards, controls, limitations and systems. They may require the learning programme to be transmitted in a structured and controlled manner. This has to be discussed with the learners so that any ambiguities can be clarified, and a mutually agreed plan, including the time-frame, can be drawn up.

The model outlines the steps involved in participatory planning and decision-making. It also suggests some of the methods that a facilitator can use to encourage learner participation, and the kind of helping and blocking behaviours that might occur in the process.

Steps:	Methods:	Helping behaviour:	Blocking behaviour:
1 Define the problem.	<ul style="list-style-type: none"> <li>● problem census</li> <li>● buzz groups</li> <li>● problem stating.</li> </ul>	<ul style="list-style-type: none"> <li>● clarifying</li> <li>● summarising</li> <li>● testing for meaning.</li> </ul>	<ul style="list-style-type: none"> <li>● ambiguity</li> <li>● over-generalising</li> <li>● over-simplifying.</li> </ul>
2 Gathering the information (ideas).	<ul style="list-style-type: none"> <li>● buzz groups</li> <li>● brainstorming</li> <li>● discussion.</li> </ul>	<ul style="list-style-type: none"> <li>● informing</li> <li>● requesting information</li> <li>● sharing experiences</li> <li>● collecting information.</li> </ul>	<ul style="list-style-type: none"> <li>● stating attitudes too early</li> <li>● status threat</li> <li>● size of group</li> <li>● mixing testing and production of ideas.</li> </ul>
3 Identify alternative solutions and set goals.	<ul style="list-style-type: none"> <li>● discussion</li> <li>● role-playing</li> <li>● reality testing</li> </ul>	<ul style="list-style-type: none"> <li>● reality testing</li> <li>● implications</li> <li>● summarising</li> <li>● harmonising</li> <li>● clarifying.</li> </ul>	<ul style="list-style-type: none"> <li>● lack of experience</li> <li>● too hasty decisions</li> <li>● straw voting</li> <li>● attaching ideas to people.</li> </ul>
4 Decision-making.	<ul style="list-style-type: none"> <li>● get consensus</li> <li>● voting.</li> </ul>	<ul style="list-style-type: none"> <li>● summarising</li> <li>● testing consensus.</li> </ul>	<ul style="list-style-type: none"> <li>● voting</li> <li>● taking sides</li> <li>● failure to test</li> <li>● mixing policy and action groups.</li> </ul>
5 Action planning.	<ul style="list-style-type: none"> <li>● team planning</li> <li>● committees</li> <li>● workgroups</li> <li>● individual work.</li> </ul>	<ul style="list-style-type: none"> <li>● initiating</li> <li>● informing.</li> </ul>	<ul style="list-style-type: none"> <li>● failure to allocate responsibility</li> <li>● lack of involvement</li> <li>● no mechanics specified.</li> </ul>

You should specify the knowledge, skills and attitudes components in detail in your plan. You might need to break down the broad

objectives into more specific aspects at this point, especially if they are in the skills area.

## Selecting learning strategies

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You need to begin by categorising your learning objectives into the three domains:

- knowledge
- skills
- attitudes.

You can then start to select what types of learning strategies or methods are appropriate for each domain. You need to bear in mind that most learning always involves all three domains, but that in each domain the primary focus will usually be on one of them. Developing learning activities should be done in relation to the learners' existing knowledge, skills and attitudes.

The main strategies are described in this section. (Other strategies are covered in Reading 10, which you are asked to read later in this unit.)

### Knowledge

The main strategies that are used to develop learning in the 'knowledge domain' are:

- lectures, talks and lessons
- discussions, seminars, colloquia, symposia.
- self-study methods.

Other useful strategies include:

- small-group study methods
- discovery learning through investigation and experiment
- examining case studies.

### Lectures, talks and lessons

These usually take place in formal learning environments, but they can be useful in transmitting knowledge to people who are already very interested in the subject and want someone who can summarise their field of interest or stimulate new thinking in that field. When these methods are used in adult learning, they need to be more participative and co-operative than formal talks. This can be managed by preliminary discussion sessions that raise questions to be dealt

with in the formal sessions. Also, the formal sessions need to be accompanied or quickly followed by dialogue and discussion.

Such a talk can be made interesting and meaningful if the facilitator plans and prepares the talk to include many open-ended questions (Why? Who? When? What? Where? and How?). These can be used to turn the talk into a logical and sequential quasi-discussion.

Remember that listener concentration starts to fall away quickly after ten minutes, and needs restimulating by an injection of fresh material, such as an anecdote or a new direction. One very good further education lecturer, who teaches history, describes his lessons as follows: 'I try to make three interesting points, and punctuate them with two stories and two jokes to keep their interest.'

With adults, a lecture or talk can and should be an active learning experience and not in any way a period of passive listening.

### **Discussions, seminars, colloquia, symposia**

These are all intrinsically more participative than talks and lectures. Nevertheless they too should be well planned to make them fully participative and active learning experiences. They should be employed to optimise learner participation, rather than be allowed to be dominated by any participant who conducts a monologue, especially when presented in so-called 'expert' language that is beyond the understanding of the learner.

Apart from using posters, video tapes or overhead projector slides, imaginative facilitators use all sorts of things to aid learning. For example in one excellent discussion group with young adults, a man of Jamaican origin used his own hairstyle to introduce a discussion on Rastafarianism. You will learn more about learning aids in the section on resources later in this unit.



## Activity 7.2

(timing depends on how long you spend on your observations)

Observe three facilitator-initiated group discussions in any setting, and report your observations in your learning journal under the following headings.

Activity	Facilitator's participation	Learners' participation	Remarks
1.			
2.			
3.			



## Activity 7.3

(You will probably need to spend at least an hour on preparation and 30 minutes writing up the evaluation. Then there is the time you allow for the group discussion and follow-up evaluation discussion.)

- 1 Plan a group discussion in relation to your programme under the following headings:
  - objectives of the discussion
  - additional material to be provided (e.g. handouts)
  - learners' participation
  - facilitator's participation
  - evaluation procedures and evaluation form.
- 2 Conduct the (planned) discussion with a group of people.
- 3 Evaluate the discussion with the group and then make some notes in your learning journal.
- 4 Discuss with co-workers and/or tutorial group.

### Self-study methods

Self-study methods are also a useful way to develop learning in the knowledge domain.

Many types of reading materials may be available for self-study: textbooks, manuals, leaflets, brochures, study guides, programmed texts, reprints, recycled lecture notes. In more recent times, computer aided instruction (CAI) methods and packages have become available, as well as great volumes of material (of variable quality) on the internet.

Combined audio-visual materials can be used for self-study too. For example:

- audio cassette – tape programmes
- video cassette – film
- DVD – filmed material.

## Skills

A lot of skills learning, such as social skills, involves acquiring new knowledge too, but this can be introduced incidentally along the way or separately, while the focus is on the skill or skills to be learned.

The main strategies that enhance learning in the skills domain are:

- demonstration/observation
- practical activities and exercises
- practice.

Other useful strategies include:

- discovery
- role-play
- simulation
- practising the ‘inner game’.

## Demonstrations/ observation

Demonstrations are where the facilitator shows how a task is performed step-by-step, gets the learners to do it and corrects them if necessary. They are the primary strategy for teaching skills. The demonstration can be of two kinds:

- a demonstration of the whole skill sequence in real time or a series of separate parts of the skill, focusing on the gestalt of the skill sequence
- a demonstration of the sequence of stimulus/response units from the skill chain, emphasising the stimulus/response relationships.

Video demonstrations are also useful, especially because they can easily be stopped, repeated and discussed.

Once the skills of the task are mastered, the learners are encouraged to work independently, under the overall guidance of the facilitator, until they reach the required skill standards, with frequent topping up.

## Practical activities and exercises

Practical activities and exercises can be done individually, or in small groups to share learners' knowledge, experience and expertise. Exercises can be structured in such a way as to bring about pre-determined behaviours.

## Practice

Systematic practice is necessary to develop a skill to a required level of competence. The nature and timing of this are important. For some complex skills like acting, the practice is better when the practice periods are widely spaced so that the learning has time to become organised and stored by the brain. For simpler skills, where precision matters greatly, such as potting snooker balls, it is better to practise them intensively.

While practice can be take place in realistic settings, it can also be acquired in quasi-realistic contexts. For example, many computer games can be used to develop the fine muscular co-ordination and timing needed to operate a computer skilfully, and for the sustained experience necessary to become computer literate. The value of this is that the skills learned are not experienced as chores: they are simply acquired non-consciously, without the learner experiencing the strain of being focused upon.

## Attitudes

As with skills learning, acquiring attitudes also involves acquiring new knowledge. This can be introduced incidentally, while the focus is on other things, or focused on separately. For example, if your group members want to move into non-traditional social roles, such as when moving out of rural areas to work in urban settings, they may need to adapt their attitudes to the behaviour of women. To achieve this they will need to understand the social conditions of women in urban settings and the way these conditions impose specific demands on attitudes and behaviour. One of the ways this can be treated is by the analysis and discussion of local television dramas that highlight rural/urban clashes of values. This can then be accompanied by role-plays and improvised sketches so that the acquired attitudes develop around specific patterns of social interaction.

The main strategies that enhance learning in the domain of attitudes acquisition are:

- case studies
- drama (role-play, street drama, etc).

Other useful strategies include:

- simulations
- discussion

- observation.

## Case studies

You have been presented with case studies throughout this module. The television dramas mentioned above are effectively case studies, though we tend to define case studies as real examples of the behaviours being studied. Essentially, they are narrations or detailed descriptions of actual happenings, structured to expose the underlying issues in a factual manner. The learners are readily provided with excellent opportunities to develop problem-solving skills and their own capacity for diagnosis and analysis. Case studies can be used for individual and/or group study.

This is a method that has been in use from early times in the form of community discussion of traditional stories such as Aesop's Fables, Jataka stories, the Panchatantra, the Holy Bible stories, stories and incidents contained in the Holy Quoran, or the Arabian Nights.



### Case study 7.3

#### Using case studies

A group of youth trainees received some materials related to cases of problems experienced in the lives of a community leader, a drug user and a factory worker.

All the cases were developed from real life examples by their facilitator. The trainees were asked to go through them carefully and to identify the reasons leading to the problematic behaviours described.

This is an example of a facilitator using case studies to illustrate something that he is teaching. Case studies can also be used to teach research skills where the learners are asked to develop their own method of researching the events in the case study. Learners may also be asked to develop their own case studies. This method can then be analysed for its strengths and weaknesses. The facilitator can use this analysis to explore basic methodological principles to develop sharper methodological insight among the learners.



## Self-help question 7.2

(about 15 minutes)

- 1 Discuss the examples above of using case studies with others (co-workers and/or tutorial group) and then describe the role of the facilitator in this.
- 2 Make a list of skills that the learners would need to develop satisfactory case studies.

*Compare your answers with those suggested at the end of the unit.*

## Drama

The use of drama (in the form of role-plays, simulations, skits, or reading and acting short plays) is a very powerful way of exposing and demonstrating attitudes, and practising alternative behaviours. Drama can be used to depict real life or hypothetical situations. The two main uses of dramas of this sort are:

- socio-drama, where the focus is on the study of social relationships learners may experience
- psycho-drama, where the focus is on the psychological issues learners need to understand.

The learners themselves do most of the play-acting. Having described and discussed a situation to be explored, the facilitator usually prepares cards with notes for the learners who will play the acted roles, and cards with observation notes for the observers who will analyse what happens. After the role-play, the facilitator uses it as data for an active discussion to highlight the learning points and consolidate them in the minds of the learners. Any point that needs extra exploration can be tackled by repeating bits of the role-play as stimulus for new thinking.

## Putting it all together

While there are learning strategies that relate to each of the learning domains, they should be used as needed, within the overall experiential approach. Working within a real, practical situation, for example on a community project, provides plenty of opportunities for learning (formally, non-formally and informally) the relevant knowledge, skills and attitudes.

## Real projects

These are real assignments, for example community development, environmental or health projects. They provide opportunities for participants to learn knowledge, skills and attitudes that are relevant

to real tasks or jobs, and that are transferable to other situations, for example employment. The learning strategies described above are valuable for use alongside a project's main activities to expose and explore issues that are obscure in the project itself. That was one of the main techniques used by Paulo Freire in Brazil, when his groups of illiterate peasants made pictures or representations of their economic plight, so that it could be worked on intellectually before acting on it politically.

### Hypothetical projects

These are models of the process of working on real projects. They take the form of assignments that are given to learners to be completed individually or in groups, in class, at home or in the field. The learners have to use the model given to practice applying the knowledge they already have. They find any other information required from books, friends or peers, and report on their findings. This process helps them to consolidate and refine their application of knowledge, skills and attitudes.



Now turn to Reading 10: Learning strategies', by Dr G. Gunawardena.



### Activity 7.4

(about 30 minutes)

This activity gives you the opportunity to apply what you have just read about learning strategies and projects.

Describe briefly a real project you are familiar with. Identify what opportunities it offered for participants to acquire knowledge, skills and attitudes and list what you think they learned through it. Can you think of ways of improving the learning strategies used?

If you can't think of a real life example you can invent a hypothetical project.

Make notes in your learning journal.

## Resources

Adult learning facilitators can use a variety of resources to make their programmes more effective. Such resources do not need to be sophisticated or expensive. It is up to the facilitator to use resources that are locally available at low cost and that are familiar to the learners. The facilitator also has to be efficient in the use of the

resources. If they are not properly planned for and appropriately integrated into the learning sessions, they can become a distraction to learning.

There are three types of resources:

- human
- environmental
- learning aids.

## Human resources

The learners themselves, their family members, friends, and the formal and informal leaders of a community can become valuable human resources. The facilitator must develop skills in identifying and utilising them. Adults have a wealth of experience and skills that learning facilitators can use. Religious leaders, teachers, doctors, lawyers, technicians, traders, craftsmen, artists, musicians, extension agents and law enforcement officers can be human resources that can be used in learning programmes.

They can provide organisational support, share experiences that would be useful as learning material, and do many more things to help the facilitator. The facilitator has to identify such resources, with the help of the learners, at the needs identification and programme design stages.

## Environmental resources

The natural environment can be used as a resource to focus attention on many social and psychological issues. It provides many features and incidents that can draw out useful lessons that can change the attitudes of the learners.

For example, a visit to a hilly clearing where soil erosion has taken place can stimulate more learning about environmental problems than a classroom lecture or discussion on soil erosion. Nevertheless, you have to prepare carefully for such a visit or it is unlikely to focus the learning sufficiently.



### Case study 7.4

#### Defining 'green'

A facilitator wanted an activity that would generate discussion among learners, to help them realise the important fact that words mean different things to different people. She collected fresh leaves of different shades of green and took them to the learning session.

She gave a leaf to each learner and asked the question: 'What is the colour of a leaf?' All the learners replied 'green'. Then she asked each learner to show his leaf to the others and prove that his leaf was

green and that the others were not. A very lively discussion ensued, that explored thoroughly the nature of definitions.

The cultural environment can also be a useful resource. Folk music, popular stories, historical legends, traditions, observations about the weather and climate are very effective as discussion starters leading to new learning. Again, you need to prepare how you will use this material.

## Learning aids

Learning aids (also sometimes called ‘engineered resources’) are extremely useful in facilitating adult learning. They can be designed to make learning a pleasant experience, if properly and appropriately used. They can engage more than one sense, which enhances learning. But facilitators need to ensure that learning aids are used to make learning more effective, and that they don’t disturb or distract the learner.

A large range of learning aids are available today, such as those listed below.

Audio aids	Visual aids
<ul style="list-style-type: none"> <li>● audio cassettes</li> <li>● CD players</li> <li>● public address system or amplifier</li> <li>● radios</li> <li>● records</li> <li>● record player</li> <li>● tape recorders</li> </ul>	<ul style="list-style-type: none"> <li>● banners and flags</li> <li>● chalk and whiteboards</li> <li>● cartoons</li> <li>● diagrams</li> <li>● flannel boards</li> <li>● flip charts</li> <li>● magazines</li> <li>● maps</li> <li>● models and objects</li> <li>● pamphlets</li> <li>● photocopier</li> <li>● photos and pictures</li> <li>● picture stories</li> <li>● posters</li> <li>● slide projector</li> <li>● stencils</li> <li>● text books</li> <li>● transparencies</li> </ul>

Audio aids	Visual aids
<b>Audio-visual aids</b>	
<ul style="list-style-type: none"> <li>● cinematic film</li> <li>● computer packages</li> <li>● DVD players</li> <li>● film strip and tape</li> <li>● interactive multimedia products</li> <li>● online resources</li> <li>● overhead projectors(with transparencies and presenter)</li> <li>● PowerPoint</li> <li>● slide presentations with presenter</li> <li>● slide/tape combinations</li> <li>● television</li> <li>● video</li> </ul>	

Here is a checklist of things to think about when choosing and preparing learning aids.

You will need to:

- select only relevant and appropriate learning aids that suit the situation
- preview any videos and listen to any tapes or other recordings
- consider how any visuals are to be planned and developed:
  - the context in which the aid is to be used
  - the stage of learning and the environment where it is to be used
  - the sequence of presentation
  - the organisation of information that you wish present on the visual aid
  - legibility and possible interpretation of material on the visual aid
  - how useful the material will be to focus the attention of the learners on the learning elements, and the consolidation of learning
  - the cultural aspects of the learners (will any words or pictures on the visual be culturally sensitive?)
  - the accuracy of the information given
  - the layout and the size of letters and pictures
- consider how easy equipment is to move, if it is to be taken from place to place
- arrange storage and safekeeping after use.

Before a learning session, you will need to:

- rehearse the session with the learning aids and make any adjustments
- ensure that all aids (display boards, chalkboards, projection screens etc.) are placed safely and properly so that all learners can see.

During the session:

- only use the learning aids to support the learning process
- avoid:
  - talking to visual aids
  - covering visual aids
  - talking while an audio aid is functioning
  - mistaking the order of presentation
  - blank and bright light on the screens
  - moving the equipment while it is functioning

Take it slowly to allow all learners see and read what is on visual aids.

After the session:

- clean or dust the chalkboard, whiteboard or any other equipment and materials that you have used
- arrange them in order
- keep them in a safe place until they are stored.

Many facilitators fidget with learning aids, and have all types of distracting mannerisms when using them. The most common is talking to the board or screen, so that the relationship with the learners is broken. This happens particularly when the facilitator has not rehearsed the session.

You should note that even the use of a chalkboard or whiteboard has to be carefully planned. Otherwise the board will be used at random and the writing on it may be confusing for the learners to follow.



## Activity 7.5

(about 45 minutes)

- 1 Prepare a chalkboard or whiteboard plan (what you hope to write on the board and where) for a session you hope to conduct for your group of learners. In your plan, indicate the topic of the session and the type of learners.
- 2 Assume that you have decided to prepare a poster on the dangers of smoking, and that it will be used at a learning session for a youth club. (For example, you could use the picture of a burning cigarette placed over the lungs of a person and use the words: 'Burn yourself to death'.) Prepare a sketch of the poster and show it to a friend or co-worker to get his feedback.
- 3 Plan some open-ended questions to generate discussion about a documentary video that you would like to show a group of learners.

Make notes about your plans for these three tasks in your learning journal. Add comments about whether you find this kind of task easy or difficult.

## Implementation

It has already been mentioned that adult learning programmes are designed to fulfil the learning needs of the targeted adult learners. This should be borne in mind during all the implementation stages of such programmes. This section explains the main activities that are involved, from initial arrangements to follow up.

### Initial arrangements

Often, the designer or the facilitator of the learning programme may not be the person in charge of implementing learning sessions. Others will help in the physical arrangements, provision of learning materials, provision of funds, enrolling of learners, selection of resource people and many other activities. All of them should be aware of the factors that facilitate adult learning.

You might be in the role of supporting someone else who is implementing the programme. The self-help question that follows will help you think about what this involves.



### Self-help question 7.3

(about 45 minutes)

Discuss the following scenarios with others (co-workers and/or tutorial group).

- 1 Your youth club is planning to conduct a learning session to help some of its members learn to take photos. What arrangements would you make in the venue where the learning session is to take place?
- 2 A resource person who is working with your group of young people has told you that she hopes to use a video camera to record some of the small group learning activities during her session. She will play them back to the group later for discussion. What facilities would you prepare for her?
- 3 Reflect on a learning situation that you have participated in, and suggest ways it could have been improved through better management and implementation strategies.
- 4 Assume that you have agreed to conduct a learning session for a team of young adults, for them to learn how dangerous drugs can ruin one's health. Advise the person who is making the arrangements what facilities you want at the venue.

*Compare your answers with those suggested at the end of the unit.*

### Before you begin

Preparation activities can consist of any or all of the following:

- choosing potential learners (in relation to the policies of the institution or in relation to a specific programme)
- identifying and analysing the learners' learning needs
- completing the enrolment procedures (registration, sending invitation letters, follow up on responses, collection of fees, etc.)
- choosing resource people, informing them of the venues, times, numbers and nature of the learners, obtaining learning materials from them and following up
- arranging the venues and the facilitation aids as required by the resource people
- printing/reproducing sufficient copies of learning materials
- arranging any field visits necessary

- making arrangements to ensure that the remuneration/fees for the resource people are paid promptly
- preparing budgets and getting the approval of the appropriate authorities
- inviting guests for the opening /inauguration ceremonies, if any
- reminding the resource people about the learning sessions they are expected to facilitate
- making alternative arrangements if any resource person is unable to attend
- arranging transport for field trips and/or any other learning activities
- ensuring that a power source is available if any electric/electronic learning aids are to be used.

### **During the learning sessions or programme**

Activities during the programme can consist of any or all of the following:

- providing learning materials to the learners
- ensuring that learning aids work
- ensuring that the learning environment is conducive to learning (this may include thinking about lighting, ventilation, seating arrangements, arrangements for group work, toilet facilities, refreshments, places to keep personal belongings, receipt of visitors and messages, facilities for informal chats)
- providing support to the people who look are responsible for the resources.

### **At the end of the sessions or programme**

Activities at the end of sessions or programme can consist of any or all of the following:

- conducting evaluations of the programme or sessions
- arranging for safe keeping of the learning aids
- paying learners, resource people and others who helped or provided services to the programme
- preparing any reports required by the institution
- distributing certificates to learners
- follow-up work with the learners to ascertain that the learning objectives have been fulfilled
- revising and redesigning the programme based on the evaluations of the learners, observations during the programme, and the follow-up work.



### Self-help question 7.4

(about 30 minutes)

You have planned to take a team of adult housewives on a field trip. The purpose is to help them to learn how to prepare and establish a home garden in order to obtain fresh fruits and vegetables for home consumption.

What arrangements would you make prior to, during and after the field visit?

*Compare your answers with those suggested at the end of the unit.*

This unit has taken you through a process from involving learners in the initial feed-in stage, through programme design, with choice of learning strategies and resources, to implementation. So by the end, how do you know if you have done well? The next section looks at evaluation.

## Evaluation

### Why evaluate?

Evaluation is the process of finding out whether the learning needs have been fulfilled.

In formal teaching situations, evaluations tend to be done to find out whether the student has learned what was taught. These take the form of assessments rather than evaluations. In non-formal adult learning programmes, evaluations are done to find out whether the facilitators have functioned effectively and the programme has achieved its objectives.

Evaluations provide one form of feedback to the designers and facilitators of the learning programme. The results of all feedback must indicate whether the programme has been successful or not.

If it has not happened as intended, the designers and facilitators of the programme have to analyse the feedback to find out when, why and how things went wrong, with the participation of the learners. They are the participants in the programme and therefore they are the best people to indicate its usefulness, impact and effectiveness.

Evaluation activities also help the learners to think. They have to think about themselves in terms of their response to the programme. The whole programme itself should be evaluated as a total experience, though any single learning unit could be used for a partial evaluation.

There may be other advantages that are not be measured by tests and examinations, but that do emerge through the evaluation of programmes.

For example the learners may:

- learn some useful skills, intended or not intended by the facilitator
- learn to communicate more effectively with each other in small groups
- overcome some insecurities (for example, shyness, stage fright, failure to listen, tardiness, that would help them to become better citizens)
- learn how to share problems and solve them using participatory processes
- learn to relate to others in a positive manner.

Additionally, participation of learners in the process of evaluation also helps:

- the facilitators to learn
- the learners to reflect on the changes that have taken place in their knowledge, skills, and attitudes.

It gives the learners an added opportunity to enhance their skills of formulating questions, responding to questions objectively, listening to each other, working together and self-discovery.

## **When to evaluate**

Evaluation should not be a series of tests given at regular intervals. It can happen at any time in the programme, if the learners agree to participate. It can happen:

- while the learning session is going on (for example, to find out whether the arrangements are all right, or whether the words used by the facilitator are clear, audible and easy to understand)
- at the end of a session through open responses to questions by the facilitator or observations made by the learners on the outcome of the learning activities and/or projects
- at the end of the programme as may be required by the institution sponsoring or managing the programme
- after a period of time has elapsed as follow up evaluation to measure how the learners are applying the results of the programme.

## How to evaluate

Many sophisticated methods and instruments have been developed for assessing formal learning, for example exams and questionnaires. In non-formal participatory evaluation, however, simple and easy to use methods have to be adopted.

Some such evaluation methods are:

- open responses from learners to pre-prepared questions
- open comments from learners
- learners testing themselves
- small group discussions
- suggestions from learners at the end of the session
- learners' evaluation committee
- regular (daily, weekly, monthly) evaluation sessions
- checklists for self-evaluation
- follow-up visits to learners' projects or homes.

Many aspects of non-formal learning can be used as indicators or criteria for its evaluation. However, in participatory and self-evaluation, the facilitator has to make decisions with the learners as to what criteria should be used. In other words:

- what the learners want to know
- from whom
- at what stage of the learning
- how the results will be used
- what the purpose of the evaluation is
- who will be involved in the evaluation
- when the evaluation will take place
- how the results of the evaluation will be used
- whether some of the factors will have to be considered in selecting the criteria.

Some of the more common questions asked as part of an evaluation are:

- Did the session(s) fulfil the needs that were identified as objectives?
- Did the facilitator cover all the intended objectives that were planned?

- Was the environment conducive to learning?
- Was a supportive atmosphere created and maintained during the session(s)?
- What was the level of participation?
- If it was high, what features of the programme helped?
- If it was low, what features of the programme contributed to this?
- How was learning consolidated?
- How effective were the methods used?
- How relevant were the examples and exercises?
- What were the learning aids used? How effectively were they handled?
- How useful would the learning be to enhance the quality of life of the learners?
- In what ways can the programme/future sessions be made more effective?



### **Self-help question 7.5**

(about 20 minutes)

- 1 Suggest ways in which the involvement of the learners in planning the evaluation process at the time of designing a learning programme can become a learning opportunity for the facilitator as well as the learners.
- 2 List ten differences between testing in formal teaching and evaluation in non-formal learning.

*Compare your answers with those suggested at the end of the unit.*

At the end of this unit, which is the last unit in this module, it is time to reflect and bring your learning together – to do a self-evaluation.

If you did not read Reading 9 ‘Principles that underpin the learning on the Diploma’ at the start of this unit, read it now, before you do the final activity.



## Activity 7.6

Look through your learning journal activities. Sum up how your knowledge, skills and attitudes have changed since you began the module. What have you learned that was surprising or unexpected? What do you plan to do differently in future - both as a youth development worker and as an adult learner yourself, when you come to study further modules?

Make final notes in your learning journal.

## Unit summary

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In this unit, you have covered the following main points:

- the importance of communication and participation in facilitating adult learning
- what is involved in designing an adult learning programme (including setting learning objectives, planning learning strategies and choosing resources and learning aids appropriate to adult learning that will make an adult learning programme more effective)
- the process of evaluation in adult learning and the criteria to be decided when designing the programme.

You have also reflected on your own learning during this module.

To check how you have got on, look back at the learning outcomes for this unit and see if you can now do them. When you have done this, look through your learning journal to remind yourself of what you have learned and the ideas you have generated.

## Answers to self-help questions

### Self-help question 7.1

An analysis of learning needs help in formulating learning objectives because it tells you exactly what your learners need to do and to what level.

An analysis of learners' evaluation of your programme and/or results provides feedback for improving or redesigning the learning objectives. You need to be able to accept the constructive feedback the learners give you, even though this may at times be painful.

Evaluation is also a way of checking the degree to which your facilitation, and the methods you have used, have been successful. An evaluation of results can also clearly tell you the extent to which the learning objectives have been achieved.

### Self-help question 7.2

- 1 The role of the facilitator in teaching learners to research their own case studies is to guide, mentor and facilitate.
- 2 Learners need research skills, such as interviewing, questioning, listening and hearing, observing, interpreting, analysing.

### Self-help question 7.3

- 1 Preparations at the venue would include possibly hiring and setting up the lighting, the background, a tripod, positioning the camera, etc.
- 2 You would need to borrow or hire a video camera, unless the resource person is bringing her own. You will also need to have a VCR set up in the room for playback so that discussions can take place around the recording. The room should have enough lighting to optimise the quality of the video recording.
- 3 Your responses to this question will depend on your own particular situation.
- 4 Your response will depend on the strategies and learning aids that you might want to use.

### Self-help question 7.4

This is only a suggested answer. Your response will depend on your particular circumstances.

### Arrangement prior to the field trip

Discuss the idea of a field trip with the group of housewives at least a couple of weeks before the date of the trip. Establish the number of women who will be able to make the trip. Have each of these

housewives prepare a plot of land for planting. Contact the institution or farm that you will be visiting to get confirmation of the arrangements, and also inform the farm manager of the purpose of the field trip and who the group are. Confirm the time for the visit and the expected number of women coming for the field trip. Remind the housewives to wear clothes that are suitably comfortable for this occasion. Make a request with the farm manager for seedlings and cuttings of fruits and vegetables to be made available for the group.

### During the field trip

Arrange prompt movement from one location to the next. Listen very attentively to the person conducting the visit. Ask questions to get more information on any areas you are unsure of. Collect seedlings or cuttings of fruit trees and vegetables, if possible.

### After the field trip

Have a group discussion as feedback on the trip. Distribute seedlings and cuttings of fruits and vegetables for the women to plant in their plots. Arrange for a meeting with the housewives after a month or two to get a feedback of how their fruit trees and vegetable garden are growing.

## Self-help question 7.5

- 1 Learner participation in the evaluation process can help facilitators to learn about the effectiveness of their programmes, style and strategies. It also provides an opportunity to learners to reflect on the changes that have taken place in their knowledge, skills and attitudes. It gives the learners an added opportunity to enhance their skills of formulating questions, responding to questions objectively, listening to each other, working together and self-discovery. The learners are the recipients of the programme and therefore are the best people to indicate the usefulness, impact and effectiveness of the processes adopted by the designers and facilitators.
- 2 In formal education:
  - tests are written
  - tests are supervised and scheduled, e.g. time limits are set
  - tests are graded or given a score
  - the test is part of the students' assessment
  - certain topics are studied for the tests
  - tests are administered regardless of whoever is present.

In non-formal settings:

- attainment targets are set for the learners to achieve

- non-formal evaluation is more oriented towards skills and not so much emphasis is on knowledge
- learners are able to see how they are progressing as they set the evaluation criteria
- learners work at their own pace and can evaluate their own work when they have completed certain tasks.

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## Module summary

The aim of this module has been to introduce you to the theory and processes of learning as they relate to adult learning and youth development work. It has focused on your role as a youth development worker and learning facilitator, capable of choosing the appropriate strategies and techniques in your work.

If you have successfully completed this module, you should now be able to:

- understand the probable nature of the learning process and be able to relate relevant theories of learning to the kinds of learners for whom you are a learning facilitator
- understand what is presently understood about the learning processes of adults and be able confidently to address the issues that affect adult learners
- discuss the philosophical and psychological perspectives of 'education for all' and the concepts of total development and lifelong learning, and some of the different theories about how learning takes place
- determine what kinds of factors are likely to help and hinder learning and be able to help the learners deal with these factors
- support learners in their efforts to learn and/or train, in the light of what can be determined about their modes of intelligence and preferred learning styles
- use the knowledge and skills of informal education and experiential learning that you have learned in this module to prepare effective learning environments for adults.

We hope you have found this module interesting and useful as an introduction to adult learning. Good luck with your assignment, which draws on the work and activities that you have completed during the module.

## Glossary

Adult learner	Anyone who is in late adolescence or older, who is enrolled in any course of study, whether special or regular, to develop new skills or qualifications or to improve existing skills.
Affective domain	The aspect of human experience that pertains to emotions and intrapersonal attitudes.
Agents of education	Organisations/institutions/individuals that provide education or learning opportunities.
Analogy (use of)	Explaining something by comparing it with something similar.
Analyse	Separate something into parts in order to understand it.
Andragogy	Theory of how adults learn most effectively.
Anti-social	Harmful to society.
Anxiety	A troubled feeling that occurs because of fear, frustration, etc.
Attitude	Someone's emotional and cognitive orientation, which is assumed in order to explain their behavioural tendency to respond to given stimuli in a specific manner. Attitudes can be acquired or changed because of learning.
Attributes	Defining characteristics of things.
Behaviour	A person's response pattern, either mental, physical or verbal.
Behaviourist theory	Learning theory that only accepts observable, measurable behaviour as evidence.
Blocking behaviour	Behaviour of facilitators and/or learners that disturbs and prevents

	learning.
Brainstorming	Process of getting ideas from people in an open, rapid and unstructured manner.
Buzz groups	Small groups discussing given topics to foster mutual learning.
Case study	Detailed description of a pattern of events that occurs or might occur in a real-world situation.
Chalkboard	Board or other surface on which letters, numerals and other symbols are written with chalk.
Checklist	List of items that will need to be verified.
Climate setting	Creating an environment (physical and social) that is conducive to learning.
Cognition	Thinking, conceiving and reasoning.
Cognitive domain	The area/field of learning limited to thinking processes.
Collective learning	People learning as a group and not individually.
Co-operative learning	Learning together and from each other.
Cultural propriety	Suitability to the culture of the learner.
Competence	Normally, this means the ability to perform a given task or accomplish something. Alternatively, through linguistic theory, it has also come to mean the underlying mental structures that underpin a range of performance abilities.
Decoding	Converting written symbols into a form familiar and comprehensible to the learner.
Demonstration	Showing how to do something.

Developmental	A series of changes (physiological/psychological) that occur with maturation.
Dynamic	Energetic, forceful.
Encoding	Putting ideas into verbal or written symbols.
Evaluation	Process of ascertaining whether the intended learning needs and objectives have been fulfilled.
Exercise (structured)	Group or individual activity designed to bring about specific behavioural development in the learners.
Experiential learning	Learning gained through experience.
Facilitator	Person who helps learners to learn by easing the process of learning for them.
Facilitation strategy	Methods and processes adopted to make learning easier.
Feedback	Process of finding out from the learners how far the intended learning has been acquired correctly.
Flip chart	A single set of large sheets of paper on which words and symbols are written to serve as visual aids for learning. These are 'flipped over', one by one, by the facilitator as the learning session progresses.
Formal education	Education provided in an organised, institutional setting.
Helping behaviour	Behaviours of facilitators and/or learners that help in making learning more effective.
Holistic learning	Learning in which the learner is treated as a thinking, feeling and social being, rather than just a thinking being.
Imitation, modelling	Mimicking or emulating the behaviours of others.

Incident study	Description of an incident for learning purposes.
Informal education	Learning that is neither organised nor institutionalised.
Insight	An aspect of problem-solving in which a solution suddenly appears.
Interchange	Communicate ideas and accept each others' viewpoints on a socially equal basis.
Learning	Process of mental change, usually resulting in a change of behaviour (expressed in the form of verbal or physical activity).
Learning environment	The physical, social and psychological context in which learning takes place.
Learning style	One's preferences, patterns or strategies of learning and thinking.
Lifelong education	Learning that continues throughout the lifespan, especially work-related learning. Educational programmes whose objectives assume that there is no stage at which people need stop learning.
Logical	Reasoned out systematically, step by step.
Memorisation	Internalising the behaviours found to be successful and repeating them.
Mentor	Guide and supportive helper for the learner.
Motivation	A driving force within learners that keeps them wanting to learn more. Note its use in educational strategies that enhance this drive.
Natural objects	Things in the natural environment that can be used to facilitate learning.
Neurological	Related to the nervous structure of the brain and body.

Non-formal education	Education that may be organised but not institutionalised.
Open responses	Free answers to questions or free comments about learning sessions.
Orientation	The particular focus of interest which motivates someone to undertake learning.
Participatory learning	Learning through participation in an experience.
Perception	The way that your brain interprets the meaning of the world that is presented to you, either through your senses or through the explanations given to you.
Performance	The effectiveness of the way the learner does a given task.
Prejudices	Beliefs that find it difficult to accept a challenge.
Programme	Structured series of learning sessions.
Pro-social	Beneficial to society.
Psychomotor domain	Area/field pertaining to physical movement, practical activity locomotion, etc. guided by mental awareness.
Readiness to learn	Preparedness to learn determined by mental and physical maturity; having the pre-requisite attainments to begin learning.
Reflection	Thinking over your experience with a view to discovering what it means and what is significant.
Reinforcement	Something which strengthens the likelihood of repeating a behaviour, usually in the form of a reward.
Resources	Physical, environmental and other materials and equipment that support learning facilitation.
Resource person	(i) A person who can be used as a

	<p>resource for learning, i.e. a human resource.</p> <p>(ii) A person who manages learning resources - materials, equipment, books, etc.</p>
Self-directedness	A process in which individuals take the initiative in diagnosing their own learning needs, formulating learning goals and implementing appropriate strategies to achieve their learning goals.
Sequential	Following a logical order (of time or place).
Simulations	Teaching techniques in which real-life situations and values are copied and used for practice, demonstration and analysis.
Social role	A form of recognisable social behaviour, usually assumed to be normal behaviour for designated individuals belonging to various social categories - such as husband, teacher, politician, expert.
Socialisation	The process of gradually learning how to adapt to the normal behaviour expected of you in society.
Survey of learning needs	Research to find out what a group of learners need to learn for their current social roles.
Training style	Preference of approach used in bringing a person to a desired standard of behaviour.
Unlearning	Getting rid of what has been learned before.
VCRs	Video Cassette Recordings.
Whiteboard	A smooth surface made out of a painted wooden or metal or formica sheet, on which letters and other symbols can be written with special markers.

## Further reading

This is a list of books and articles referred to in the module and suggestions for exploring topics further. You are encouraged read as widely as possible during and after the course.

We suggest you discuss further reading with your tutor. What is available to you in libraries? Are there other books of particular interest to you or your region? Can you use alternative resources, such as newspapers and the internet?

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# Assignments

## Assignment 1

Assignment 1 consists of two parts and counts for 50 per cent towards your final assessment in this module

### Part A

Talk informally to a group of young people to find out about their learning experiences (focusing specifically on factors that have facilitated and hindered their learning), then write a short essay (approximately 750 words) on your findings in the light of your understanding after studying this module.

### Part B

Work with the same group of young people to prepare an outline plan (approximately 1,000 words) for a programme of experiential learning.

- 1 Describe the situation.
- 2 Describe the participants.
- 3 Identify the needs.
- 4 Describe the broad aims and objectives of the programme/project.
- 5 State some of the strategies you would use to encourage informal learning, co-operation and participation in the exercise.
- 6 Develop an action plan.
- 7 Describe how you will evaluate the learning programme.

Note: You are not being asked to implement the project (although you can if you want to). The goal is to develop an outline plan for a programme of experiential learning, with the participation of the learners.

## Assignment 2

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You are expected to keep a learning journal throughout your work on this module. You use this to record your thoughts and feelings as you are learning and also to write your responses to the study guide activities. The journal is worth 20 per cent of the final assessment. (You are asked to record your answers to the self-help questions in your learning journal, or you may use a separate notebook.)

## Assignment 3

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This assignment will consist of a written examination worth 30 per cent of the final mark. The examination will be based on short-answer and multiple-choice questions, to test your understanding of the theories and concepts used in this module.

Note: We recommend that you discuss the assessment requirements with your tutor before you begin, including how your learning journal will be assessed.

# Readings

The readings in this section will help you develop your understanding of Module 1 Learning Processes. The reading numbers, their titles and author(s) and the unit in which they appear are listed below.

- 1 'The automatic systems in the mind'  
by Dr G. Gunawardena (Unit 1) .....233
- 2 'Scaffolding and the zone of proximal development'  
by Dr G. Gunawardena (Unit 1) .....236
- 3 'Key learning theories' by Dr G. Gunawardena  
Revised 2007 by Lewis Owen (Unit 1) .....238
- 4 'The nature of knowledge'  
by Dr G. Gunawardena (Unit 3) .....258
- 5 'Oral traditions and rules of evidence'  
by G.Custred (Unit 4).....263
- 6 'Learning styles' by Clay Johnston and Carol J. Orwig  
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- 7 'Understanding intelligence: multiple intelligences and  
the structure of intellect (SI) theory of intelligence'  
by Dr G. Gunawardena (Unit 6) .....278
- 8 'Pacific perspectives on learning: Pacific thinking styles'  
by Ana Maui Taufe'ulungaki (Unit 6) .....289
- 9 'Commonwealth Diploma in Youth in Development Work:  
Tutor's Manual' (Unit 7) .....292
- 10 'Learning strategies' by Dr. G. Gunawardena (Unit 7).....297

## Reading 1: The automatic systems in the mind

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By Dr G. Gunawardena, Sri Lanka, for the Commonwealth Secretariat.

The automatic systems in the mind seem to be evident in the very rapid learning that infants do when they learn to crawl and talk.

### Learning to crawl

The infant learning to crawl is most interesting. This appears superficially to be spontaneous, but if you look carefully at an infant you can see a strong element of trial and error (which is almost deliberate). What seems to happen is that the child has a neurological pre-disposition to try out crawling in this way – it seems programmed to do so.

When a certain amount of experience of crawling has taken place, then it seems that an automatic system in the brain is switched on, and all the movements from then on are absorbed into this system and crawling becomes competent and unconscious. From the moment that the automatic system is switched on, all the additional crawling knowledge (skill) is acquired at lightning fast speed.

### Learning to talk

The case of the infant learning to talk (or learning its mother tongue) is surprisingly similar to the first example. We know that children don't actually learn what their parents tell them to say, but what their parents, grandparents or carers say and do seem to cause children to start experimenting with language.

What's most interesting though is that the things they hear from their parents seem to trigger off underlying patterns of grammar which are different from the speech of the parents but very useful to the children's mastery of the principles of the adult language. Like the crawling infant the newly talking infant seems to develop through a series of experimental activities which have been triggered by a perception of what's going on around her.

Those experimental activities of making sounds, as with crawling, seem to trigger off the development of a mental system, or grammar, which, by the age of five, is effectively the skeleton and a lot of the flesh of the complete language. Once the automatic language acquisition system is activated, the grammar seems to develop very rapidly, as long as the child is listening to language and preferably engaged in conversations. This process seems to be lifelong, in that we are always developing more and more aspects of our language.

The continued process of language acquisition seems to be paralleled by the increased complexity of physical movement that we can do. After about five or six, we can develop skills of dancing, football,

playing a musical instrument. However, all of these depend on the deep level grammar of movement that has built up in us semi-automatically from birth.

The question that arises for educators is: So what? Are the automatic systems important when we're older? Do the automatic systems still matter when we are older, and can we make use of the to help young adults learn?

## Automatic systems and adult learning

Ask yourself this question: Without an automatic system for managing English, would I be able to read and grasp this material?

Even if English is your mother tongue, without an automatic mental system that handles all the basic language and reading skills, you would have difficulty following this material.

If English isn't your mother tongue, you might follow the content very painstakingly by translating it into your mother tongue, but it's enormously easier if you have developed an automatic system for understanding written English.

We know that people can learn a completely new language such as French or German in a couple of months by being surrounded by the target language in a carefully organised environment. Sometimes languages are taught in this way: the immersion or conversation method.

### The immersion method

The learner spends a few weeks working and talking with a native speaker (the teacher) of the language they want to learn – the target language.

The native speaker should:

- understand the mother tongue of the learner, but resist using it
- always talk in the target language, but somehow or other show the learner what things mean (for example, by pointing to objects being discussed or using gestures or drawings).

Both should talk about things they both know very well and where there are shared bits of vocabulary. For example, both might be interested in football and cooking and child-rearing. When they talk together, the learner can speak in their mother tongue but the native speaker must always speak in the target language. The learner must try to understand without translating. They must try and understand what is being said in terms of images. The learner doesn't have to speak in the target language until they feel that it's not awkward to do so.

What usually happens is that they start using the odd word or phrase of the target language embedded in their natural speech. After a while they start talking in a sort of 'baby talk', but soon that becomes fluent

and natural, though maybe at first at quite a simple level. The basics of the new language become more or less automatic. In other words, the learner develops a natural mental grammar for the target language and will be able to use it for thinking creatively, rather than translating into mother tongue.

What happens when one learns through this method is probably similar to what happens when we learn our mother tongue as a child. We know it works as a method of acquiring a new language or a new aspect of one's own mother tongue (such as the language of Sociology or the language of Business).

### **The automatic learning system is always at work**

The automatic learning system is always at work. We don't notice it because we are concentrating on what we are saying not how we are saying it. Think of the amounts of new vocabulary and factual knowledge that we pick up all the time in this way, without consciously choosing to do so, and often desiring not to do so.

But usually, when we learn a language formally, we switch off the automatic system completely by concentrating on grammatical rules, vocabulary and pronunciation. That makes it very difficult to acquire the language. However, if the language teacher begins by building up from what the students know already, it will help them begin to understand the ways in which the new language works. The teacher can give the learners enough understanding to give them the confidence to start trying the new language out. And that also seems to trigger off the automatic language acquisition system.

### **The relationship of conscious and unconscious learning**

The human mind seems to work in every area by this combination of perceiving a pattern, trying it out, consciously or unconsciously, until the automatic systems are triggered.

The conscious learning process becomes prominent when we meet a very different (unknown) aspect of what we are doing. We switch on our conscious attention and seem to go through the initial process once more until we have mastered the basic meaning of the new area of knowledge, at which time the automatic system starts to take over again.

### **An example of the inner game**

The following is an example of how a technique called 'the inner game' can be used to awaken or re-awaken knowledge or skills. We will use football as an example. It works like this:

Ian Wright, one of England's most effective goal-strikers, was discussing football with his friend Stan Colleymore. Colleymore told Wright that he was worried about losing his ability to get the ball in the net. Wright advised Colleymore to watch videotapes of his Colleymore's) best goals for Nottingham Forest, and to watch them

over and over, and the skill would come back. The skill is internalised in the brain; it just needs re-awakening.

Ian Wright had suggested a way of tapping into the automatic kinaesthetic system, which is driven by mental as much as physical processes.

If you try and analyse very skilled technique too closely you can confuse yourself, because it's too complex to analyse fully. However, once the overall pattern of a skill is clear, the automatic system will be triggered.

### Knowledge construction

The automatic system is a system of knowledge construction not a system of knowledge recording. The mind constructs a system for learning to crawl or talk because it understands the meaning of the situation, and because it has an innate capacity for constructing a learning system. The automatic systems of the human mind seem to consist of rules (experienced as intuitions) that help us to build up a picture or a structure to represent a particular idea, and each one of us builds these up differently though we all use the same underlying general rules.

What has been focused on here is the brain's language-forming ability, but obviously maths is similar. There is a good argument also that music and the visual artistic sense are similar, and that social skills are similar. The linguist Noam Chomsky argues as well that the brain probably has a science-forming faculty.

### Abilities tend to be mentally separate

Although these abilities may well work in the same way as each other, these all tend to be mentally separated from each other, so that we have to develop each one in a somewhat different way from the others, though adhering probably to the same principles of learning. And it certainly seems as if the brain puts walls round each aspect of itself until different aspects have clear linkages. These cause learning blocks, which is why accelerated learning programmes advise us to use as many aspects of the brain as possible in a piece of learning.

## Reading 2: Scaffolding and the zone of proximal development

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By Dr G. Gunawardena, Sri Lanka, for the Commonwealth Secretariat.

### Lev Vygotsky

In the 1920s, Lev Vygotsky discovered that, although the development of language, once it's begun, is automatic, it requires human interaction or quasi-interaction for it to develop properly.

The nature of the interaction powerfully affects the surface form of the spoken language (not the deep level rules), and the form of the spoken language powerfully affects the development of thought. Marx, with his concept of praxis, and Freire argued that thought and practice must be closely interlinked for change to take place.

### Scaffolding

Vygotsky's ideas have been used to develop a model for this process; we call it 'scaffolding'. In other words a structure erected out of a lot of small elements to support the building inside. In this case that building is the mind, and the small elements are the words and interactions of friends, teachers, family or whatever, which form a supportive mental structure that allows the thought inside to be built up to the next level of complexity.

### The zone of proximal development

Vygotsky called that next level of complexity the 'zone of proximal development'. You can't create that scaffolding by telling someone what to think; for some reason they have to make that thinking step themselves (that's how the mind works). You can only do it by asking the right sort of questions, or presenting something concrete to represent a new concept, and then they make the jump of understanding. The members of groups exploring ideas together have this sort of effect on each other.

### Exploratory talking

Douglas Barnes, from Leeds University, in his marvellous little book, *From Communication to Curriculum* (Penguin, 1976), describes the different ways in which educators can use group talking methods for intellectual development. These methods are particularly valuable for youths and adults especially in poorer countries because here, from childhood people are usually well socialised into talking in groups and have no uneasiness about it.

What Barnes calls 'exploratory talk' is very powerful for developing new understanding. The rules are that the members of the group all have the aim of using the group to find things out rather than to show off what they know. Of course some will know more than others, and they will be expected to pool their knowledge, but always as part of a collective effort to develop new understanding.

## Reading 3: Key learning theories

By Dr G Gunawardena. Revised (2007) by Lewis Owen.

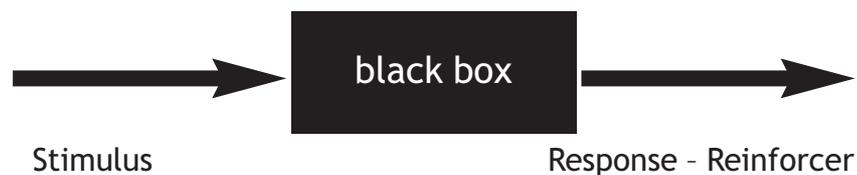
### Behaviourist

#### Classical conditioning

In a behaviourist analysis of learning, the idea is that we learn primarily by responding to external conditions.

Behaviourists (such as Ivan Pavlov, Edward Thorndike, John B. Watson, Edwin Guthrie and Burrhus F. Skinner) didn't really consider what goes on inside the mind of the learner. Because they felt that the inside workings of the learner's mind couldn't be seen or known, they described it as a 'black box'. They felt that they could only infer what appears to take place when learning occurs.

Their main research into the basic building blocks of human learning was based on the assumption that they must develop blocks in a very similar way to that of learned behaviour in animals (i.e. around the basic responses to their environment). When observed closely, they found that these basic responses take place in small steps or units, which soon become linked together into chains of continuous activity. The responses are caused by stimuli in the environment which trigger behavioural responses in an animal, for example, observable when creatures such as rats move in small, rapid, jerky, movements when they explore their environment. In many animals, movements are in small, clearly marked steps. Around these response units, permanent patterns of behaviour are formed (behaviourist theories are sometimes called 'stimulus-response theories'), as when rats convert these units of movement into continuous running or fighting.



Behaviourists discovered by experimentation that, throughout the animal kingdom, for stimulus-response learning to occur there must be a response that a learner is capable of making and a stimulus to which the learner will react. And in learning there must be a reward for that piece of behaviour, if it is going to become part of the organism's behaviour.

The behaviourists conducted laboratory experiments using animals such as chickens, rats and dogs to study how best to elicit desired behaviours. For example, Ivan Pavlov conditioned dogs to associate the sound of a bell with the smell of food, which elicited salivation in

the dogs. Pavlov called the prospect of food the ‘unconditioned stimulus’; the dog salivating the ‘unconditioned response’; and the taste of the food (the reward) the ‘reinforcer’. All of this is perfectly normal behaviour for a dog. However, Pavlov converted this into a form of learned behaviour which is not at all normal for a dog. He did so by getting the dog to associate the food with the sound of the bell, so that the salivation response was at the stimulus of the sound of the bell, reinforced by the food. He then took the food away so that the dog was no longer salivating at the smell of the food but at the sound of the bell only. The sound of the bell had become a ‘conditioned stimulus’ and the ‘conditioned response’ was salivation. The reinforcement was now no longer necessary. His dogs soon learned to salivate at the sound of the bell, and eventually at the sound of ticking metronomes, when no food was present. Today, the same techniques seem to be the basis for teaching rats and dogs to find unexploded mines and terrorist bombs.

Developing this method into a technique of instrumental conditioning, behaviourists were able to shape the behaviour of many animals into remarkably complicated patterns, by teaching a progressive small step at a time – a technique called ‘successive approximation’. For example, horses have been trained to solve problems by going through a sequence of learned steps. This technique has frequently been used on simple computer-learning programmes, where each small successive and successful step is rewarded by someone saying ‘Well done’ or smiling. Their effect is real but short-lived, and the later, more complex studies of reinforcement patterns, or ‘schedules’, suggest that they have to be much more carefully designed for learning in human beings.

Interestingly, any physical or behavioural skill can be broken down into sequences or ‘chains’ of small steps, which can be increasingly perfected by introducing some of the behaviourists’ insights. For example in teaching dancing, there is usually a structure of relatively small finite steps, and the learner can be helped, by reinforcement of each of these small steps, to enhance the quality of her movement. This is very valuable where there are weak spots that disturb the whole sequence of the movement. Without analysing the chain of stimulus-response units, it would be difficult to pick up and remedy the problem. Learning works much better when the reinforcement is ‘intrinsic’ (i.e. the reward comes in the form of the improvement or learning itself, rather than an outside reward), in this case, the reward of experiencing the small step as more physically effective. Even so, the instructor’s verbal stimulus and instant praise as a reward for each step also encourages learning, especially initially.

### Operant conditioning

Among human beings, behaviourist learning techniques are usually based on the principles of operant conditioning. Here, people are essentially free to choose their behaviours. These behaviours are emitted more spontaneously than in classical conditioning. Operant

conditioning investigates how best to bring these naturally occurring behaviours under control, using reinforcement schedules. (In Skinner's case, this was for idealistic reasons, in that, in common with cognitive theorists, he believed that humans are capable of almost any kind of learning if that learning is organised properly.)

Reinforcement schedules generally depend on extrinsic rewards for appropriate behaviour and are widely used in the real world to shape human activity (for example, gambling on machines or national lotteries, playing computer games, working for bonuses and working for the approval of youth leaders). One of the important findings here is the 'partial-reinforcement effect'. Here, a desired response (such as performing good behaviour or putting more money into a 'one-armed bandit') has been shown by a great deal of research to be far less likely to disappear if rewards are given only part of the time and irregularly. So powerful is this type of operant conditioning that it has been strongly argued by psychiatric researchers that susceptible people can be conditioned into gambling addiction by it.

A very positive example of this sort of reinforcement is found in a psychology textbook by Robert A. Baron (1997).

A top-class high school footballer called Sam had notoriously bad social behaviour. When accepted at a good university and arriving at football coaching, he swore that he would soon 'sort out the coach'. The coach ignored this abuse, watched Sam practising for several days, then omitted him from the college team at the next game. Sam was extremely abusive, but the coach ignored this behaviour completely. During the weeks that followed he continued to ignore Sam's bad behaviour, and often left him out of the team, but every so often he would publicly praise something that Sam did well and when he had been working hard. By the end of the season, Sam's bad outbursts had disappeared.

Think about why this happened before reading the next paragraph.

Baron makes the point that Sam changed his behaviour in response to the consequences they produced. Sam learned to produce behaviours that resulted in positive outcomes and avoided behaviours that produced negative outcomes. In operant conditioning, the emphasis is on using a combination of positive reinforcement (where organisms learn to respond in ways that produce positive reinforcers such as praise or getting picked for the team), negative reinforcement (where they learn to respond in ways that enable them to escape from negative reinforcers, like avoiding being left out of the team by practising properly) and 'omission training' (where organisms learn to stop responses that lead to the removal of pleasant consequences: Sam's ill manners became associated for him with being sidelined), rather than punishment. It's important to note here that the positive reinforcement for Sam was irregular.

Learning methods derived from behaviourist theories tend to be focused on the change and/or development of specific skills. They are

often social-skill oriented and are product/outcome oriented. They stress external motivation and accountability. One example that demonstrates most of these traits is the use of learning contracts.

Throughout the first half of the twentieth century, behaviourists continued to develop increasingly elaborate theories to account for how learning took place. It was not difficult for them to give plausible explanations for emotional responses and manual skills, such as playing an instrument. The major limitation of behaviourist learning theory is that it describes only observable behaviours and insists on ignoring what is taking place inside the mind of the learner. However, as Gleitman (2003) states: ‘modern investigators of animal learning have shown that, at bottom, classical and instrumental conditioning (and many other forms of learning too) depend on cognition.’

Gleitman argues that learning involves changes in the way that neurons (nerve cells situated in and linked to the brain) function. Learning requires neurons to be able to change the way they function as a result of experience. This is likely to be true of all animals, as it is of human beings. The psychologists who studied these processes early on were powerfully influenced by biology, and by the assumption that all the species in the animal kingdom, including humans, have fundamentally similar conditions with which to contend, and therefore the way that human neurons have adapted will be similar in principle to the process in animals. Thus they felt that the basic building blocks of learning in all of them are likely to be the same. Therefore, by studying learning in simpler creatures, they believed that they could understand the essential nature of learning in human beings. This is a contentious issue, though undoubtedly models of learning drawn from studies of animals do throw light on many aspects of human learning.

It was through the early work of Wolfgang Kohler (1925) and others on complex cognition in animals, and the difficulties experienced later in explaining the higher order abilities in human beings, that cognitivist theories of learning emerged. In moving to skills such as language learning, concept learning, rule learning and problem-solving, it became very much more difficult to apply adequate behaviourist explanations.

## Cognitivist learning

In contrast to the behaviourists, who were more concerned with how learner’s behavioural responses to external conditions were structured, cognitivist theorists (such as the German Gestalt psychologists, the American Edward Chase Tolman and the Swiss Jean Piaget) wanted to know more about the processes that go on in the mind of the learner.

To the cognitivist theorists, the processes of learning are more important than behavioural changes (Goodwin, 2000). Their work threw some light on what was going on in the ‘black box’ – the mind of the learner.



## Gestalt theory

The essence of cognitive theories of learning is to be found in the work of the German gestaltists on perception. These scientists discovered that, when we are faced with a confusing environment full of stimuli that is difficult to sort out, then there is an apparently innate tendency of the brain to construct our perception into relatively simple, well-ordered meaningful patterns (gestalts). Think of your own experience of losing your sense of where you are on a very dark night, and you will see how quickly you use your brain to construct and establish a view of what is around you. You bring a new order into your perception that allows you to balance your responses and to act appropriately. You may of course construct an inaccurate view and put yourself into difficulty. But you can't help performing this structuring. This is why gestaltists assumed that the process is innate, though it may be that these structuring processes are learned but on the basis of innate general tendencies. Nevertheless, it argues that here is clear evidence of internal mental structure with very deep roots in the formation of the brain.

Indeed, you will have realised that what has already been said so far in this module assumes that much of our learning is guided by mental strategies, constructed patterns, and hypotheses that we use to try out our understanding, as well as by a recognition of (or a search for) order and meaning in our experiences. These are the concerns of cognitive psychology. As you will see from the rest of the module, we advocate learning methods that, to a significant degree, derive from this view: methods such as discovery learning, process-oriented learning, relying on internal motivation, networked learning and student choice. The mental events that learners need to be involved in are thinking for themselves, developing tools for acquiring knowledge, problem-solving and organising their knowledge.

In essence, cognitivist theories of learning look at three things:

- types of learning or knowledge
- information processing and memory
- metacognition (awareness of the self as a learner; capacity to understand and monitor one's own cognitive processes).

## Types of knowledge

### ***Jean Piaget and genetic epistemology***

Epistemology is the theory of the nature of knowledge. Piaget, who centred his early work on the development of his own children, set out to describe and explain the nature of children's knowledge, whether or not it was different at different stages of their development, and whether it was genetically programmed. His view is that the mechanism that drives the process of cognitive development is an innate process, but that this actually enables open-ended adaptation to the demands of the environment. This process of adaptation takes place through inborn mechanisms for building an enormous range of mental representations of the world – 'schemata'. Here, 'mental representations' refers to pictures, images and structures of concepts. These build up in the child's mind by her direct interaction with the world around her: these representations take the form of the schemata that we have already described. The schemata are acquired by experience, even though the process that drives their development is innate. Because they are innate, this doesn't mean that they are fixed or limited. What fixes or limits them is experience.

As indicated above, there are two main processes by which these schemata (systems of representation) are built up: 'assimilation', which is the tendency to understand new information in terms of the existing schemata, and 'accommodation', which is the modification of existing schemata to absorb new information. Schemata are rich and are built up slowly, and this needs to be understood and respected. The model is very useful in helping us see how the assimilation process might cause learners not to perceive important differences between new information and old knowledge. They might just assume that the new information, even when it's really new, is an example of what they already understand, therefore they will appear to resist new ideas. You may find this among young men with a fixed idea of what women are really like, rather than seeing their qualities properly. In other words, they have chosen assimilation rather than accommodation. The model also helps us to realise how important it is to facilitate the accommodation process, as that may often be very difficult. We may have to involve young men with fixed ideas about women in a role-play where they play the part of a woman, to learn how to empathise with them.

Piaget describes four different stages of cognitive development:

- birth to almost two
- two to seven
- seven to twelve
- twelve onwards.

Between the ages of seven and twelve, children develop the ability to think logically and develop mental maps of their knowledge. This knowledge is centred on the concrete features of the world, and Piaget says that it consists of ‘concrete operations’. In other words, they think in terms of real-world activities that can be observed. So for example, learning arithmetic is best done by using actual objects, such as coins and notes, or an abacus. Piaget argues that only in the final stage, usually after the age of twelve, do full-scale ‘formal operations’ develop, when children can master more abstract thought and become able to think just in terms of concepts, rather than concrete examples. This eventually grows into the ability to handle deductive and propositional reasoning.

Modern theorists and investigators, while accepting the general value of the model, have criticised it for its research methods, which failed to discover the truth that children can in fact be far in advance of the developmental stages that Piaget constructed, usually through the quality of their social experience, which Vygotsky’s work shows to be so crucial.

For youth development workers, it is important to realise that their young clients may well not have developed their formal operations very extensively and may well have to be allowed to think in concrete operational terms – expressing all their ideas in concrete, real world examples, and then using discussion and other representational activities, such as drawing diagrams, to enable them to make the transition to formal, abstract thinking. In fact, we ourselves, in some areas of our work (such as writing difficult research reports) are not fully operational in formal terms and have to think through our material in concrete, real world terms. And we assume that this may well be true for you, and would encourage you to represent what you think in terms that make sense to you.

### Cognitive domains

In the period after the second world war, cognitivist interest not only concerned itself with epistemological issues but with using the essential insights of the field in programmes of instruction and education. Underpinning much of this work was a similar vision to that of the behaviourists: that human learning could be massively improved if educators could understand how best to organise the learning process.

This culminated in a 1971 study by James Block et al of Bloom’s Mastery Learning:

“Mastery Learning (Bloom 1968) offers a powerful new approach to student learning ... It proposes that all or almost all students can master what they are taught ... it suggests procedures whereby each student’s instruction and learning can be so managed within the context of ordinary, group-based instruction and learning ... Mastery learning enables 75 to 90 per cent of the students to learn to the same high levels as the

top 25 per cent learning under typical ... instructional methods.  
(p.3)”

The essential methods used depend on a detailed breakdown of the subject to be learned into a learning structure, where all the parts of the subject are analysed and described in terms of their specific difficulty and the nature of the particular knowledge involved, and their relationship with other parts of the learning structure. Specific objectives are established, aimed at ensuring that all parts of this structure are taught and tested diagnostically at intervals. The method acknowledges that each learner has a unique pattern of learning style and learned abilities, so the learners who fail any part of the frequent ‘phase tests’ are given one or more alternative methods of re-learning that same material – verbal and oral instructional material, films or tape/slide sequences, computer programmes, short films, small peer syndicate discussion and so on. The emphasis is on achieving mastery of all the elements of the course rather than on the time allowed for the course of instruction, so people are allowed to take varying lengths of time.

The successes achieved with this programme around the world were claimed by the researchers to be remarkable. While the pure programme as such has not been fully utilised in the UK, the basic ideas of the method drive the British National Vocational Qualification (NVQ) system of qualifications, also the Business and Technician Education Council (BTEC) programmes of professional technician training and even influence the examining and teaching of many of the General Certificate of Education (GCE) Advanced Level science and technology subjects. It is in this way a liberating and practical model. It does not have to stay within the theoretical field that it came from, but can equally be adapted to more creative and humanistic fields by imaginatively adapting the principles.

Although you are unlikely to have the resources to set up formal mastery learning programmes, you can to an extent adapt the principles. You can break down whatever is being learned into its essential structure of concepts and skills. Make sure that you have a method of finding out where exactly clients are failing to master the material. You should then find some alternative ways in which they can tackle that same material so that it can be learned properly. Also, try to ensure that clients do master the material, rather than rushing them through a programme. Speed is not the important criterion with this method.

### ***Bloom’s taxonomy of educational objectives***

Benjamin Bloom (1956) was head of a committee of colleges examining the nature of different kinds of educational activity. He initially identified three domains:

- cognitive behaviour – to do with knowledge, thinking and problem-solving

- affective understanding and skill – emotional and social understanding and skill
- psychomotor behaviour – physical skills that require controlled muscular movements.

Bloom himself worked only on the first two domains, showing that they contained several levels of increasing complexity. The cognitive domain, at its lowest level, begins with knowledge of facts (usually simply memory), then comprehension (or understanding) of facts and material, then application of knowledge to solve real problems, then the ability to analyse learning problems, following that the ability to synthesise (discover the relationships among) disparate materials and (at the top of the hierarchy) the ability to evaluate the knowledge. For a long period, many school and college examination subjects in the UK have been specified in this way, with different proportions of marks being awarded for the different levels of objectives.

Bloom did not develop the affective domain as far as this, but at its lowest level he specified ‘receiving’ – the ability to recognise and cope with emotional and interpersonal data, followed by the ability to respond to that material, then to value it (evaluate it in terms of oneself), following that the ability to organise and conceptualise emotional and relational experience, and finally the ability to characterise it in terms of a broad value system.

He did not deal with the psychomotor domain, though others have. Clearly, we do need some system, in any kind of assessment of manual and bodily activity, for judging the relative worth of the activity observed. A great footballer, for example, is operating at a higher level of mastery of physical abilities and the deployment of those abilities on the field than many other footballers. From a coaching viewpoint, that needs describing in some reasonably objective way for development purposes and demonstration effects.

A system such as this is valuable for directing the youth worker’s attention to the kinds and levels of abilities of her clients and to the areas into which she might help them develop.

### ***Learning hierarchies***

If you have ever found yourself trying to tackle a learning problem and realising that you don’t have one or more of the basic tools for the job, then you will appreciate the ideas of Robert Gagne. In his book *The Conditions for Learning* (1977), in the tradition of Bloom and others, he argued that there were five major categories of learning:

- verbal information
- intellectual skills
- cognitive strategies
- motor skills

- attitudes.

Each type of learning should take place under its own ideal instructional conditions. However, his major contribution to our understanding of learning was not so much the classification of learning types, but the identification of interdependency between different levels of learning. It was this that led to his work on learning hierarchies.

The real significance of learning hierarchies is that they demonstrate the basis for the sequencing of learning. The hierarchy represents increasing levels of complexity. To facilitate the learning at each level the teacher needs to identify what is needed before learners can tackle that level.

To identify the prerequisites at each level requires the teacher to do a task analysis of the section of teaching that is to take place, then to arrange the instruction in the following order:

- 1 Focus learners' attention.
- 2 Explain the learning objectives.
- 3 Ask them to recall prior learning.
- 4 Present a new learning stimulus.
- 5 Provide learning guidance.
- 6 Get the learners to do the learning task.
- 7 Give them feedback on their efforts.
- 8 Assess what they've done.
- 9 Find a way to make sure that they will retain that knowledge and be able to transfer it to some new situation.

This approach is obviously well suited to the instructional programmes in the armed services, where Gagne worked for a time. It can also be employed in aspects of formal teaching in youth development work. It may at times be applied to formal learning situations. However, the principles should also be kept in mind in the informal learning environments, as it is a systematic way of preventing learners being asked to master something for which they lack the underlying learning tools.

### Information-processing and memory

One of the basic models of cognitive psychology describes the learner as an information-processing and storage system. It is from this model that cognitivists explored the cognitive processes involved in learning. Computers present a useful analogy or metaphor for this model, which includes three levels or types of memory or storage:

- sensory memory
- short-term memory

- long-term memory.

These levels are a considerable simplification. When behaviourism was in its heyday, the study of memory was relatively straightforward. But it has long been realised that memory is a single word for a number of very complex and seemingly specialised mental processes, to judge by the range of titles of the subjects that have been investigated and established in this area. In every one of these, the definition of memory being used is powerfully affected by the nature of the material being stored in the mind and by what the person storing the material is intending to do. For example, if we are trying to learn a sequence of technical words so that they are available to us when we want to describe a process, it is possible to learn them as we would learn a sequence of telephone numbers. If we want to use the memory process to gain a deeper understanding of that process, then we might store the words in terms of their etymological relationship to the process. These two processes are clearly very different in some way. This suggests that perhaps memory is not as generic a phenomenon as we imply in the use of that word.

### ***Sensory memory and short term memory (STM)***

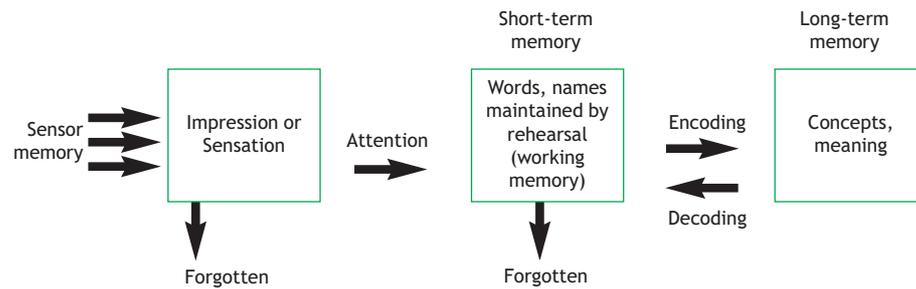
Sensory memory, or ‘sensory information store’, is where we detect features and recognise patterns of objects and events around us. This processing of information takes place through our five senses. As soon as our attention is engaged, the information is processed into short-term memory (working memory), or STM, which is where we hold, for example, a telephone number while we dial it (Boulton-Lewis, 1997). Without rehearsal of the information, it disappears from short-term memory within 15–20 seconds. Short-term memory also appears to be limited to seven (plus or minus two) discrete items. However, its absolute capacity can be quite large in view of the fact that each of these seven items might consist of a significant ‘chunk’ of related information.

The tendency of STM to erode so quickly suggests that learning facilitators can only rely on presenting sense stimuli very briefly to capture the interest and attention of the learners before switching to relevant material that the learners already know or that they can make connections with. The new learning (the unknown) can then be linked to previous learning (the known).

### ***Long-term memory (LTM)***

This refers to the memory for information that has been well-processed (interpreted) and integrated into our general knowledge. Almost everything a person knows is stored in the long-term memory (Boulton-Lewis, 1998) and the capacity of the LTM appears to be unbounded. Relevant material is transferred from short-term to long-term memory through a process called ‘encoding’. This process is called encoding because it involves transforming the new material into a code that our minds can easily handle. This code is based on what we already know and the way that is coded and stored in our

minds. Encoding therefore involves the mental processes we use to abstract general points from the new information and convert them into a form that enables us to derive meaning from them.



The extent and duration of memory result from the degree and level to which information is processed in this way. Thus, we are not conscious of material that is not processed, and it remains in sensory storage for only a fraction of a second. Material that is attended to and rehearsed is held in short-term storage for several seconds; and material that is fully encoded finds its way into long-term memory. This is why it's so important to discuss thoroughly the new ideas that are being studied: this enables the learner to encode or conceptualise them in terms she understands, and that puts them into LTM.

## Encoding

Encoding of information (for example linguistic information) might occur at a superficial level ('lexical memory': noting and remembering only the pattern or structure of a word, for example); or at a deeper level (taking into account the meaning of a word – 'semantic memory').

A traditional model of memory portrays the mind simply as a catalogue or movie-like recording of sequences of experiences, perhaps organised around stimulus/response chains. Children at school used to be taught to learn poetry like this – perhaps as a sequence of rhyming couplets supported by a sequence of visual images. This can be done without paying much attention to deeper insights into what a poem is saying. Memorising a poem by attending to the pattern of insights around which it is structured is very different.

Several contemporary models of long-term memory are associative, including cognitivist 'associationism'. This assumes that the memory is structured in the form of patterns of propositions (structures of ideas). If we can associate new knowledge in some way with one of these propositions, then this enables the mind to link up the new knowledge with related ideas: this also allows it to call up specific details in that field of knowledge. It is astonishing how effective the understanding of the deeper structures of a piece of knowledge is in enabling us to remember the detailed nature of that knowledge.

In this way, cognitive associationists hold that material in memory is organised according to relationships among propositions – and that

everything in memory can be associated with something else. As a youth development worker it will help you to be able to make links between whatever young people say and the connections between that and deeper level ideas, because you can use that awareness to lead on their development in ways that might otherwise be impossible.

For the learner, the practical idea derived from this is that, if you consciously organise your stored material in a logical structure of related ideas, you can very easily trace any part of that structure from memory, including detailed material, like dates in history or equations in maths, because they are given meaningfulness by the structure of ideas in which they are embedded.

Memory can be improved by repeated and varied use of this structure, recalling items of information (decoding) by the process of piecing together the associations in the pattern of ideas. This reinforces the associations. The neuronal connections are strengthened by repeated recall, and by using the material to transfer the ideas to new situations, which creates a richer web of connections.

### ***Mental organisation***

Terms such as 'node', 'frame', or 'schema' are metaphors for the mental organisation of knowledge (or alternatively for the organisation of memory). Associationists argue that, because of the way information is organised in propositional structures in the long-term memory, visual representations of this information (for example flowcharts, cluster plans and mind maps) are very useful aids to memory.

Tony Buzan (1995) is the most famous proponent of mind maps. He shows how the learner can listen to a lecture, read a book or watch a videotape and note down key words and phrases that summarise the points or propositions that are made by the expert. As the expert's argument develops, the learner can begin to draw pencilled lines relating these key word and phrases, so that eventually a cognitive map (or propositional structure) has been drawn of the whole session. The map probably will need to be refined or redrawn to enhance the clarity of the argument, but can then be stored away and used whenever needed to stimulate memory, perhaps before another talk that the learner listens to or a talk that she gives, or as preparation for an interview. The method really works very effectively, and some people still refer to mind maps that they made twenty years before.

However, you have to realise that the long-term memory does not simply reproduce events or images as a photograph does, but instead the mind reconstructs the propositional material, as a painter does. It often distorts events that have happened, and it sometimes even recalls events that have not. Providing that you are aware of this, you can use it creatively to develop your own thinking.

Three important cognitive processes are involved in capturing a sensory impression and holding it in consciousness, then encoding it for long-term storage:

- rehearsal (repetition or practice),
- elaboration (extending the impression),
- organisation (sorting, relating, classifying, categorising).

## Metacognition

Cognitivists are not only interested in what we learn and how we process information, but also how we learn about the process of learning itself. When we become accustomed to learning new things skilfully in a field of knowledge, then this teaches us what we should be doing when learning more new things, so that we can speed the learning process up. Our awareness of the precise nature of our knowledge and ability to understand, to monitor and control our cognitive processes is referred to as ‘metacognition’. The skills of metacognition are usually divided into two types:

- self-assessment – which refers to our ability to remember and understand what we know and to access that knowledge and the skills that are part of it
- self-management – the ability to manage our own cognitive development – to judge when we should be learning something new, and how we should go about it. As adult learners, we employ a range of metacognition skills.

‘Cognitive strategy’ is a label for the concept of a method of thinking and learning. When educators teach learners how to learn (as opposed to teaching them the content of the learning) they teach cognitive strategies. As a facilitator you should try to enhance the learner’s cognitive strategies (thinking skills) because learners with good cognitive strategies (metacognitive skills) are better able to monitor and direct their own learning processes: the self-management of their own learning. In the developed world, many jobs require the job-holders to retrain frequently. For them, possessing good metacognitive skills is essential. In the developing world, good metacognitive skills will facilitate the modernisation process.

The term ‘learning/thinking strategy’ emphasises that identifiable and teachable strategies are involved in thinking as well as in learning. Weinstein and Mayer (1986) describe eight classes of learning/thinking strategies. These can all be developed and taught by you as facilitator, so that your learners can acquire them to control their learning and develop themselves.

The first six are:

- rehearsal at a basic level, such as repeating the names of items

- rehearsal at a more complex level, for example, repeating extended material aloud, taking selective notes or underlining material we are reading
- elaboration at a basic level, for example creating mental images or descriptions of a piece of learning
- elaboration at a complex level, for example paraphrasing, summarising or describing how new information relates to older knowledge
- organisational strategies for basic problems, such as grouping, clustering or putting items in order
- organisational strategies for complex problems, for example creating a hierarchy of ideas and their relationships, generalising, classifying and sequencing.

The last two are comprehension-monitoring strategies:

- self-monitoring as a strategy of metacognition: problem identification, self-questioning, self-reinforcement, checking for comprehension failures
- affective (motivational) strategies: learning to monitor our relaxation skills, to focus our attention, manage performance anxiety, manage our time.

### ***How do people become thinkers?***

Cognitivists ask how people become thinkers. How can we make better, more critical, more creative thinkers of them? Part of its answer is – by making them aware of themselves as learners and information processors (metacognitive skills), and by teaching them specific cognitive strategies (for example, how to rehearse, organise, monitor; and so on).

### ***Forgetting***

In contemporary information-processing models of memory, forgetting is felt to mean simply ‘failure to retrieve’, the notion being that the memory is still somewhere in the brain, but has become inaccessible. The assumption is that the organisation of part of the LTM has been disrupted, and that access to memories has been compromised by disturbances to the underlying structure of the representations: in cognitivist terms, disturbances in the ‘propositional structures’. Theories of forgetting maintain that information is forgotten if it is unused, distorted, suppressed, or interfered with, or because the individual has not developed an effective retrieval system as part of her metacognitive training.

Theories of forgetting suggest that to minimise interference with accurate encoding and to maximise transfer, educators should emphasise:

- distinct and important aspects of situations

- similarities and differences.

Mnemonic devices include rhymes, patterns, and acronyms. There are also more complex mnemonic techniques (the link system, the 'loci' system and the 'phonetic' system), which you can follow up in books on memory techniques if you are interested in this aspect of learning.

More complex techniques are based on the principle that visual imagery is an extremely powerful aid to memory, because it reflects how we believe information is stored in long term memory. Again, read Buzan (1995) on this.

Note: If you would like to know more about cognitivist theory, you could start by studying Encyclopaedia Britannica and/or internet references to the work of Robert Gagne, David Ausubel, Jerome Bruner, Benjamin Bloom, Noam Chomsky and Lev Vygotsky.

## Humanistic

Everything we have looked at so far is centred on the cognitive processes that enable us to learn, but it will be obvious to you, when you consider it, that your feelings and self awareness are extremely important in determining your ability to utilise your cognitive processes. If for any reason you do not feel relaxed and confident enough, then it becomes a real struggle to get your cognitive processes in full flow. Your mental balance is powerfully influenced by the feelings you have about yourself and the quality of your social relationships. This is especially true for young people like your clients, whose confidence may have been damaged by previous social failures and by unemployment.

One of the major domains of social psychology is called 'social influence theory', in which a series of social experiments, such as the Stanley Milgram experiments in obedience and the Philip Zimbardo role-play experiment in simulated prison conditions (1971), have shown how the social roles we play powerfully influence our behaviour and self expectations, in the short term at least, and often our long-term development. There is a clear link between this and the findings of labelling theory, where the labels that people assign to themselves or have assigned to them, providing they are reinforced on a random and repeated basis, tend to stick and partly determine their behaviour. In this way, many people can be labelled and can role-play themselves into incompetence ('learned helplessness') and failure. Equally however, the same mechanisms can be reversed and they can role-play themselves into intelligent and effective behaviour and therefore into long-term intelligence and social effectiveness. This presumably is an aspect of how the 'inner game' works in sport. This is really perhaps the primary aspect of learning facilitation that youth workers do.

As a youth development worker, you should have high but practical expectations of your clients, label them as potential achievers, and

help them step by step to attain goals near to them and then to extend their reach. You should also use learning situations that give them experience of role playing competent performance. The later units in this module spell out the methods for achieving this.

The humanistic models of learning have various perspectives but are all concerned with the uniqueness, the individuality and dignity of each learner and the right to self-determination. Humanistic theories emphasise:

- the inborn and powerful human desire to learn
- the importance of the educator's concern for the perceptions, needs and feelings of the learner
- the desirability of self-determination: the need for the learner to have a strong measure of control over the learning process
- the need for the teacher to be a facilitator, rather than an 'authority'.

Although both humanistic and behaviouristic theories emphasise the belief in people's ability to learn and develop, many aspects of their approaches are in ideological conflict. While the behaviourist emphasis is on 'outcomes' and 'performance', the humanistic emphasis is on the development of the social and emotional self, which is seen as the key supporting framework for underlying competence.

Three of the major early influences were the work of Carl Rogers, John Holt and Paulo Freire. In later modules you will encounter the 'conscientisation' model of youth development work pioneered by the Brazilian educationalist, Freire; this has considerable overlap with other humanistic models but also has a radical political dimension, influenced by the work of Karl Marx.

## Motivation

Theories about motivation talk about two kinds:

- extrinsic or external, for example praise from a parent, teacher or mentor (or the risk of disapproval if a goal is not achieved)
- intrinsic or internal – the human urge to grow, excel, to fulfil one's potential or to self-actualise.

Humanists are interested in developing a person's awareness of intrinsic motivators, such as feeling competent, creative and empowered. This is in contrast with the behaviourist emphasis on extrinsic motivators, such as those relating to rewards and punishments.

### **Maslow's 'hierarchy of needs'**

Humanist psychology's concern with the individual's needs is well-reflected in the writings of Abraham Maslow. Maslow proposes two general needs systems:

- basic needs
- higher-level (meta) needs.

The essential humanistic standpoint for educators is that for learning to take place, then the ordinary emotional and interpersonal needs must be satisfied for learners. What is more, the nature of the learning demands attention to the particular needs that must be satisfied while it is taking place. There are various models of these needs, including, for example, Eric Berne's 'recognition hunger' and 'structure hunger' (where people engineer patterns of human interaction in order to get a recognition response from others – the equivalent of the baby being 'stroked' by its mother), and Maslow's humanistic hierarchical model of the needs that motivate personal growth.

In Maslow's model, our physiological needs are the most basic (the need for food, for warmth, security and shelter). Educators working in disaster zones know very well the primary need for food and shelter for the young people they are working with. We have experience of designing educational programmes even for schools in Lesotho where the first consideration was how to feed the children. It may well be crucial for you to become an expert in providing basic nutrition and protection from the weather, and finding well-defended positions in disputed areas, before you can run development programmes.

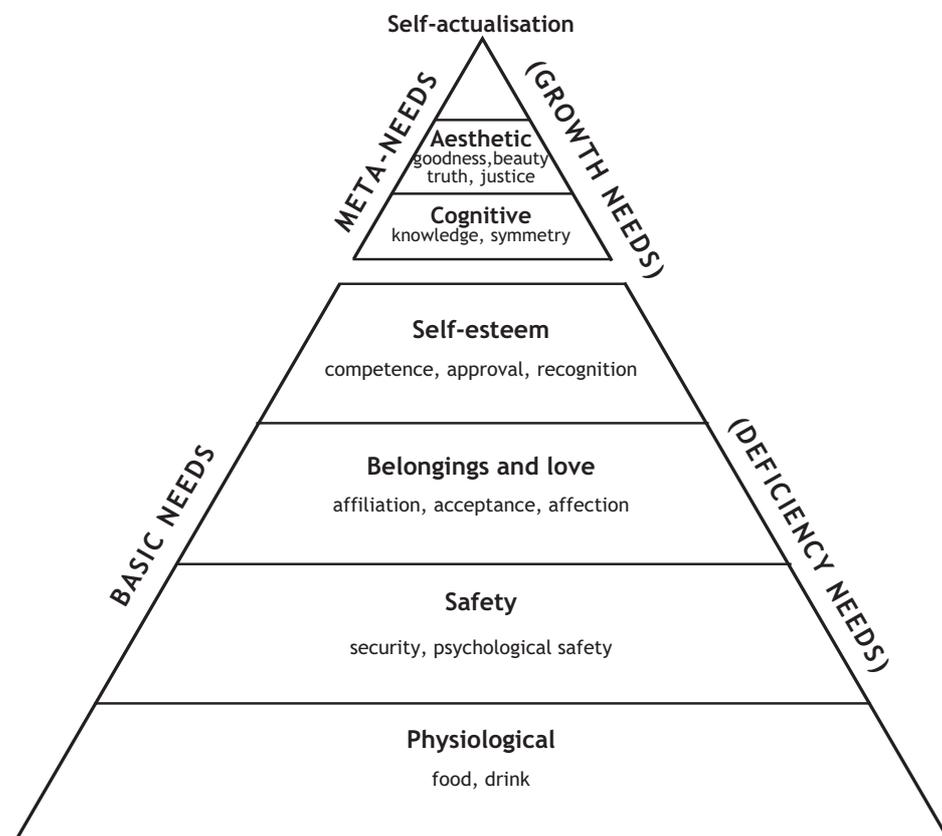
What is more, Maslow argues for the importance of psychological safety. This will be particularly relevant in areas where there is military action, where there has been a natural disaster, or where there are high levels of criminal activity. But the need for psychological reassurance is there for anyone who enters an unfamiliar learning environment, particularly for the first time. The famous British study 'Hightown Grammar' describes how the uncertainties of the first year of secondary education caused some dysfunctional relationships to develop, which determined the failure of some children throughout their school careers.

This need for psychological security overlaps Maslow's more complex and next higher category of need – the need to feel that you belong, that you are liked and even loved. One of the finest educators we know, Mrs Muriel Pyrah, once said in a television production, that the child who gave the most trouble and was often the least obviously likeable was usually the one that needed love the most. In her remarkably powerful and effective teaching she transformed such children by giving them attention and respect, and really 'listening' to them. One of your major tasks in leading a group will be to create an atmosphere where people listen to each other and 'hear' each other,

where respect and consideration are the basic affective scaffolding for learning.

You can create this in the group by practising it yourself. In this environment, self-esteem and self-belief will flourish. Of course, the patterns for achieving this will vary from culture to culture. Sometimes, the highest respect is given to people with high social status, and you will of course have to act within the norms of your culture, but always with the underlying aim of promoting self-esteem and group solidarity.

Maslow's model says that these first-level needs have to be met before progression to the learning needs of which education is most aware – the cognitive and aesthetic needs, the 'meta' needs. The highest need in Maslow's system is that of self-actualisation – the unfolding and fulfilment of the self or reaching one's higher potential. This shows itself in spurts of growth, where the cognitive and affective schemata become clearly richer and more effective.



Maslow's basic needs are also called 'deficiency needs' because they become motivators when a person has a deficiency with respect to a need: for example, a lack of food or water will motivate the activity to look for these things.

The great Russian educator Anton Makarenko, was given the task of gathering up the bands of homeless, penniless, wild young people wandering through post-revolutionary Russia (described in his novel *The Road to Life – an Epic of Education*, 1955). The model he developed in his remarkably successful programme was based on the group having goals. He describes how the crucial point was

establishing motivation, and the first motivation was for his hungry band to find food and make a meal, satisfying the most basic need of all. He used that goal to establish the next highest motive of creating and collectively rebuilding a barn into a hostel, which developed the group's sense of solidarity and their need for each other. He converted the achievement of these goals into establishing a new and higher level of meta needs, the goal of eventually writing and performing plays for the local peasants so that the young people might become loved and respected by society. The goal of performing the play was the establishing of a meta need. Meta needs are also called 'growth needs': they motivate, not because of fulfilling a deficiency, but because of our need to grow and to be self-fulfilled.

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## Reading 4: The nature of knowledge

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By Dr G. Gunawardena, Sri Lanka, for the Commonwealth Secretariat.

As a youth development worker you will sometimes be a teacher, more often a facilitator of learning. We have looked so far at some of the important things to know about the 'process' of learning itself. We must now look a little deeper at the nature of knowledge.

Dealt with properly, this is a huge and controversial subject, a major branch of philosophy called 'epistemology'. It deals however with some very practical issues for facilitators of learning, because they need to understand how the type of knowledge being dealt with develops most effectively in the mind.

I have already talked about the ways in which the mind tends to work in compartments. There may well be very good reasons for this, because it helps the conscious processes to focus, without any distractions from the volume of detailed information that the automatic systems look after.

Take language development as an example. If, when you discuss youth work, you have to concentrate on grammatical structures, voice rhythms, the roots of words, use of gesture, rules for taking turns to speak etc., you would never be able to deal with it all. So what happens is that you concentrate on two things – what you want to say, and the best way to get the communication going between yourself and whoever is with you. All the rest is looked after by the automatic system.

### **Does the mind always operate in compartments, or is that just at the conscious level?**

In fact, in all learning processes there are all sorts of information (conscious and unconscious) acting together as if it's all one thing – but we are only aware of the conscious part. In fact, however, though we may be concentrating on ideas, our emotions are always involved, our bodies usually and of course the spirit and the sense of self.

So, as a rough attempt to acknowledge the complexity of the learning process, about forty years ago a team of American educationists led by Benjamin Bloom realised that it was helpful to be conscious of the different sorts of learning they were really testing. It would help everyone concerned to know what the teaching was trying to achieve; in other words what the teaching objectives should be.

### **Bloom's learning domains**

Bloom, in his Taxonomy of Educational Objectives, identifies three general types (domains) of learning:

- cognitive
- affective, and
- psychomotor.

Learning as a form of change of behaviour can take place in all of these three domains.

Though they usually occur together, the emphasis is usually on one at any one time.

## The cognitive domain

In the cognitive domain, Bloom was really looking at the different ways we process ideas. He sensibly claims that some of these ideas are more complicated than others, and that it is important to know what we are really asking learners to do. This is because we should be teaching and assessing the harder skills in a different way from the easier ones.

He said that he had identified six types of processing of ideas. In order of information processing difficulty these are:

- knowledge (by which he means the easy recall of factual information)
- comprehension (by which he means understanding the meaning of something)
- application (here he argues that it's harder to use a piece of knowledge to solve a problem by applying it in a new area, than it is to explain it, because extra steps of thinking are involved)
- analysis (this is more difficult because you have to be able to break something down into its constituent parts)
- synthesis (he feels that this is harder still, because it involves the learner putting together a lot of different elements to make something new)
- evaluation (again this is very hard because you've got to know a lot about something, and you've got to be able to analyse and compare it with other similar things to judge whether it's better or worse than something, or how good it is for the task it has to do).

When we assess someone's quality of mind all we've got to judge this by is what they write or say or do, and what we've got to do is to try and analyse the underlying processes by asking: What quality of thinking is really going on under the surface?

The cognitive part of the taxonomy is one device for doing this.

## The affective domain

Interests and attitudes play an important role in learning. Without a positive attitude and deep interest one finds it difficult to engage in

learning. The success of learning depends on interests and attitudes to learning.

Interests and attitudes are formed and developed in young children either as a result of inborn drives and aptitudes or due to the pressure and guidance from parents or elders. In the case of adults they develop interests according to decisions taken on what they need to achieve and what is most suited to them. These decisions are very much dependent on life situations (see Unit 4 on the role of Informal Learning). For example, a person whose chosen occupation is agriculture, is likely to develop an interest in his occupation and develop positive attitudes towards it. Similarly a teacher or a craftsman, provided the job is not imposed on him/her, will have similar attitudes.

### **Social skills**

However, the affective domain means much more than this. Think of the importance of emotions in relation to your social skills with friends and acquaintances and family. If you lack skill in the affective domain (or emotional intelligence) your relationships will probably break down with perhaps devastating consequences. Young people who have gaps in their emotional intelligence, may need help from the youth worker to fill those gaps, or in other words to get rid of those emotional blocks to new affective learning.

The affective domain is the domain where the automatic systems are most powerfully at work and this makes it hard to teach emotional intelligence unless you tap directly into its deep structure and make it accessible to analysis. This is of course the domain of the psychotherapist and psychoanalyst when emotional intelligence has become badly damaged and blocked.

For youth development workers it is important to recognise when emotional damage is so bad that they should refer their client to specialised help.

### **Carl Rogers**

Carl Rogers, a US psychiatrist and humanistic psychologist, discovered from his psychotherapy experience that when certain conditions are present in the counsellor/client relationship, even quite bad cases of damaged emotional intelligence improve enormously.

These conditions are:

- that the counsellor has an unconditional positive acceptance and respect for the client as a person, no matter what the client has done, even though the counsellor may deeply disapprove of what has been done
- that the counsellor is always authentic and not playing a role or game with the client

- that the counsellor is always honest about her or his feelings and accepts the feelings of the client
- that the counsellor does not put words into the mouth of the client but listens very carefully and reflects back to the client what she thinks the client has said in order to check out the client's feelings.

What is very interesting is that when these methods were applied in education they had a very dramatic positive effect on pupils' attitudes, self-concepts and learning achievements. Now this was tested in various countries, always with similar results, so it may well be of universal relevance.

We can develop emotional intelligence through taking these conditions as a model and thus touching the deep structure of young people's emotional intelligence, without them necessarily realising what is going on. When we have an open conflict with a young person that is a good opportunity to explore feelings openly, providing we don't get ourselves emotionally upset. By the sort of insight and acceptance Rogers talks about we can have a huge effect.

Case studies and role play are useful methods for developing emotional insight. Helping youths to deal with problems of family, community, authorities and so on should be at least partly directed at emotional blocks and gaps.

If you are interested in this issue of emotional intelligence and emotional learning I recommend you to read Daniel Goleman, *Emotional Intelligence* (Bloomsbury, London, 1996, ISBN 0-745-2830-6). It's meant for the general reader and is very approachable.

Karen F. Stone and Harold Q. Dillehunt (Goleman, 1996) have suggested the following list of areas of emotional skill and intelligence, which they teach as the Self Science Curriculum:

- self-awareness
- personal decision-making
- managing feelings
- handling stress
- empathy
- effective communications
- self-disclosure
- insight into your own emotions
- self-acceptance
- taking personal responsibility
- assertiveness
- working effectively in groups

- conflict resolution.

## The psychomotor domain

This is the domain of the body. It includes any form of physical ability and kinaesthetic awareness, and it's quite crucial in any form of manual skill or skill requiring bodily movement. It's important to the carpenter, the labourer, the surgeon, the artist and of course to anyone interacting with other people. Like all the other abilities it has surface aspects and deep structures.

The surface aspects can be observed with care and then analysed and taught, but the deep structures are those where the automatic systems of the mind are in charge, and they need to be tapped in a different way. The inner game mentioned earlier is one such way. A deep level knowledge of the meaning and purpose of the physical actions is very important. Think of the surgeon who needs the sharpest possible understanding of exactly what she's trying to do and what needs to be done to get there.

Robert Pirsig (*Zen and the Art of Motorcycle Maintenance*) talks about the mechanic's feel for the engineering components he's working with, his sense of the tolerance of the metal to stress. This is a deep level sense of the meaning of what he's doing. And this triggers the automatic system.

Psychomotor skills learning requires certain pre-requisites:

- 1 a need and motive to learn
- 2 a certain level of muscular maturity (which is already present in adults)
- 3 regular practice
- 4 most importantly an interior model of what the skill looks and feels like
- 5 evaluation of performance (self-evaluation or evaluation by facilitator).

It is important to stress the point that, even though Bloom identified these as three areas of learning ('knowing', 'feeling' and 'doing'), they are merely different ways of thinking about experience which is one and indivisible.

## Reading 5: Oral traditions and rules of evidence

By Glen Custred.

The Native American Graves Protection and Repatriation Act (NAGPRA), which mandates the transfer of Native American remains to an 'affiliated' indigenous tribe, allows the use of several lines of evidence in establishing cultural affiliation. One of them is 'folkloric and oral traditional evidence.' This is entirely appropriate, given the nature of the problem and the fact that oral traditions, if appropriately weighed and carefully evaluated, can sometimes prove valuable in retrieving historical facts. But it is not only reasonable, it is imperative that any program for implementing NAGPRA specify protocols governing the rules of evidence pertaining to oral traditions.

This is by no means virgin territory, for scholars have long grappled with the problem of extracting historical fact from oral traditions. Historian and folklorist Richard Dorson tells of a contract he received in 1961 from the Indian Land Claims Commission of the Department of Justice to determine how much credence the government should place in arguments made by Indian claimants based entirely on oral tradition. In the course of his research, Dorson found that 'a host of scholarly disciplines had fought bitter interdisciplinary battles' over the issue of the historical validity in oral traditions. Besides folklorists and mythologists, they included 'archaeologists, anthropologists, classicists, geologists, historians of every hue, students of religions, Africanists, the medievalists, the Celticist.'

Especially concerned with this issue are historians of Africa, who deal with a paucity of written sources from African societies but an abundance of oral traditions. Moreover, scholars in various fields have long been interested in how memory produces tradition and in how tradition is changed by oral transmission and by the nature of oral cultures.

It isn't possible here to summarize such a rich and vast literature, nor can we apply it to specific questions raised by cultural affiliation under NAGPRA. Instead, we will try to illustrate what this body of scholarship has to offer, suggest some rules of evidence that might emerge from it, and conclude with Kennewick Man as a case study to show why such rules are sorely needed.

### Folklore and oral traditions

Perhaps the best place to start is by defining 'folklore and oral tradition.' Jan Brunwald defines folklore as:

“those materials in culture that circulate traditionally among members of any group in different versions, whether in oral

form or by means of customary example, as well as the process of traditional performance and communication.”

Oral, as opposed to written material, and tradition, knowledge and skills handed down over the generations, are central to every definition of folklore. Note, however, the difference between oral tradition and oral history. Oral history refers to knowledge from experience or living memory that is transcribed and becomes part of the written record. Oral traditions are those narratives that are passed down by word of mouth from one generation to the next and therefore become transformed over time.

Oral tradition, as the term is used in NAGPRA, usually refers to oral folklore, also described as oral literature, and is divided into genres defined by different forms and functions. Epics, ballads, and lyrics appear in verse and are usually sung. The epic relates great events of the past and the action of great personages. The ballad, shorter and more prosaic, tells a story. The lyric evokes a mood or a feeling. Prose narrative in oral literature is divided into tales, legends, and myth. Tales are highly structured, purely fictional narratives exemplified in European tradition by such stories as Snow White and the Seven Dwarfs and Cinderella. Legends, on the other hand, are often told in less tightly structured narratives whose themes may also appear in other genres such as the ballad and the epic.

Unlike folktales, legends may bear some relationship to the truth; that is, they are believed to be true accounts of historical fact by at least some of those who relate them. Tales are the short stories of oral societies; legends are their history. Myths, on the other hand, are sacred narratives, believed to be true by those who relate them, that deal with the broader meaning of life, the cosmos and human morality. Every culture has its own classification of oral traditions; however, all cultures distinguish between those stories that are fictional and those that are true, roughly in the way defined by folklore scholars.

Scholars have been intrigued by strikingly similar themes, patterns, and narrative elements that recur in the folklore of unrelated societies around the world. Vladimir Propp and Levi-Strauss, among others, describe basic structures of folk narratives. Recurring narrative elements called motifs have been catalogued; useful in analyzing folktales, they are especially valuable in determining the historical validity of oral traditions.

Different kinds of evidence can be retrieved from different genres of oral traditions. Even folktales, regarded as pure fiction, can sometimes reveal information about past cultural or social aspects. Their reach into the past, however, is probably not much earlier than the latter part of the nineteenth century. The most fertile sources of retrievable historical facts, however, are narratives about the historical past, epics and legends that people believe to be true.

## The process of oral transmission

Knowledge transmitted solely by word of mouth undergoes substantial changes in the course of a few generations, because, as Marcel Detienne points out, each person ‘selects ‘facts’ and produces an account in terms of the way in which his social sphere organizes spoken memory.’ Memory, selection, and the cultural context of a body of oral tradition alter accounts of events over time. Moreover, a storyteller often embellishes and redacts for purely narrative purposes; thus aesthetic and dramatic motives also alter content.

To illustrate how oral transmission shapes content, we will examine three processes:

- ‘omission’ and thus the loss of information
- ‘addition’ through diffusion
- ‘fusion of elements’ within a narrative, also called ‘telescoping’.

Omission of events or personages from a body of oral traditions can lead to loss of information from folk memory. Robert Lowie illustrates this point in the case of the Assiniboines of the Canadian Plains, who adopted the horse in the eighteenth century, only a century and a half before Lowie’s study. Although the horse profoundly changed their way of life, their oral traditions do not mention its introduction. Nez Perce traditions, on the other hand, retain in folk memory the first appearance of the horse. Differing instances like these lead Lowie to object to the use of oral traditions in history. Jan Vansina, however, says that omissions of this kind can be explained by the cultural context of the oral traditions. The horse may not have appeared significant to the Assiniboine when it was introduced; therefore the event itself was not remembered. But after three generations they couldn’t imagine a time without the horse, and they accounted for its origin not in legend but in a myth of Creation. The horse had a less transforming affect on the Nez Perce, which is why Vansina believes they retained its introduction in historical time.

Vansina gives another example of omission, in this case how a great event was lost while a minor one was retained. The oral traditions of the Kuba of the Congo retain the memory of the first white man to appear among them, but there is no mention of the second white man, who wrought vast changes in life in the Congo. The first white man, a merchant, was a novelty and thus retained in tradition. The ultimate importance of the second, however, was unknown at the time; thus he didn’t become a part of folk memory. The consensus of the community about what is important or interesting therefore determines what will be retained or lost. It may be possible to account for the absence of an important historical fact in oral tradition without calling into question retained information that may truly reflect past events.

Diffusion of motifs or themes from one tradition to another, sometimes over long distances and across linguistic barriers, is

another feature of oral tradition that may alter or distort the memory of past events. This process was explored in detail by earlier scholars. The way new elements are borrowed and absorbed depends on the influence of the source tradition, on the interests of the borrowers, and on the part the borrowed elements play in the pre-existing tradition. For example, an image expressed in a motif may reinforce a theme in the borrowing culture, thus making it more concrete. Or an innovation may fill out an earlier traditional account, as in the case Vansina relates of the Kuba, who say their ancestors came to their present homeland by river. When traders, whom they encountered from the eighteenth century on, told them about the marvels of the sea, 'it fleshed out the image of their points of origin' and was thus incorporated into their body of oral traditions.

Fusion of different elements into a single unit is another shaping process in oral tradition whereby multiple historical figures may be fused into a single hero, several battles fused into one battle, historic events fused with mythic themes. Omission, borrowing, and fusion regularly occur in oral tradition and can be taken into account if the researcher understands the cultural and historical context of transmission. Researchers can discard elements that do not reflect historical fact and earmark elements of questionable historical accuracy. Final validation, however, requires corroborating external evidence like written documents and archaeological and other kinds of data.

Oral traditions can actually be more credible than written accounts when contradictions occur in written records. Vansina cites as an example the Abenaki in Maine, whose oral traditions tell about events in 1759 during the French and Indian War. When their oral history was written down over a hundred years later and compared with French and English written versions of the same event, the oral tradition not only confirmed both written versions, it also resolved a contradiction between them.

But we can't expect to find the same degree of validity in myths as in legends, since the function of mythic lore is very different from that of other kinds of oral traditions.

Archaic myth, as it is sometimes called, is the living myth of oral societies such as those found in America at the time of European contact. This kind of myth deals not with historic time but with the distant past. It addresses the questions of how things became accomplished, how they came to be. Mythic narratives frequently include bizarre elements – monsters, figures that are both animal and human at the same time, shape-shifters, magical transformations, and incestuous relationships. Nonetheless, they are believed to be true accounts by those who relate them, 'a reality of a wholly different order from nature,' as Mircea Elide puts it. Myth often has a moral dimension; it explains in moral terms why things happened, how the landscape was configured, why plants and animals are the way they are. The significance of myth lies in the cultural and psychological realm, not in historical fact.

Since myths, like all folk narratives, reflect the experiences and societies of those who tell them, such great events as migrations and invasions may be telescoped in time in the shift from the historic to the mythic past. Borrowing may occur when ideas spread from one religion to another, filling in or reinforcing earlier narratives or introducing new elements into the mythic narrative. The most striking change comes about when a myth is created to reinforce a new religious movement. The Ghost Dance is an example of a revitalization movement that originated in one North American tribe and spread in various forms to other tribes. Although the roots of a myth may lie in the distant past, some of its elements may be of more recent origin.

## Rules of evidence and oral traditions

All oral traditions have their limitations, says Vansina, meaning that they have varying degrees of reliability. Before attempting to retrieve historical information from an oral tradition, we must first define rules of historical evidence, a task to which Vansina applied himself in the two books he wrote on history and oral traditions. ‘The rules of evidence form a body, a logical train of thought,’ he cautions. ‘One cannot apply some and neglect others. They are of a single whole.’

Rules of historical evidence must perform as a minimum these functions:

- Validate sources. This involves ascertaining the relationship of the collector to his informants and the collector’s competence and knowledge of the native culture.
- Define the kinds of shaping processes at work in oral transmission and how they can be identified.
- Examine all variations of the tradition within the relevant geographic area and within the folk community.
- Identify widespread themes and motifs (to detect fusion of historical fact with recurrent folk patterns) and cultural contacts and revitalization movements (to identify new myths or diffused elements that may be of more recent origin).

These are only a few of the standards we must demand of protocols for determining cultural affiliation under the provisions of NAGPRA. The need for rigorous standards is evident in the government’s handling of the case of Kennewick Man.

## The case of Kennewick Man

The Department of the Interior has attempted to establish the cultural affiliation of the 9,300-year-old remains of Kennewick Man with a coalition of local tribes. Since there are gaps in the archaeological and mortuary records, affiliation cannot be established by physical evidence. The government has based their case on the geographic proximity of contemporary tribes and the site where the ancient

remains were discovered, and on linguistic evidence and oral tradition.

The linguistic evidence is thin and inconclusive and based in part on controversial assumptions.

The evidence from oral traditions is equally unconvincing. Recorded myths were examined in search of ancestors of the contemporary tribes that lived in the area 9,000 to 10,000 years ago. Although there are no migration motifs in the body of myth, there are references to earlier inhabitants, the 'Stick People,' and to invaders. Note that absence of a migration motif does not disallow the possibility that extant tribes migrated into the region they now inhabit; moreover, the mention of outsiders and former inhabitants suggests pre-contact population movement in that area. Oral traditions, like the physical evidence, fail to establish probable continuity.

The entire Plateau, like many other native regions, was the scene of revitalization movements in the nineteenth century, some associated with the Ghost Dance. Christian ideas and later Christian missionaries also played an important part in shaping the cultural changes taking place at that time. In evaluating myth for its possible antiquity, the historical context should be taken into account when sifting folk narrative for elements that may be of more recent origin. This wasn't done in the case of Kennewick Man. The mention in the mythic narratives of natural catastrophes such as floods and volcanic eruptions, especially periods of cold weather, was emphasized. The conclusion was drawn that references to extreme cold verified the presence of living people in the Plateau at the time of the Ice Age. But the geology of the region yields prima facie proof that great temperature fluctuations have occurred since then. Concluding that a population inhabited a region in antiquity merely because their oral traditions mention cold weather is pure speculation. This aspect of their oral traditions should be ruled inadmissible as evidence.

Legitimate rules of evidence reveal that oral traditions give no verifiable proof whatever about when the Plateau tribes first inhabited the area. In order to eliminate faulty evidence in future NAGPRA litigation, scholars and jurists must define incontestable protocols for evaluating oral traditions.

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How to contact the author of this article:

Glynn Custred

Department of Anthropology

California State University

Hayward, CA 94542-3039

e-mail: glynn209@aol.com

## Reading 6: Learning styles

Adapted by the author from 'Discovering your learning style' by Clay Johnston and Carol J. Orwig, Summer Institute of Linguistics, International Linguistics Centre, Dallas, Texas, ([www.sil.org](http://www.sil.org)).

There are many different learning styles. Identifying your preferred learning style leads to meta cognition or self-awareness about how you learn. Your preferred learning style is like your favourite food: it is what you like to try first. But your favourite food is not always appropriate for the situation, so you may have to try something different.

There is no absolutely right or wrong learning style, although you may prefer one style over another, and/or a style may be inappropriate for a particular learning task. Preferences develop like muscles: the more they are used, the stronger they become. Successful learners have flexible and integrated learning styles.

Researchers and practitioners agree that:

- learning styles stem from a nature/nurture combination
- students of all styles can be successful learners
- students are more successful when using their style strengths
- diverse teaching styles are essential to accommodate individuals within a group.

The challenge for learning facilitators today is to assess the learning styles preferred by each student and to provide learning opportunities that are compatible with those styles. If you can manage this, it is likely to result in improved attitudes toward learning and an increase in productivity, achievement, and creativity.

### Personality types

The Myers-Briggs Type Indicator (MBTI) is one of several inventories that are used to identify and describe an individual's personality type. Psychologists use it to create a psychological or personality profile based on Carl Jung's typology of conscious functioning (archetypes).

Jung constructed three measures for evaluating personality types, to which Myers and Briggs added a fourth:

- introversion – extroversion
- thinking – feeling
- intuition – sensing
- judging – perceiving.

The MBTI attempts to address the interpersonal and affective dimensions of a person's psyche. Its results have been applied to learning. The following are general descriptions of personality types and the ways that the learning modes of people with these typifications are affected: you should keep in mind, however, that individuals may display characteristics of more than one type.

- Extroversion – characterised by seeking and enjoying interaction with others and having interest in people and events outside the self. The extrovert may be willing to take risks in learning, but depends on outside stimulation and interaction to engage in learning.
- Introversion – characterised by being drawn to solitary activities and limited interpersonal interaction, and engaging mainly with issues in one's own inner life and thinking processes: this promotes concentration and self-sufficiency. The introvert takes a while to process information before trying to put it into practice. Not a risk-taker, this learner may avoid taking necessary chances.
- Thinking – characterised by judgements based on impersonal and/or objective criteria: this helps with analysis, self-discipline and motivation. A thinking type may be overly anxious because self-esteem is connected to achievement; may seek support from preferring controlled situations.
- Feeling – characterised by making judgements based on issues of personality and sociality, taking into account one's own feelings and the feelings of others involved. This generates motivation towards integration with others, a bonding with teachers and classmates, and such interpersonal relationships can lead to a good sense of self-esteem. Needs to feel 'appreciated', and tries to avoid tense social situations.
- Sensing – characterised by an emphasis on information gathering through one's own five senses and dealing with the world in practical or factual terms. It encourages one to work systematically, paying attention to detail and observing phenomena closely. Requires clear sequencing of materials, clearly stated goals and lots of structure.
- Intuition – characterised by being tuned into relationships and relying on having a feeling for things of possible value; drawn to innovative and theoretical pursuits. It gathers inferences and makes judgements by making guesses based on the context; can structure his/her own training, conceptualises well and builds good models from which to work. The intuitive individual is not concerned with accuracy and may miss important details.
- Judging – characterised by being apt to lead a planned, organised and well-controlled lifestyle; works systematically and gets the job done. The judge is rigid and intolerant of ambiguity.
- Perceiving – characterised by a tendency towards spontaneity, freedom and autonomy. It allows for the openness and flexibility

so needed in language instruction and lets one be adaptable to change and new experiences, all of which language learning entails. Lack of persistence or consistency may hamper performance.

## Brain dominance

The brain dominance theory examines learning style in terms of which side of the brain a person tends to use most for processing information. Brain scanning research shows that people use different sides of their brains to process different kinds of information and this tends to cause different patterns of brain dominance.

All people use both sides of their brains holistically, but most individuals tend to prefer learning strategies associated with one side or the other. Such individuals are considered to be left-brain dominant or right-brain dominant. Some have about even preferences and are considered to have 'bilateral dominance'.

The left side of the brain:

- processes verbal, abstract, analytical information in a linear, sequential manner,
- looks at differences and contrasts in information, noting the small signs that represent the whole pattern,
- concerns itself with reasoning abilities embodied in as maths and language.

The right side of the brain:

- processes non-verbal, concrete, and spatial information,
- looks at similarities in patterns, forming a whole picture of any information, and processing parts in relationship to the whole,
- concerns itself with artistic abilities such as music and graphics.

## The development of cerebral dominance

At age four, the two hemispheres of the brain begin to specialise, developing learning preferences based on the functional differences between hemispheres. Each side develops strengths in different cognitive functions. At age five, lateral integration (lateralisation) begins – the two sides of the brain begin to interact to process information. This is usually completed by age nine. Children are not ready to handle abstract information until about 3rd grade.

## Sensory learning modalities

We all seem to have a learning mode preference based on our sensory intake of information. As babies, our preferred mode is based on our senses of touch and taste, evident in the fact that everything to be explored goes into a baby's mouth. As we grow older, the learning

modality develops around the visual, tactile/kinaesthetic and auditory receptors.

In most schools the (a) visual processes are the most used; next the (b) auditory and last the (c) tactile and kinaesthetic. Some disciplines of course favour the visual less than the other two: for example, music students must have an enhanced auditory ability and students of Dance or Physical Education are expected to be more kinaesthetically dominant than average.

The modern university tends to focus on theoretical learning which places a definite emphasis on visual/cognitive links. This is, of course, an effect of the change from an oral to a print culture. Current learning theory does not give priority to any one of the three sensory styles. Rather, the idea is to use a learner's favoured style as a point of entry into engaging with a specific content area, but then strengthening the learning and extending the intelligence of the learner by the use of the other styles to deepen and reinforce the learning.

This multiple sensory approach assumes that:

- 1 Personal thinking styles can be expanded and learners can become more intellectually adept through multiplicity.
- 2 Learning is reinforced by recourse to several inputs and multiple neurological (or synaptic) connections.

### Auditory

Thirty percent of people are auditory learners, who learn by listening. They tend to:

- learn from verbal instruction
- enjoy plays
- write with light pressure and not always legibly
- talk while they write
- remember names and forget faces
- be distracted by noise
- remember by listening, especially when there is music
- find games and pictures annoying and distracting.

### Visual

Forty percent are visual learners, who learn by seeing and writing. They tend to:

- be verbal (see words) or pictorial (see pictures)
- remember faces but not names
- have vivid imaginations

- think in pictures
- show their emotions
- use colour.

## Kinaesthetic

Kinaesthetic learners use their whole bodies to learn. They tend to:

- learn by doing
- not be avid readers
- be poor spellers
- remember what was done, not seen or talked about
- not hear as well as others
- use touch
- attack things physically
- be impulsive
- enjoy games.

Note: All children are very kinaesthetic to age six.

## Overall learning style

Your overall learning style is a composite of these various factors. Each person has a unique pattern, so it is impossible to make general predictions about exactly how learning style preferences are going to interact, and which factors will be more important than others.

Nevertheless, certain composites of learning style factors tend to co-occur more frequently than others. People who exhibit the classic correlations will exhibit clearly marked overall learning styles.

You may be one of those who does not exhibit all the expected correlations. This probably means that you are able to learn happily in a variety of ways and settings.

## Common correlations

Here are some of the correlations that may occur to produce the four main, very different, overall learning styles:

- relational
- analytical
- structured
- energetic.

## The relational learner

Motivations to learn:

- a chance to develop relationships and understand people and ideas
- a chance to embrace variety
- a chance to help other people develop
- a chance for personal development and growth
- a chance to understand underlying meanings.

Strengths:

- is intuitive, thus good at grasping systems
- is adaptable to different situations and cultures
- is empathetic with others
- is good at judging other people's reactions.

Potential pitfalls:

- may be overly sensitive to rejection
- may be so adaptable that personal identity is lost
- may be easily distressed by lack of harmony
- may have a short attention span if the subject or person does not engage interest.

Preferred learning environments:

- Learning while living in a community of people who are accepting and open to relationships and to letting the learner be involved in their activities and lives.
- Learning activities that allow the learner to observe and understand people and their culture.
- Classroom setting that allows the learner to have lots of variety, creativity, group-work and communicative activities.

Difficult learning environments:

- Possible cultural or psychological barriers to spending time with people; as when people are naturally reserved or xenophobic.
- Repetitive, unvarying tasks or activities.

### **The analytical learner**

Motivations:

- Opportunities to work independently
- Opportunities to integrate data into theoretical models
- Opportunities to solve problems
- Opportunities for intellectual freedom.

Strengths:

- Good analytical ability
- Intuition, allowing the grasp of overall systems
- Critical thinking which can help to solve problems
- Good self-evaluation.

Potential pitfalls:

- May be unable to meet high personal standards and become discouraged.
- May spend too much time at the desk or computer and not relate to people.
- May be unwilling to speak because of fear of making mistakes or dislike of making mistakes.

Preferred learning environments:

- Can work independently and at own pace.
- Seeks the intellectually stimulating that involves problem-solving, reading and research.
- Enjoys a classroom where the teacher's intellectual ability and command of the subject matter is perceived as superior and worthy of respect.

Difficult learning environments:

- Traditional classroom situations that call for doing things in a rote or mechanical way.
- Classes that call for a lot of unrehearsed activities.
- Unstructured and disorganised environments.

## The structured learner

Motivations:

- Enjoys a systematic and organised approach to learning
- Enjoys a chance to apply concepts in a practical way
- Accuracy
- Hands-on activities
- Practical solutions to problems.

Strengths:

- Perseverance
- Good planning
- Thorough and painstaking
- Systematic and careful.

Potential pitfalls:

- May be more concerned with problems or tasks than with people.
- May be so concerned with accuracy they are inhibited from talking.
- May find learning a language in its natural context too chaotic for personal taste.
- May block out input in an uncontrolled way, thus making it difficult to catch the gist of a conversation.

Preferred learning environments:

- A typical classroom setting, with a well-ordered syllabus, clearly presented materials, and clear instructions.
- Hands-on activities.
- Problem-solving activities.
- Exercises and drills.

Difficult learning environments:

- Unstructured, disorganised, or chaotic environments.
- Situations with diverse activities and lots of interpersonal interaction.
- Language learning in natural communication settings.

### The energetic learner

Motivations:

- Lots of activity
- A chance to do things with people
- Variety
- Adventure and risk
- Personal involvement in activities
- Hands-on activities.

Strengths:

- Adaptability
- Willingness to get out into the community and get involved
- Desire to interact with people
- Willingness to take risks.

Potential pitfalls:

- May ignore accuracy.
- May act too quickly.
- May be unwilling to take time to plan a program.

- May be satisfied with speaking incorrectly, as long as the message gets across.
- May have gaps in knowledge because of unsystematic language learning.

Preferred learning environments:

- Community language setting with opportunity for involvement in their activities.
- Learning activities that can be linked to other enjoyable activities.
- Classroom settings that allow for lots of variety, flexibility, action, group work and field trips.

Difficult learning environments:

- Traditional classroom situations that require spending time alone, doing repetitive exercises, and working with pencil and paper.
- Any program that is rigidly structured and does not allow for variety and spontaneity.
- Possible cultural or psychological barriers to joining in activities with people; as when people are naturally reserved or xenophobic.

Note: Kinaesthetically-oriented people learn best while moving.

## Reading 7 Understanding intelligence: multiple intelligences and the structure of intellect theory

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By Dr G Gunawardena; Section 3 by Lewis Owen.

### 1 Intelligence testing

There is an enormous range of variation in the observed skilfulness and capability of human beings. The desire to find the underlying causes of this is deep-seated in anyone who manages other human beings – teachers, government ministers, the heads of enterprises. Because if we can pinpoint the causes, it is assumed that we can deploy our human resources more efficiently, either by (a) tracking people into career paths suitable for their human potential (such as giving them only basic education if they don't have high intellectual potential), or (b) giving them appropriate training to enhance their underlying potential (such as special remedial and developmental training).

The history of intelligence testing and related subjects like neuro-imaging and neuro-endocrinology is part of the history of the attempt to do this. An example of this is *The Female Brain* by Louann Brizendine (2006). Brizendine's aims are praiseworthy:

“I believe that women actually perceive the world differently from men. If women attend to those differences they can make better decisions about how to manage their lives.”

But the difficulties involved in interpreting the evidence of test performance and even the best images of the human brain are such that we need to be extremely careful about the generalisations that we make. Professor Steve Jones, a geneticist and author of *Y: The Descent of Man* (2003) has pointed out that there is absolutely no consensus about the science of these differences. He makes this point:

“That doesn't mean that there are no differences between the brains of the sexes, but we should take care not to exaggerate them.”

This sort of approach has been aimed at finding genetic differences in potential intelligence between different ethnic groups and different social castes and classes. We should be extremely wary of all of this if only because those who design the tests are likely already to be among the elite groups and they naturally design tests based on their own mental habits. Nevertheless, if we can find anything that will help young people's development from this material, we should use it. What is crucial is that we should not use anything which says that the limits of their development are known. Tony Buzan (1995) has described the unlimited potential of all human brains. It's that we should focus on.

The intelligence testing tradition is based on the idea that our ability to deal with problems in the real world depends on underlying general abilities in perception and reasoning, and testers have devised sophisticated systems for showing how they believe that this can be done. However, these intelligence tests are inevitably produced by the preconceptions of the test designers. One of the things intelligence test designers have omitted is testing for emotional intelligence, though there are now sophisticated ways of doing so, because it doesn't fit the IQ model. You have already read about 'emotional intelligence' in this module, and the identification of that as a separable mode of processing knowledge has emerged from extensive experience in areas such as modern management studies. In management studies the ability to handle human interaction is understood to depend on possessing underlying general 'people abilities'. It's evident from management research that people can have very high people intelligence and yet be relatively low achievers in other areas in IQ testing. People abilities, or 'people intelligence' are nevertheless clearly extremely important in determining one's ability to deal with problems in the real world.

One of the problems with traditional intelligence tests is the assumption that there is a single, underlying universal factor, a 'general intelligence' that drives all of someone's intelligent behaviour. The psychologist Charles Spearman labelled this as *g*, which stands at the top of a hierarchy of less important and more specific factors of intelligence such as numerical ability or verbal ability and so on. What this theory says is that you may have a high level of skills in some of these specific factors and a low level in others, but, by analysing your results statistically, testers can work out just how high your general intelligence is (your IQ or Intelligence Quotient), and this can then be compared with everybody else's. They claim that this measured intelligence will determine your intellectual development for the rest of your life. Psychologists who support this view accept that the environment has some influence on this development (about 20 per cent). But they argue that *g*, the general intelligence factor, which they say underpins and controls the level of all the other factors, is 80 per cent determined by the genes that you inherit from your parents.

You will probably have realised by now that the writers of this module do not accept this traditional view of the nature of intelligence. The reason for this is that traditional models of intelligence, because they insist that your intelligence is determined by your genes, are particularly negative about the possibility of raising the level of thinking of people who do badly on traditional intelligence tests. Perhaps the most vivid way to illustrate the inherent bias of such testing is to remind you that Muhammad Ali failed this type of intelligence test badly but then went on, in the special circumstances of the Vietnam War, to become one of the most intelligent, admired and respected spokespeople of the twentieth century. In fact our own experience of working with young people is that you should not label them in any way. As Tony Buzan points out

(1995), their potential is enormous and multi-faceted. The job of the youth leader is to tune in to that potential which reveals itself all the time if you are looking for it and are attentive to it.

Spearman defined intelligence very narrowly, as *g* or 'the ability to deduce relationships and correlates' (the ability to work out that things that look different actually have close links, combined with the ability to see patterns of relationships across a range of situations or materials). In the words of another IQ tester, Arthur Jensen, 'these are essentially the processes of abstraction and conceptualisation'. Jensen was notorious for writing what was widely claimed to be a racist article in the *Harvard Educational Review* (1969). In that article he claimed to have proved by IQ testing the intellectual inferiority of Afro-Americans compared with white Americans.

IQ tests do not measure people intelligence, yet those who are high in people intelligence are bound to be very good at recognising the relationship between patterns of social behaviour and the effects of the social situations where these occur. For example, when public order officials have to interpret crowd behaviour and act when an urban riot occurs following a triumphal public meeting. That is obviously a form of conceptualising the close links between different sorts of phenomena. This certainly meets even Spearman's description of essential intelligence. However, testing a person to evaluate this using an IQ test might well produce a very low level result because the IQ test has to be written in symbols rather than behavioural interactions. By insisting that IQ testing is the only way to test intelligence, psychologists such as Jensen must simply be assuming that 'people intelligence' is not 'actual intelligence'.

## 2 Multiple intelligences

There are theories and models of intelligence that are much closer to the rich and complex abilities of young people than the IQ model. Howard Gardner (1983) argues that our experience of the real world tells us that intelligence is not unitary but multiple. Even lay people use the unitary term, 'common sense' e.g. 'I don't like discussing things with her, she's got no common sense'. This lay person's phrase clearly suggests a unitary view of intelligence. But the commonsense of a subsistence farmer is clearly quite different from the commonsense of a gold miner or the common sense of a computer programmer. The differences in each situation require very different spectra of abilities. When we develop the capacities of young people through project work, we need to be able to analyse how well they adapt their thinking and behaviour to the tasks that face them in order to know how to help them. A unitary view of intelligence is not helpful for that, whereas a multiple intelligences model is.

Intelligence is the mental process by which we understand the situation we are in and deal with it. Gardner argues that:

- research shows that each of us has available for use seven (or more) quite different kinds of intelligence (as we use each one its

differences from the others influence our pattern of thinking, so that each one tends to generate a different learning style)

- all of these intelligences are intrinsically valuable so they all need to be equally valued
- the level we can reach in each of these intelligences is not fixed, so they can all be taught, nurtured and strengthened
- where schools focus primarily on the linguistic and logical/mathematical intelligences and learning styles, this has a bad effect on a lot of children because it does not allow them to link what they are already good at to what is new
- everyone learns in different ways, at different rates, for different reasons, and this should be catered for in schools
- when you have strengths in certain intelligences and weaknesses in others then you should use the stronger intelligences to awaken and strengthen the weaker ones
- in any of these multiple intelligences, the ways a high level of ability shows itself can be very diverse, therefore we can't get anything conclusive from testing to find out how clever someone is in that type of intelligence; so we should really be finding out instead the particular ways that individuals make use of that type of intelligence. The central assessment question then becomes 'How are you smart?' not 'How smart are you?'

Different kinds of intelligences are described below.

- 1 Visual/spatial intelligence involves being able to deal intellectually with visual problems and to look at other problems and create mental images to analyse them. It's especially valuable with visual arts, navigation, architecture and certain games such as chess, where the logical structures of the game are overlaid by powerful visual patterns.
- 2 Verbal/linguistic intelligence relates to words and language. We use this intelligence to formulate our understanding of situations in listening, speaking, reading and writing.
- 3 Musical/rhythmic intelligence includes the ability to recognise and create tonal and rhythmic patterns and structures, and to formulate their expression in musical notation. It includes mentally processing environmental sounds, the human voice and musical instruments.
- 4 Logical/mathematical intelligence deals with the analysis and construction of patterns of symbolic information, using propositional thought patterns.
- 5 Bodily/kinaesthetic intelligence is the ability to use the body so that it expresses emotion(s) and ideas, plays sports, and deploys the ability to interpret and invoke effective body language. It deals primarily with physical activities and kinaesthetic learning experiences.

- 6 Interpersonal intelligence is the ability to understand and manipulate person-to-person relationships. It includes the ability to communicate with others and to participate in group activities.
- 7 Intrapersonal intelligence is based on understanding and managing the self. With respect to learning facilitation, it concerns the attention needed by a person who is engaged in independent study rather than group study or group work.
- 8 Naturalist intelligence consists of the underlying general intellectual abilities that are embodied in the work of the farmer, countryman and so on. It enables human beings to recognise, categorise and utilise the natural environment. Gardner (1999:48) uses the concept to mean a combination of ‘the core abilities with a characterization of the role....’.

Smith (2002), taking a critical view of the multiple intelligences model, says:

“In essence, Howard Gardner argues that he was making two essential claims about multiple intelligences. That the theory is an account of human cognition in its fullness. The intelligences provided “a new definition of human nature, cognitively speaking” (Gardner 1999: 44). Human beings are organisms who possess a basic set of intelligences.”

“People have a unique blend of intelligences. Gardner argues that the big challenge facing the deployment of human resources “is how to best take advantage of the uniqueness conferred on us as a species exhibiting several intelligences” (ibid.: 45).”

“These intelligences, according to Howard Gardner, are amoral – they can be put to constructive or destructive use.”

Smith (2002) raises several criticisms related to the work of Howard Gardner. Below is a summary:

- A common criticism made of Howard Gardner’s work is that his theories derive rather more strongly from his own intuitions and reasoning than from empirical research.
- Smith argues that the criteria employed by Gardner are judgemental and subjective. For example, it can be argued that musical intelligence and bodily-kinaesthetic intelligence are better approached as ‘talents’. (Smith, 2002).
- According to Smith, Gardner himself has noted that there is an element of subjective judgement involved.
- Smith also cites John White (1998) who has questioned the reliability of Gardner’s criteria, given that some of the intelligences Gardner describes involve manipulating symbols and others do not involve manipulating symbols. These very different kinds of intelligence are being treated in exactly the same way: so they are being compared using epistemically

different kinds of criteria. White has also raised questions about how Gardner's criteria can be applied rigorously, and about the reasons Gardner gives for their relevance.

- Smith notes that those researchers and scholars who have traditionally viewed intelligence simply as whatever is measured by intelligence tests, will find Howard Gardner's work problematic (but see below), as they will with more recent research on intelligence (for example, Robert Sternberg, 1996) which has focused more on the componential, experiential and contextual facets of intelligence, rather than on the particular informational material that the person is processing.

### 3 The Structure of Intellect (SI) Theory of Intelligence

The criticisms of Gardner, summarised by Smith, come from psychologists strongly influenced by the traditional intelligence testing community (the IQ theorists). In fact, the IQ theorists, whose ideas are summarised above, have themselves come under considerable criticism over the last forty years (Richardson, 2000). It has been argued very thoroughly that the choice of questions to test the underlying intelligence of subjects in traditional intelligence testing has always been based on the verbal and symbolising norms of the people who devise the tests – inevitably, middle-class, white men from the metropolitan countries working in the academic professions, used to assessing middle-class students in order to classify their degrees. Also, it has been argued that these tests could not possibly give proper weight to the abilities of those who come from social classes and cultures and occupations where the norms are very different.

While the IQ theorists appear to dominate this academic field, the psychological theories that rely on a central controlling factor called 'general intelligence' are by no means the only types of theoretical accounts of intelligence available. Multi-modal theories of intelligence (multiple intelligences models like Gardner's and multi-factor models like that of J. P. Guilford) seem to us far more useful in youth in development work. Despite the claims of traditional intelligence testing, the concept of human intelligence as consisting primarily of one general factor that drives all the specific factors is not by any means definitively supported in the history of intelligence testing. While multiple intelligences theory possibly does need to be developed and refined, Guilford's Structure of Intellect (SI), multi-factor theory of intelligence has undergone an enormous amount of testing, within the accepted scientific norms of traditional testing, and come up with totally different results from the IQ theorists. Guilford puts it this way:

“Unfortunately, the most telling evidence against a universal factor in tests of intellectual performance is the decisive number of zero correlations that have been found when tests have been sufficiently varied in kind and have been constructed with good

experimental control and when other experimental controls have been exercised in testing operations.”

(J. P. Guilford, 1967).

What Guilford means by this is that his testing found that very large numbers of individuals could be extremely high performers on some ability recognised by IQ theorists as showing the ability to ‘educate correlates and correlations’ (as required by Charles Spearman), but showed extremely low ability on the other abilities recognised as relevant by IQ theorists.

The Structure of Intellect Theory of Intelligence (SI Theory) is a multi-factor theory of intelligence developed by Professor J. P. Guilford (The Nature of Human Intelligence, 1967). This is of considerably older origin than Gardner’s theory. Guilford’s model was not based on subjective notions in any form, but on intellectual categories derived from systematic and sustained testing of Second World War recruits in order to give them the most appropriate rapid training for combat in the European and Pacific wars. Guilford researched and developed a wide variety of intelligence tests, very much in the way that the IQ testers had done, but he came up with very different conclusions from them, because he had to achieve extremely accurate, valid and reliable results, results that might determine the lives of fighting men and women and the outcome of a world war. Instead of finding one general underlying, determining intelligence factor, his SI model found 120 separate general factors.

Though it was a model devised originally to solve the problems faced in personnel allocation and training during the Second World War, it is today widely used in education and in personnel selection and placement. It is used widely because it enables learning facilitators to analyse what the intellectual abilities essential to a piece of teaching are, and appropriate preparation can be made to ensure that the learners are able to access these before teaching. It is also used because it is an excellent diagnostic tool for specifying what aspect of thinking is blocking the learner’s thought processes and showing how that can be overcome. It seems to me a very much stronger and more coherent model than any that I have seen from the rest of the intelligence testing community.

Guilford’s view, as appeared in *New Education* (September 1965), was:

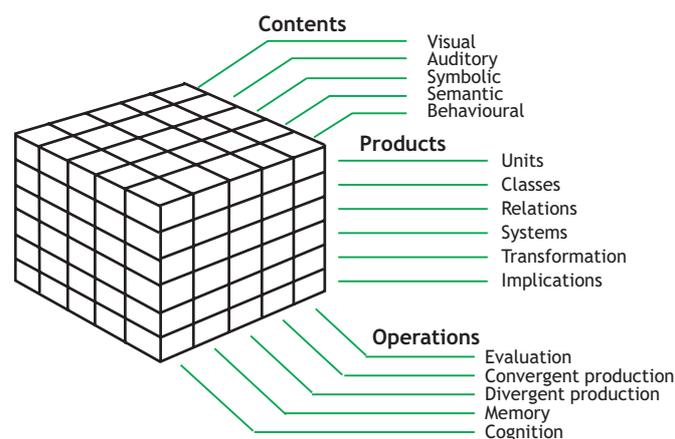
“The multi-factor view, which seems to be making substantial headway at present, assumes that, on the contrary, there are numerous unique intellectual abilities (but not an enormously large number) that collectively can be regarded as composing intelligence.....and with respect to the nature-nurture issue, there are, moreover, some indications that learning may well make substantial contributions to those abilities.”

Today, the model describes 150 separate factors of intelligence, developed out of the original 120 factors as a result of repeated

testing over a long period of time: the extra 30 factors are more finely related to the actual performances on the tests. When Guilford had first got to the point of creating a theory to describe what he had discovered in his military testing, he developed the tentative SI model and tested the model using a wide range of psychometric tests. These gave him operational definitions of the various abilities proposed by the theory, and he used factor analysis to decide which tests seemed to measure which abilities. When he had found a battery of tests that factor analysis indicated were valid measures of each ability, he was able to refine them and check their reliability.

Each of these 150 factors can be separate enough to block your thinking if it is a crucial step in a learning process and you haven't developed it properly. For example, if you have a weakness in one of these units, visually recognising quite basic behavioural information such as the way someone smiles (as a researcher I know with Asperger's syndrome does), then that means your evaluation of their interpersonal behaviour is blocked and may cause serious problems with behavioural or people relationships. On the other hand you may have a particular strength in several others of these factors, which you can use to help solve that problem. An actual example I have used is to exploit the fact that the person with the Asperger's problem was very highly developed in qualitative social research techniques (conversation analysis and so on). When this process of him interacting with research subjects in one to one conversations was filmed, the facial expressions of the interviewees could be correlated with the conversation, and slowly the investigator built up some skills in recognising what visual expressions mean. This is one of the reasons why the model is used so widely in education, because it enables learners' information processing weaknesses to be identified and remedied.

For simplification purposes, Guilford structured his findings in the form of a cube.



In the SI theory, intelligence is viewed as comprising five types of mental processing that he calls 'operations': these are 'cognition' (which is really 'awareness' or 'recognition'), memory, generative or creative thinking, which he calls 'divergent production', 'thinking

logically and in a linear manner' which he calls 'convergent production', and evaluation.

The type of intellectual material with which the mind works he called 'contents'. There are five categories here:

- visual information and auditory information (these two he originally categorised as one type called 'figural' content)
- symbolic information, such as numbers or musical notation
- semantic information, which is information carried in forms of language whose meaning has to be processed
- and behavioural knowledge, which is where he locates social and emotional intelligence.

So the learner may be operating in any one or more of the five areas of knowledge and may be processing the information by one or more of five types of thinking. The learner's ability to do so will depend on underlying abilities to deal with what Guilford has classified into six kinds of products: units, classes, relations, systems, transformations and implications.

To give a behavioural example: assuming that the learner is managing a children's play group, among other things, she will be using her behavioural intelligence.

- 1 If she is good at recognising sudden changes of children's movement then that is based on the cognition of behavioural units because they are single items of behavioural content.
- 2 If she realises that this is part of a typical pattern of movements, then she is good at the cognition of behavioural classes.
- 3 If she observes a sequence of activities among the children and works out how one thing leads to the others, she is evaluating behavioural relations, which means understanding how units of behaviour generate other units.
- 4 She will have to deal with the group as a whole, and there may be lots of personality types and lots of different activities, but in any group of people behaving together, there is an overall pattern where all things influence each other; if she is able to analyse this overall pattern, this is her ability at evaluation of a behavioural system.
- 5 Supposing the group's behaviour becomes rather ragged and ill-tempered, and she then knows how to turn things around so that the group starts to act differently and productively. If so, she is probably good at the convergent and/or divergent production of behavioural transformations, at least in this sort of situation. Her youth leader can show her how to transfer this ability to groups of older children, even adults.
- 6 The ability to spot in advance that a pattern of interaction could lead to serious disruption of the group, is the convergent

evaluation of behavioural implications, which is the last of Guilford's units.

Since all these behavioural products are linked at one level, we assume they are all part of the same general behavioural intelligence, but Guilford's work has shown that they are separate abilities, that ideally become linked up into a rich behavioural intelligence. Even someone good at analysing behavioural implications may not be particularly good at recognising specific units of behaviour. Since each of these dimensions can be independent, there are theoretically 150 different components of intelligence. Guilford's earlier version was 120 factors. Treating this statistically, it was found that:

“Supposing only 4 of the 120 factors are completely independent, of significance intellectually, and determined independently genetically (this is deliberately taking a very cautious view), then, ignoring genetic accidents such as mongolism and perinatal and environmental effects, it would follow that only one person in sixteen, or less than 7 per cent, would be below average in all of these abilities; or put another way, over 93 per cent of people would be above average in one or more of these 120 abilities.”

(Owen and Stoneman, in Rubinstein and Stoneman, 1970).

My own preference is actually for the earlier version of 120 factors of intelligence (that conflated visual and auditory contents into figural content, which seems to me better because it can be used to describe kinesthetic intelligence as well). When Guilford wrote the 1967 study, he reckoned that his analyses had shown that only 8 of the 120 factors of intelligence were covered by the g concept, and that his analysis of the then recently revised Stanford-Binet intelligence test showed that only 28 of the SI factors were being tested by the Stanford-Binet test.

The 1970 quotation from *Education for Democracy* was written when the issues of genetics were much less well understood than today. Today I would argue that, although genetic inheritance undoubtedly has some part to play in determining the basis of our intelligence, there is no evidence that it sets definable limits to our intelligence. It may influence our early intellectual preferences and affect our interests, but we should use whatever evidence we find of our thinking and build the new thinking we need onto that. The methods of even the best intelligence tests or models are very crude in understanding the intellectual power we have, in the way Tony Buzan describes it. We should be much more concerned with using psychological and physiological insights to generate strategies that will raise people's intelligence to a high level. The SI model tells us that even if only one of these factors is at all developed (it may be an apparently very minor factor) we can use that factor to connect up with other factors, to raise the level of the whole information processing structure of the intellect.

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## Reading 8: Pacific perspectives on learning: Pacific thinking styles

(Excerpt from 'Vernacular Languages and Classroom Interactions in the Pacific' by Ana Maui Taufe'ulungaki, in Thaman K. H. (ed) 2003. 'Educational Ideas from Oceania'. IOE, USP, Fiji. pp 13–35.)

In Pacific cultures, which value respect, generosity, loyalty, cooperation, sharing, humility and fulfilment of mutual obligations, among others, the nature, forms and structure of knowledge are perceived differently, which in turn gives rise to different speech rules and communicative behaviour and consequently teaching and learning strategies. The thinking of Pacific Islanders is said to be right-brain oriented, which tends to be:

- creative, holistic and spatial
- divergent instead of linear logical
- interpersonal, which favours group activities, spoken over written language, and demonstration and doing rather than verbal direction; and
- kinaesthetic, which lends itself to physical activities.

Such thinking styles are manifested in a number of ways. The Aborigines (the Yolingu) of Milingimbi in Arnhem Land, for example, have certain beliefs about knowledge: that it is a closed system and a valuable commodity, and knowing is a privilege reserved for those with appropriate status within the community.

Speech is used mainly as a means of developing and maintaining social relationships rather than for the organization of activities and for giving instructions. It is characterized by extended silence, little eye contact, and little use of personal names and formal greetings. There is a verbal sense of equality in that it is little modified when addressing persons of different ages. In this cultural context, the key learning strategies are:

- observation and imitation rather than oral or written instruction
- personal trial and error rather than oral instruction and demonstration
- performance in real life rather than practice in contrived settings
- mastery of context – specific skills rather than learning decontextualised and generalisable principles;
- person-oriented, which relies more on the nature of the relationship between participants in the learning process than on the nature of the knowledge being learned (Harris, 1980, as reported in Ninnes, 1991).

## Polynesian knowledge systems

Some cultures such as Tongan make a clear distinction between knowledge (ilo) which is acquired through learning (ako) and wisdom (poto) which is the 'beneficial use of 'ilo' or 'knowledge' (Thaman, 1988). Clearly, knowledge is not expected to be achieved for its own sake, only if it is worthwhile and benefits others. Three basic contexts have been identified for informal learning in Polynesia:

- the desire for social cohesion through the maintenance of good relationships, which takes the form of cooperation
- the closed knowledge system, which affects the way knowledge is viewed, and linguistic rules for knowledge transfer and the use of questions and answers
- the significant role of peer groups in fostering learning.

These contexts give rise to certain learning strategies: observation, participation and imitation (Ritchie and Ritchie, 1979; Jordan et al, 1981). Lesa (1995), for example, in his study of the learning styles of Samoan students, reported that:

“62% identified with the participant learning style and another 21% identified with the collaborative learning style.”

Both of these styles characterise 'group' learning. .... Thomas found, for example, that there is a high degree of sensitivity to social cues and the emotional tone of the interaction; low intensity of communication between parents and children, as parents were less involved in looking after children, and a high degree of interaction between family members beside mother and father. While pakeha (European) children were predominantly individualistic and competitive, Pacific Island children demonstrated more sharing and cooperative behaviour.

Similar findings were reported by Ninnes (1991) in the Western Province of Solomon Islands where knowledge systems are closed and new knowledge arises from and is validated by external sources such as ancestors and dreams. The common learning strategies that emerge from these specific cultural contexts are: observation, imitation, listening, participation and asking. The questions are of the information-seeking type and to obtain technical advice.

In the Pacific then, where behaviour is mostly governed by the need to maintain group harmony, the values of cooperation, good relationships, consensus and respect lead naturally to congruent learning strategies, such as the preference for working in groups, interacting with peers, and learning through observation, imitation and doing. These are in stark contrast to classrooms where the stress is on teacher – directed individual achievement, competition, curiosity, extended verbal interactions and decontextualised pupil participation.

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## Reading 9: Principles that underpin the learning on this Diploma

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(Adapted 2007 by Lewis Owen, from the first Draft Commonwealth Diploma in Youth in Development Work Tutor's Manual.)

### Reflective practice

The concept of reflective practice is important to the work of the Diploma. We tend to favour Paolo Freire's version of this, as suggested in *The Pedagogy of the Oppressed* (1972). Freire was very influenced by the humanistic aspects of Marxist theory. Marxism sees human beings as agents who continually construct the world anew around what they find there and around their understanding of what is possible. In doing so, they at the same time construct themselves and their abilities anew. To do this they have to be organised into a social structure, and that structure is sometimes hostile to the changes that people would like, so conflict arises between those social classes that are moving forward and those that are controlling the present system for their own benefit. Marx saw no real limits to human development other than the potential of the material world's resources. But he did see how powerfully reactionary social classes controlled the ideas and actions of the progressive classes.

Freire's mode of development of literacy among poor peasant communities was through the world of action (or practice). His peasants learned to read and write because reading and writing were essential tools that allowed them to understand what actions to take in order to change their oppressive conditions. Freire's method was to get his subjects to 'name the world' as the first step, because, he argued, once you name something and understand what you mean by the name, you then have some power to change it.

The method of assigning names is quite important, because the names need to be both precise in meaning and yet open to the meaning being changed: this change is caused by the way that our understanding of the ideas is affected by our actions. He made use of important named ideas that he called 'generative themes'. He had identified these ideas as the key themes for understanding what was causing the poor peasants to be oppressed and how to reverse this. Such themes might be, for example, around the price paid to small farmers for their coffee by middlemen.

He began by making a representation of such issues in the real world in some concrete form, such as a picture or drawing, or an actual bag of coffee beans. Words were then attached to these representations as labels. He established with them that these written forms were based on basic elements of meaning that could be broken down and recombined in different ways to produce different meanings. By doing

this to the concrete representations of the generative themes, he showed how reality and language in combination could be used to demonstrate how the real world could be changed. In the case of the price of coffee beans, he could show from analysing the concept of price and its associated terms – market, trade, competition, value, how a local market monopoly could accentuate and exploit competitive tendencies among farmers, and they could see, from the detailed nature of the representation, what elements of the situation might be altered and brought under their own collective control, while also realising the importance of keeping that company afloat if possible. At the same time, they were using this to learn to read and write. This was one of the forces that eventually led to ‘fair trade’ types of arrangements for selling coffee, as humanitarian European entrepreneurs have also come to understand the issues. He puts it like this in *The Pedagogy of the Oppressed*:

“To exist humanly is to name the world, to change it. Once named the world in its turn reappears to the namers as a problem, and requires a new naming. Men are not built in silence, but in words, in work, in ‘action/reflection’.”

## The cultural principles that underpin the learning on the Diploma

### Dialogical learning methods

Freire distinguishes between what he called the ‘banking model of learning’, where you put a piece of learning away in your mental bank without your schemata accommodating it first, and the ‘dialogical mode of learning’, where student and tutor engage in the exploration of ideas as equals in a learning dialogue in order that the learning is properly understood and used and your schemata accommodate it.

Of course the tutor may well be an authority in the field under discussion, but a dialogical relationship requires that the tutor is not in authority. It is well accepted in applied linguistics that presenting an idea to yourself in words deeply affects that idea. For example, the memory of real events can be distorted by the way we encode them in words, through what psycholinguists call the mechanisms of ‘levelling’, ‘sharpening’ and ‘assimilation’. In psychological studies it has been found that in delayed response experiments of any kind, verbal coding allows research subjects to delay their responses indefinitely, because they can invent a verbal rule to guide their performance.

Although the quality of your language experiences does not determine your mental processing of the real world, it influences it powerfully. The relationships controlling learning dialogues are crucial in their influence on the quality of learners’ linguistic experiences and therefore of their learning experiences.

## A cognitive apprenticeship

When you acquire any kind of knowledge, the nature of what you have acquired is deeply influenced by the culture of the situation in which you acquired it. The way the thirteen modules have been designed is such that you will be expected to become quasi-practitioners of the various disciplines in the Diploma course. And that involves quite a penetrating grasp of the principles of the content outlined in the modules, if you are going to apply these in facilitating the development of young people. However, it doesn't in any sense require that you get a thorough knowledge of the scope and detailed methods of the disciplines concerned.

To achieve the Cognitive Outcomes of the module on Commonwealth Values, you do not require a course in political philosophy, but you do require a basic grasp of the sort of questions political philosophers ask, and the ways in which political philosophers tend to construct explanations of how to analyse and tackle political problems in the real world.

What we are asking is that the subject matter of the various modules be treated not as 'bodies of knowledge' but as 'practices'. We are hoping to facilitate for course members the practices of the sociological thinker, the planner and the environmental activist in order to extend your competence as developers of the skills of youth development. Of course, that involves acquiring some of the content in those fields, but only enough to facilitate the growth of the practical skills and modes of thinking involved. We can probably agree that all forms of inquiry begin with the basic questions typical of the specific area of knowledge being employed: sociologists ask certain types of questions about issues in the social world, psychologists other questions, planners different questions. These come from the typical 'angle of approach' taken by the various types of practitioners.

These questions relate of course to theories of various kinds typical of the particular disciplines concerned; important as these theories are, however, they should be viewed as part of the practices of the various disciplines, rather than ends in themselves. Because the theories are the most obvious part of these disciplines, it is tempting for you to put your main effort into studying the theory as an end in itself. Theoretical knowledge is of course a profoundly important part of competence, but the key issue is the role that knowledge plays in the 'practice' of the subject. If it does not influence the way you actually see the deep level issues in the problem that confronts you, nor helps you to focus on the steps necessary for successful action, then it is what A. N. Whitehead in *The Aims of Education* (1929) called 'inert' knowledge – knowledge that you have put away in your knowledge bank.

## Active and inert ideas

Whitehead's view was that teachers should cover only a relatively few key ideas in a subject, but that we should teach them in as challenging and open-ended way as possible; they should be combined in all sorts of different combinations so that they become 'active' ideas, full of potential for new thinking. We feel it important for you to focus on each module in this way. That reduces information overload and should give you considerable control over the material in a module, so that anything new you might encounter in that field becomes relatively easy to manage.

As course developers, we have assumed that a crucial aspect of the action knowledge that course members must acquire are the basic questions practitioners ask in the fields represented by the modules. It is clear from cognitive theory and research and from studies of perception that the key to all learning is 'meaningfulness'. Where a new experience is made meaningful either by being assimilated into some knowledge the learner already has, or where that knowledge is made to accommodate the new experience in a meaningful way, then the learner will understand it.

The approach to a module will normally be problem-based, and we have aimed to help you to address these problems by posing the questions in a way that we hope is meaningful to yourselves but also germane to the field being studied in the module. Having formulated tentative answers to these questions by accessing some of the research and theory in that field, each participant must then develop well-structured ideas to support practical actions to deal with the problem. We feel that these well-structured ideas are best built up inductively from your real experience and from your practical understanding of the theory and research. They will then form a deductive framework, enabling you to tackle problems on a principled basis.

## Andragogy not pedagogy

The important first step in developing a rationale for youth and community development work is to stress that the approach to young people should be andragogical rather than pedagogical. In other words, the approach is based on what theory and research normally agree to be those learning methods most suitable for adult learners. There is plenty of evidence that even young children learn best by reorganising what they already know in the light of new experiences. In the case of adults, who have vastly greater stores of knowledge and experience, andragogical studies indicate that the process of learning must not only be based on adult relationships but also on the accepted understanding of the way adults acquire new knowledge. The implications for the work of the Diploma suggested by this are that, though there is a lot of what will to most course participants be new knowledge, the teaching of that material should generally be based on helping you to reorganise what you already know, in the light of new insights.

## References

Freire, P. (1972) *Pedagogy of the Oppressed*, Penguin

Whitehead A. N. (1929 ) *The Aims of Education and other essays*,  
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## Reading 10: Learning strategies

By Dr G. Gunawardena, Sri Lanka, for the Commonwealth Secretariat

This reading explores some of the strategies or methods that facilitators can use to enhance the knowledge, skills and attitudes of adult learners.

The following strategies are discussed:

- small group discussions
- skills analysis methods of instruction
- demonstrations and practice sessions
- problem-solving
- role-play and simulations
- project work
- case studies.

### Small group discussions

Although learning is an individual internal change, most of us actually learn in groups. One to one teaching and learning is not possible in many adult education programmes due to lack of resources (money, time and human resources). Therefore, in the majority of situations, teaching of adults takes place in groups.

There are two types of discussions that can be practised with adult learners. The role of the trainer and learners may change according to the type of discussion selected for a particular occasion.

### Trainer-initiated group discussions

In trainer-initiated group discussions, the trainer plays a leading role. S/he selects topics for discussion, prepares plans, guides, manipulates and dominates proceedings and finally engages in evaluation to see whether the group has achieved the intended objectives.

Learners do take part in such discussions but the communication will be a two way process; from trainer to learner and learner to trainer. Therefore, learners will hardly get a chance to talk with others. However, trainer initiated discussions are popular in many adult education programmes. The main advantage is that the group can easily be directed towards an intended goal within the least possible time available.

When looking at trainer-initiated discussions from the point of view of the trainer, s/he can get a much better understanding of the learners and of their problems. Distortions and misunderstandings in

learners' perceptions can be identified and corrected. A close interaction between trainer and learners, and learners and learners can develop.

Trainer initiated discussions, however, also have weaknesses. Such discussions ignore the view that adult learners are capable of making valuable contributions to the teaching-learning process.

### Free-group discussions

Free-group discussions will solve some of the above problems. With this method, the trainer is no longer the sole source of information. Peers become a potent source of learning.

The group must have a constant flow of new ideas and information to make such discussions a worth while experience. Text books, stories, poems, dramas, audio visual material, photographs etc., can be used to facilitate free group discussions. Read the following example:

“The Humanities Curriculum Project of The Schools Council and The Nuffield Foundation (Heineman, 1970) developed a battery of evidence (films, tapes, photographs) to supplement the teacher. According to the findings of this project, the only tenable position for a teacher to adopt was a value-neutral position. The value neutral teacher participates in group discussion, but, being aware of the limitations of her/his participation, will not take sides in it.”

(From J. Rogers (1982) Adults Learning)

Interaction with the other members of a group can improve self-confidence. In addition this type of discussion provides opportunities for ‘collaborative reflections on the meaning of group members’ experiences’ (Lindeman, 1930), and ‘development of thinking skills and natural relationship patterns’ (Brookfield, 1994). Group discussions are used as the chief teaching medium in Danish Folk High Schools, Swedish Study Circles, and the Canadian Farm Forum (Brookfield. 1994).

### Do all members of a group benefit from group discussion?

There may be variations of benefit in relation to the individual differences among your group members. For example, those who are very talkative may dominate the discussion, perhaps leaving others in a frustrated situation. Some refuse to take part in discussions in the belief that ‘others know much more than me’. Some may think that they cannot gain anything by talking with others.

Since trainer-initiated as well as free-group discussions have their own strengths and weaknesses, to overcome problems trainers are encouraged to use a combined approach wherever possible.

Here are some suggestions for the improvement of group discussions:

- Create a friendly informal atmosphere to reduce the tensions and fears of learners and to keep them at ease.
- Try to match topics with what you know about the characteristics and needs of the learners.
- Use small groups to allow each member to make enough contributions.
- Practice a variety of techniques (trainer-initiated, leader-initiated, free group).

## The skills analysis method of instruction

Skills develop with experience and practice. A person can be highly skilled or not so highly skilled in performing a particular task. Skill analysis identifies the gap between required performance (what it should be) and the existing performance of learners or trainers. Skills analysis is particularly suited to complex semi-skilled operations in industry if they are of a repetitive nature: In such operations, a novice will perform so much worse than an experienced worker. However, with analysis based training the novice will usually quickly master the necessary skill.

Romiszowski, A. J. (1986) explains how skills analysis can be carried out in relation to small tasks. The tasks involved in the very simple skill of opening a can involve more steps than you might think, but can be broken down to the following:

- 1 Grasp the can.
- 2 Rotate the ring into correct position.
- 3 Lift the ring.
- 4 Pull the ring.

Once the analysis has identified the chief sources of the difference between master and novice performance, a procedure can be implemented. Given below is one example taken from the TWI approach, a seven step method of instructions (McCord, 1976, highlighted in Romiszowski, 1986).

- 1 Demonstrate to workers how to do it.
- 2 Explain key points.
- 3 Let them watch you do it again.
- 4 Let them do the simple parts of the job.
- 5 Help them do the whole job.
- 6 Let them to do the whole job but watch them.
- 7 Put them on their own.

Work place situations make use of the skills analysis method both formally and informally. The facilitator has a central role to play in relation to skills analysis method.

## **Demonstrations and practical sessions**

Demonstrations and practical sessions are widely used in adult education even though they provide limited opportunities for active participation.

### **How do demonstrations differ from lectures?**

In a lecture, nothing is asked of students other than the appearance of polite attention. In demonstrations, learners will either observe the material or process demonstrated by the teacher or sometimes actively take part in the process.

### **How can a trainer facilitate learning by using demonstrations and practical sessions?**

When demonstrations are carefully planned, the knowledge and skills objectives can be easily transmitted to learners. However, when the restructuring of the attitudes of adult learners is needed, demonstrations are more difficult to use. Case studies might be a better strategy.

A skilful trainer can facilitate learning by:

- selecting suitable audio-visual material to be presented (the appropriateness will depend on the subject, group and available resources)
- using them in the appropriate manner and time
- providing opportunities for learners to practice immediately after the presentation
- and making very short and clear presentations.

## **Problem-solving**

Learners are asked to solve everyday problems in small peer groups or individually. As they are actively engaged in the problem-solving process, there is no need for them to make special efforts to memorise concepts or principles. The knowledge and skills acquired by solving problems should have a direct relevance to their everyday lives.

Learners should follow a systematic process which involves five important stages to find a solution to a problem:

- 1 Identify the problem.
- 2 Formulate objectives.
- 3 Prepare data-collecting instruments.
- 4 Collect and analyse data.

## 5 Make conclusions and recommendations.

### Identify the problem

The simplest way is to present a problem orally or in writing, with all the necessary instructions to be followed. In addition to that, the facilitator can direct learners to identify different problems in the light of carefully selected or developed material, such as case studies, films, photography, maps, charts etc.

In order to do that, the facilitator should have a clear understanding of the characteristics of the learners. Learners can be encouraged to identify a problem of interest to them and related to their immediate surroundings.

### Formulate objectives

Objectives should be clearly defined either by the facilitator, or by learners under the guidance of the facilitator. They will provide a clear direction to learners to identify possible solutions.

### Prepare data-collecting instruments

The decisions regarding the data collecting instruments (e.g. questionnaires, interviews, surveys etc.) will depend on the objectives of the problem solving process. Learners should be given some direction on a number of possible avenues to explore in order to come to satisfactory conclusions. The facilitator can help them in identifying:

- what questions need to be raised
- how the information could be explored
- whether there is a need for more data.

### Collect and analyse data

The facilitator should help learners to organise data in a meaningful way, to identify possible relationships of the factors with the present problem, to explore underlying issues etc.

### Make conclusions and recommendations

This can be done orally or in writing, and may in fact lead to another round of problem-solving, or further action.

## Role-play and simulations

Teachers in primary grades often use role play and simulations to transfer necessary skills and information or to develop positive attitudes in children. There, the teacher may take the initiative by performing different characters in front of the class, by guiding students to practice selected roles in an appropriate manner and also

by initiating discussions after role-play activities have taken place. However trainers of adult students must act in a different way.

The trainer needs to explain the objectives of using role play or simulations with the group. In other words, the learners should have a clear understanding of why they are doing the activity.

Following are some of the advantages of role play and simulations:

- Role plays and simulations encourage active participation which is very important in adult learning.
- We all make mistakes in real-life situations. Some are very expensive and cannot be modified. By participating in role plays which are close to real-life situations, the adult can find answers as to why mistakes have been made and what should be done to avoid those mistakes.
- Role play or simulations are an excellent way of motivating people who find it difficult to learn in other ways.
- Role play or simulations are excellent methods for kinaesthetic learners, as both can involve a total body response.
- These methods are suitable for classes with a range of learning preferences. Characters can be selected according to the individual differences in the group.
- These methods improve social skills such as leadership skills, communication skills.

There is no ideal way of preparing and carrying out role plays or simulations. It mostly depends on the objectives of the lesson, competencies of the trainer and characteristics of the student group involved in this task. Some role plays are very simple and hardly need any preparation at all. However, we must not forget that the group of learners should be informed about the role plays well in advance. If not, it may become a waste of learners' and trainers' time.

## Projects

“Project work usually involves groups leaving the cocoon of the classroom and venturing out to seek raw materials from local people, records or conditions... The result of the project, its end product, has often been in a form which involved offering something to the community.”

Rogers J. (1982:188)

The passage highlights some of the basic characteristics of a project. These are that:

- learning occurs in an informal setting
- resources to be used are plentiful
- something new will be contributed to the community at the end of a project.

In addition, the following characteristics should be taken into consideration to get a clearer picture. They are that:

- projects emphasise the personal commitment of learners
- learning is something that is directly related to the context of learners' own experiences and skills
- individual differences can be treated in an effective, individualised manner.

Therefore projects can be regarded as a means of learning by doing and teaching by investigation. This necessitates a change in the role of the trainer. APPS's explanation (1979) about the role of the facilitator seems to be much more relevant in this context.

According to APPS, the trainer should perform the roles of a trainer, conditioner, model, resource and a guide in individual, group or community setting.

### How could a trainer facilitate learning by using projects?

The most popular form of projects involves all members of a group. Apart from that, small groups can be formed to work independently under different projects or parts of a project. When forming small groups, the trainer must be aware of the social relationships among learners. When people are encouraged to work with their friends, they perform best. Therefore, the trainer as a facilitator should not try to encourage new relationships. That will slow down their participation, thereby weakening the effectiveness of the project.

The facilitator should be able to get the maximum benefit of having a group with varied learning modalities, by directing them towards a variety of end products. For example, those who are competent in writing could be directed towards producing comprehensive written documents, while encouraging some to present their work in other formats, for example AV productions, drama, art or photography.

The least experienced people should be guided and trained to identify links between materials in a meaningful way. On the other hand, opportunities can be provided for utilising old skills as well as developing new skills of the members for the benefit of the group. The growing sense of fellowship and group feeling should be improved.

### Case studies

Case studies represent real life situations that can be used for discussion, problem-solving, or simply to illustrate concepts that are being presented. They are useful also for illustrating attitudinal aspects of a situation.

Case studies can be presented in print, audio, video or other modes. It will depend on the facilities available and the characteristics of the group of learners involved in the learning process.

Trainers should be careful not to include confusing and conflicting details in case studies. Some trainers use case studies to stimulate interest and motivation.

Directing learners to gather information for their own lengthy, formal case studies is another strategy a trainer could use.

Creating this kind of case study can be a complex process of:

- selecting a suitable case for study
- collecting data by using relevant instruments
- analysing and interpreting data collected
- drawing conclusions and making suggestions.

By conducting a case study, learners are expected to develop important research skills such as interviewing, questioning, observing, interpreting etc. In the initial stage of training, case studies make considerable demands on the trainer, not only because of the time and skill demanded for preparation, but also the trainer's ability to train the group to draw general points from specific examples.

Case studies involve a fundamental change in the trainer's role. The traditional role of giving information to learners is not encouraged in this process. Therefore, the emphasis will be on the quality and nature of the resources used and the valuable contributions the learners are able to make with the trainer's encouragement and guidance.