ENVIRONMENT EDUCATION PROGRAMME
TRAINING OF TRAINERS MANUAL

FOREWORD

This manual has been written as an adjunct to the Environmental Education Programme written as
a pilot project for UNHCR. Writing a training manual is only ever a shadow of what training is all about. This training course (and this manual) have been trialled over many different training sessions with a wide range of teachers from many parts of Africa. Although many of the concepts and methods are new for some teachers it has been accepted enthusiastically by them. I hope it will be as useful for you.

The manual and the accompanying classroom materials follow a strong personal philosophy of mine developed over many years of reading and teaching. It depends heavily on questioning skills and an open approach to the way children learn. It assumes that a lot of education takes place outside of the classroom and this education is vital to the child and needs to be incorporated with what the child is learning inside the classroom. These methods and skills which have been incorporated into the programme have proved themselves over the years.

ACKNOWLEDGMENTS

It is not possible to work alone on a programme such as this. This, like the rest of the programme, has been written in collaboration with many people. My thanks to them all.

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My thanks also to Chris Talbot (UNHCR Geneva) as this project is his brainchild and who gave me the opportunity to write and especially to all those people in the refugee camps of Dadaab and Kakuma who gave so unstintingly of their time and expertise. Thank you.
INTRODUCTION

This manual has been developed to help you as a facilitator, a trainer and a teacher. The course outlined in this manual has been trialled in the order in which it is presented and the subjects ‘flow’ from one to another. But the manual is not meant to be used like a textbook. It is not designed to be prescriptive, rather it should be used as a resource for your training programme.

The manual looks at “good teaching” and the skills required to develop “good teaching”. It is assumed that these skills are useful not just for an environmental education programme but also for all aspects of your professional teaching life.

There are no revision times listed although there are revision games and quizzes included in the appendices. Revision should happen regularly – if you use a game it is a nice way to finish each day or to ‘lift’ participants when they are flat or sleepy (like after lunch).

There are eight appendices some of which you will need to reproduce, and three handouts to be reproduced and distributed if you feel they are useful. There is no timetable included because each of you will have varying times for your workshop. Remember to allow plenty of time for discussion and try for a balanced programme; lectures interspersed with group work or activities. And remember NEVER spend more than twenty minutes talking!

I hope this manual will be useful to you not just for the environmental education programme but for all of your teaching career. Happy training!
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Introductions

Objectives

* To introduce yourself to the participants and the participants to each other.
* To build group spirit.

Method

* These methods will work for the group that you are training especially if they come from different schools. However you should point out to the teachers that these methods work extremely well with children especially at the beginning of a school year. Because they promote familiarity within the group they may help promote group dynamics.

Sit the group in a circle.
Start with your name and then ask the name of the person next to you.
That person then says his/her name and the name of the person next to them and so on around the circle.
Each person says their own name and then the name of the person next to them.

Same as above but ask the participants to think of an adjective that starts with the same letter as their name. They then introduce themselves by their name and their adjective (e.g. Sensible Sarah). Then continue as above.

* If the group know each other slightly you may want to try this introduction game

Sit the participants in a circle and throw a ball (or other small object) to a person saying your name and then the person's name to whom you have thrown the ball. This continues, not around the circle but across the circle in any order. Nobody should be introduced more than once (i.e. they should not have the ball thrown to them more than once). Continue until every person has been introduced.

Give each participant a blank card and say
   "Write your name, organisation, position or job and your hobby on the card"
Put all the cards in a box and mix them up. Ask the participants to select a card and find that person and introduce themselves and find out more about the person whose card they have.
Ask participants to introduce the person whose card they have to the rest of the group.

Introduction of the Course

Objective

* To enable the group to focus on the content of the course.

Method

* Lecture [The following are notes for the lecture]
This training course has been designed so that you become familiar with the contents of the kit and the methods used in the Teacher Guide. It should help your understanding of the environment and how it affects us and how we affect it. It should also help to enhance your understandings of exploratory and discovery learning as methods for learning.

All training courses can be split into two parts [draw a line down the centre of the flip chart/chalkboard] – content and method. This course is no exception: the content is the kit, the method is how you teach it. The method in this course however is also split into method and content. Sometimes to show a method we do that method ourselves, but in relation to something else. For example if I want to show you that small groups are an effective way to learn, I may ask you to work in small groups but to discuss active and passive learning. In your own notes you need to be aware that there is a duality about what and how you are learning.

Expectations.

Objectives

* To enable the teacher to understand and cater to the needs of the group.
* To focus the attention of the participants on the objectives of the course (to develop their "mind set").

Method

Give each person a card or piece of paper. Ask participants to write down the major thing they hope to achieve from this course.

Each participant should present their expectation to the group and then paste it on a large sheet. This sheet should stay in view for the duration of the course.

[If the group is large, then participants can work in small groups where each group has a sheet of ]

As the facilitator, summarize the expectations taking into account what the training course is aimed to achieve, what it is possible for you, the facilitator to achieve and pointing out that as adult learners the participants must also take responsibility for their own learning.

The Environmental Awareness Programme

Outline of the Kit

Objective

* To enable the group to see what the kit contains and why

Method

[Large group work, demonstration and lecture]

Ask the group to write down all the elements of the environment that they can think of. This should be done without speaking to anyone else.

List the responses participants have made on the board/flip chart eliminating any that are mentioned
for a second time.
Now ask the group to go outside and list everything they can see and feel.
When they return compare the two lists.
Are there additions from list 2 to go onto list 1?
Point out (if necessary) that everything that they see (and feel) is a part of their environment.
It is the function of this programme to help the children understand their environment and how it affects the way they live and also how they can affect it and make it easier to live.

Open the kit and show the component parts (but not the books).
Explain that the kit is also supposed to be “environmentally friendly” and accessible to all so that “science” materials have been kept to a minimum. Everybody needs to understand about the environment and how we affect it; not just people studying science. This kit tries to “demystify” the knowledge and skills not make them more esoteric (removed from ordinary life).

Show the contents one at a time explaining that they (and other things available at the school) are used for experiments that are described in the pupil’s workbooks that are also part of the kit.

[Make sure these added items are available for your training as well]

Give out the workbooks (all levels) to each participant. Give out Teacher–Guides one between two. Explain that the TG is cross–referenced lesson by lesson to the workbooks. Allow time for reading and cross–referencing in pairs.

The Philosophy of the Programme

Objective
To enable the participants to understand why the kit has been designed as it has and how it should

Method
[Group work and lecture]

The following are notes for the lecture

The kit has been designed so that it correlates to the Kenyan syllabus. The detailed cross–referencing is in the Teacher Guide. Most of the cross–referencing is with Science and they need to work closely together – even where, on occasions, the same experiment is used in Science it is to show the properties of a substance while in the environment programme it is applied to our needs and the resources of the environment. The lessons are designed to foster and use the children’s language skills, their mathematical skills and the skills needed in social science.

But the kit and the programme are not just an addendum to the syllabus. Nor is it the syllabus in another form; the material has been written so that it is integrated into the whole syllabus.

Ask the participants to turn to the section in the TG where the course is cross–referenced to the Kenyan syllabus. Ask that they check some of the lessons that are marked to see how they can be incorporated as language or maths lessons.

Point out that the children are asked to acquire knowledge through exploratory and discovery learning and then they are asked to apply this knowledge. In the higher standards they are asked to analyse things they see from surveys, discussions and experiments and to offer solutions. These skills should not be unknown – they are all listed as skills to be gained from following the
Kenyan curriculum. It is sometimes difficult to ask children (and ourselves) to have a strong participatory and exploratory approach when we have not had this in our previous work and where it seems culturally inappropriate. But our responsibility to our children is to educate them – help them to develop skills knowledge and understandings that will help them to live in the 21st century. We cannot do this by using methods that belong to the 19th century.

The programme is not advocating disrespect for elders, teachers or traditions. Just the opposite in fact, many really traditional ways of doing things are environmentally very sound and it is the aim of the programme to build on these and encourage further sound practices.

This work must be guided by you the teacher – not by telling but by asking. Your questioning skills will be well polished after you have been using this programme! All of this requires from you that you be a good teacher – sometimes a great teacher!! This course will help you to polish the skills required for good teaching.
Characteristics of a Good Teacher

There are four different methods described here for establishing the qualities/characteristics of a good teacher. You would not use all of them. Choose two of the most appropriate methods for the group with whom you are working.

Objectives.

* To have the group identify the qualities they consider important in a good teacher.
* To analyse and categorise those qualities so that the requisite skills can be achieved during the course.

Methods

This first method works extremely well with children once they understand that they should not wait to be asked for their ideas and once they understand that there is not just one correct idea but all ideas are acceptable.

1. Explain the rules of "Brainstorming" to the group.
   [Ideas should be "first thing you think of" and not analysed
   All ideas are accepted and no criticism allowed
   Building on (or expanding on) other ideas is allowed
   There is a time limit of fifteen minutes (approximately)]

   Ask the group for any qualities they think a good teacher should have.
   Write these on a board/flip chart. [Try not to write a formal list as this implies a priority or hierarchy]

   The group should simply call out any qualities they think of. The facilitator should not ask people by name for their ideas. The idea here is a free flow of information.
   Keep listing qualities/characteristics until the group cannot think of any more or until fifteen minutes has passed.

   Categorisation of Brainstorm
   (a) Draw an outline picture of a person. Add features according to the characteristics stated in the brainstorm (e.g. big eyes for observant, big ears for a good listener, a heart for empathy). Ask if there is anything else the participants would draw onto the figure. The final figure becomes the "categorisation list" for the brainstorm.

   (b) Match similar ideas and name them conceptually (e.g. "understanding the group" and "caring for others" can be classified as "empathy"). As each concept is written, erase the brainstorm idea from the board. At the end you will be left with a list of single word categories. Ask the participants if there are any other categories they would like to add.

2. Pairs and Plenary

   Each participant works with the person seated next to her/him.
   Tell the pairs that they have ten minutes to discuss and list the top ten qualities they consider essential in a good teacher.
   The pairs discuss the qualities they believe are important in a good teacher.
   Each pair makes a list in priority order of the "top ten" qualities.
   These lists are read to the plenary group.
   The facilitator writes the qualities on the flip chart but omitting those that have already been listed.
   The list is pasted on the wall.
Discuss with the teachers that these are both good methods for working with the children. The programme (and this is reinforced in the Teacher Guide) requires lots of discussion and group work. These methods are good to start an open discussion with children who are not used to unstructured discussion.

3. Lecture  [The following are notes for the lecture]

The qualities of a good teacher may add up to be a "perfect person". Essentially what we want from a teacher is three fold: -

I. a general awareness and sensitivity as well as an awareness and understanding of the children being taught - the background of the participants, their level of understanding, their expectations, their limitations.

II. an understanding and knowledge of the content of the course (i.e. the teacher must know what s/he is talking about)

III. an awareness of what the children are to achieve - the objectives of the lesson - so that the class does not "wander off the track".

These qualities may include warmth, dedication, honesty, good health, integrity, empathy, professional knowledge, openness, dynamic, creative etc. etc.

The teacher needs to be able to put these qualities into practice and it is assumed that these qualities can be acquired, otherwise there is no need for training of teachers - either people have these qualities or they do not.

How can we train for these qualities? Which qualities are "trainable"? Qualities such as integrity, openness, awareness can be reinforced by training specifics such as:-

- Listening skills
- Observation of the group
- Questioning Skills
- An understanding of group dynamics
- An understanding of other people's points of view.

Listening skills. This includes not just listening to the words of a participant. It involves showing the listener that you are listening (body language - leaning forward, watching the speaker, nodding etc.). It also means that you must listen - not in order to respond but in order to assimilate what the speaker is saying. DO NOT BE AFRAID TO BE SILENT WHILE YOU ABSORB WHAT THE CHILD HAS SAID.

It allows you time to really respond to what the speaker is really saying. If you are unsure of what the speaker is asking, rephrase the question and say "Is this what you are asking?".

Observation of the Group. Be sure to look at all the children. Most people focus more on one side of the room than the other - left handed people to the left hand side, right handed people to the right hand side. If you sit in a circle it is easy to miss the people sitting beside you, or on the same side of the circle as you. Being aware and making a conscious decision to look at those areas will make the group aware that you are noticing all of the participants. Use your peripheral vision to notice when people wish to speak and to ask the quiet people to contribute. Allow questions whenever they occur. It is more important to answer the queries of the children than it is to tell your own story - after all they are the ones to be learning and they will learn more effectively when they are focused - as they will be if they are motivated enough to question or comment.

Questioning skills are so important that we will deal with them as a whole unit later in the course.
Group Dynamics. Within any group certain types of people will emerge. If you took all the "leaders" and put them into one group, in the other groups leaders will emerge. In every group there will be those who listen, those who speak and those who speak later (outside the group). Your job is to make sure that the group functions and produces the best (highest) thoughts of the group rather than the "lowest common denominator" or only those things which are so basic that everybody can agree without anyone being upset.

How? If your aim for the group is to make them think of new ideas then mixing those from different backgrounds, with different skills and different points of view is a good idea. If your aim is to solve problems that are subject or area specific then you may need to put together those with similar backgrounds. Groups should be not be smaller than five or larger than ten for small group work. The group needs to have a specific task and a specific time limit. It is your task as the teacher to make sure that the group knows exactly what it has to do and how much time it has to complete the task. It should have certain recommendations to put to the whole class.

Each group needs a scribe - somebody to write what the group says or plans to present; a delegate - somebody who will speak on behalf of the group to the class and a facilitator. The facilitator is very important. With a class you need to choose a child who is sensible and mature and can call on the strengths of the other children in the group.

Facilitators need all the qualities of a good teacher - especially an awareness of others in the group. The group needs to have a facilitator who has good questioning skills or at least is able to allow all members of the group to speak.

If you are not sure of the qualities of your facilitators then use strategies such a "matchsticks" to be sure that everybody in the group participates. Or "brainstorming" where each person has a marker and writes on the flip chart (not neatly or one at a time but as soon as they think of something). This encourages those who are quiet to contribute to the activity.

Group dynamics depends on trust in the group. And trust is difficult to establish immediately. There are "trust games" that you can use to help establish trust but even just talking about it helps. This means that you have to give of yourself, be an equal with the group, not a little "god" who knows everything. Give examples from your own life, then your group will be more prepared to reveal queries, weaknesses and flaws. You do not have to show yourself as a poor teacher, just as a human being.

Others Points of View. There are very few absolute truths in the world. Most facts are only opinion but are so deeply held that we assume they are facts or even truths. Once people believed they were the only people on earth - in fact several groups/tribes of people call themselves "the people" but this was obviously an opinion as we know there are many millions of people in the world. There are exercises that help people come to an understanding of others' points of view. We will do some of these exercises. Another way to become sensitised to other people's points of view is simply to listen to them. Ask questions that are non-threatening but that try to establish the belief involved in that person's point of view.

4. Drama

If the group do not know you or if they have not had the opportunity for very much training, then leave this exercise for later in the course. It may be incorporated into the lecture so that you are acting out items as you are talking about them. Otherwise the participants may not realise that you are acting - and it is not good psychology to demonstrate poor techniques to prove good ones.

Walk into the room, do not look at any one in the room and do not introduce yourself. In a monotone voice speak quickly about the benefits of good training methods. Walk up and down or rock from side to side, keeping the monologue going. Ask if there are any questions but keep talking if anyone raises their hand. Do not acknowledge that anyone has raised their hand. Write a list of good training methods on the board but talk while you are writing so that the group cannot understand what you are saying. When you have written your list turn to the board and again with
your back to the group explain each point. Be sure that your voice does not change tone or pitch. Be sure not to look at anyone in the group. Talk for about five minutes. \(\text{[Be aware that this takes a lot of practise - to do it without falttering and without laughing. If you are not secure as a teacher it will also be very difficult as you will be tempted to be a "good" teacher]}\)

Conclusion
Ask the group to analyse your "performance". List the things on the board/flip chart. If they do not mention some things be sure to mention them yourself to draw attention to the fact that they are errors in the teacher. Ask the group to think about which of these flaws they have and how they can rectify them.
Environment - Psychological and Physical

Objective.
* To increase the participants' awareness of the environment for training and their influence

Method
[ Lecture] [The following are notes for the lecture]
The environment created for teaching can be divided into two parts - psychological and physical. The psychological environment is the one you create as a teacher - the atmosphere created by your personality and characteristics as a good teacher. It includes all the things we talked of earlier - body language, eye contact, empathy, knowledge, sensitivity etc. It is determined by how you respond and react to the class. It determines how open your class will be and how responsive they will be to the messages you are giving.

The physical environment is the surroundings - the tables, chairs, size of the room, aides (e.g. flip charts, chalkboard etc.). There may be limitations here (in terms of what is available) but if the psychological environment is good the physical is less important - but where it exists you must make sure that it is conducive to the class and does not hinder learning.

[ Small Groups]
Discuss: "Traditionally we always have our seats in rows and the teacher sits behind a desk - to sit in a circle will not make any difference to the way we learn".
Half the groups should develop arguments to support this statement and the other half should develop arguments against the statements.

In an open discussion see what the advantages and disadvantages are.

Presentations

Objective
* To help the participants become aware of their own performances as teachers.

Method
Before the course begins prepare three pieces of paper each with a different topic (something you can realistically expect people will know about). Tape each paper underneath a different seat.

Ask participants to check under their seats. The three participants have two minutes to prepare their topic and then they each in turn give their five minute presentation.

After the presentation ask the presenter to write a critique of themselves - two good points and two bad points. After a few minutes, move to the group analysis but be sure to check if the "presenters" have had time to think about their performance.

The rest of the group is to analyse the presentations and offer comments at the end of each presentation based on the qualities previously established.
The audience must offer both a positive and a constructive improvement comment (e.g. perhaps if you tried ....) to the presenter.
Communication

Perceptions - Points of View

Objective

* To demonstrate that perceptions/points of view are not facts and that to effectively communicate we need to take into account others points of view.

Method

Show the "face/vase" card or the "two women" card. [Appendix II]
Ask a variety of participants what they see.
Keep moving around the group until you have about the same number of people who see each thing.
Ask who is right and who is wrong.
Initiate a large group discussion using the "matchsticks" discussion strategy.
Give each participant three matchsticks.
Explain that this is a round group discussion and that each person must lay down one matchstick for each point they make.
As well each person must use all their matchsticks.

[This ensures that all participants have the same opportunity to speak and make their points.]

Through the discussion try to demonstrate that especially in areas involving our values perceptions are often different from one person to another - and that this does not mean they are wrong - just different. Ask the group to relate some area in their life where they see that different people have different perceptions. Try to have the group come to the conclusion that other people's values and attitudes are just as important as their own and deserve the same respect you would give your own even though they are children. [Remember the lesson when you are training and do not allow old prejudices to guide your thinking - if somebody has a different idea ask yourself "why not? rather than "why?"]

One-way and Two way Communication

Objectives

* To demonstrate the limitations of one-way communication
* To demonstrate the advantages of two-way communication

Method 1

Divide the group into pairs.
Give one of each pair a bag with an object inside. The person is not allowed to look in the bag, but is to put their hand in the bag, feel the object and describe it to their partner.
The partner draws what the first person describes.
The partner is not allowed to ask any questions.
After five minutes ask those who were drawing to show their drawings - at the same time let their partners remove the objects from the bag.
Discuss the shortcomings of one-way communication.

**Method 2.**

Take two of the group out of the room. Show them the picture of the geometric shapes. [Appendix III]

Invite one of them back inside with a copy of the picture. S/he is not to show it to anybody.

Choose two other people from the participants. One is to go to the flip chart and the other out of the room (not with the first person.).

The participant with the drawing (the instructor) describes the picture to the participant at the flip chart (the artist).

The instructor stands behind the flip chart so that s/he cannot see it.

The artist is not allowed to ask any questions.

The second instructor is brought in and given the copy of the geometric drawing. S/he is not to show it to anyone.

The second artist is brought in. This time the instructor can watch what the artist is doing, make comment on it and the artist can ask questions.

Discuss with the participants which drawing is better and why. Discuss and list the advantages of two-way communication.

REVISION - Appendix VII
Types of Learning.

Passive and Active

Objective
*
To demonstrate the effectiveness of active learning in comparison to passive learning.

Method
Ask the participants to write on a slip of paper or card two specific things they remember learning. (It is important that they write specific things - not courses or ideologies). They should be able to write what it was, who helped them learn, how they learned, why they learned.
In groups of three the participants share their experiences and choose one thing for the group that is a good example of the learning that took place.
In the plenary group a representative of each small group tells about the one thing the group has chosen that they learned - the content; method; situation; people.
List the responses on the flip chart/board in four columns - under the four headings. Discuss as a large group how vividly they remember learning and how that relates to how they learned - how passive they were or how active.
The group should be aware that they remember things more effectively that they have actively learned.

Teaching Tips

Essential and Non-essential Information

Objective
*
To help participants understand how to prioritise information

Method
[Lecture and Small Group work]

Draw on the flip chart a target with a bull's eye and two other circles.
Discuss with the group that in every set of information there are essential points for the children to grasp, useful information for the children to know and other information - trivia or interesting information.
Put the participants into small groups or pairs and ask them to write (on flip chart paper) a series of points about some aspect of their work - preparing a lesson, supervising children in the playground, conducting a lesson.
Ask the group to put the essential information in one colour, useful in another colour and the trivia in a third colour.
Have the groups present their charts to the plenary and see if other groups agree.
OR
Put the participants into small groups and ask them as a group to list ten things they cannot live without (Material things - not love and friendship). Explain that now they are being taken to another place and each person can only take eight things - write these in a different list- but the authorities have misjudged and now there is not enough room - they can only take five things - get them to underline those five (they must agree as a group).
Discuss how much this reflects what is truly essential and what is merely useful.
Summarise the discussion by pointing out to the participants that we often teach children unnecessary things – we teach jargon, when plain every-day language is more appropriate and more easily understood. We teach detail when the children don’t yet have the concepts. We teach lessons that the children don’t need to learn at the expense of those they do need. We need to look very carefully at our children, their circumstances and the relevance of what we are teaching.

**Adjusting to Different Levels in the Class**

**Objective**

* To help the participants understand how to communicate effectively with the different levels in target groups.

**Method**

Ask the participants to work in groups of five (with people they have not worked with before). Ask the groups to list the characteristics of a class of standard 1 children (how well do they read, can they write independently, what behaviour patterns do they show) that need to be taken into account when teaching them. Then ask for a list of characteristics that need to be taken into account for a class of standard 6 children. Compare the lists.

Ask the group to work out different ways they would teach the groups considering their different backgrounds and experiences.

Ask the group to keep in mind the work already done: the characteristics of a good teacher and the necessity of matching backgrounds to link information the people already have.

[If you do not have much time ask each group to look at only one target audience, so that each group is looking at a different target audience]

**Summary Lecture**

Adjusting to target groups and then teaching the specific group effectively can be summarised as:

1. TTT - (in English) Tell what you are going to teach, (i.e. create a focus for the group); then Teach the group, then Tell them what you have just taught them (revision).
2. The link - to link the new material to information and understandings the group already have. If you are talking to eight year olds then be sure that the information that you are giving fits together with what they already know (not what you think they know or what you think they should know).
3. The background of the group must be taken into account and used to make the learning meaningful. Use examples from their own lives. Remember that people in the group will interpret statements quite differently unless you are very specific because they bring to the new experience all their previous experiences.

**Open and Closed Questioning**

**Objective**

* To help participants understand and be able to use questioning skills.

**Method**

Draw the nine square diagram, or the triangle diagram [Appendix IV] on the flip chart before the
session.
Explain to the participants that there are really only two sorts of questions - those which have a
correct answer and those that do not. Explain that many people assume there is only one way of
doing things or understanding things, when in fact there is a variety of ways to do things or ways
of seeing things (remember perceptions).
Show the diagram and write two questions - how many squares (triangles) do you
- how many squares (triangles) are there?

Let the participants answer, but point out that although the first question sounds like an open
question, there is in fact only one right answer and therefore it is a closed question even though
perceptions play a part. Discuss that true open questions ask "why?", "what do you think?" "is
there another way?", "what else can you add?". NEVER ACCEPT JUST THE ANSWER THAT
AGREES WITH YOUR OWN IDEAS. REMEMBER YOUR JOB IS TO HELP THE
CHILDREN TO DISCOVER, NOT TO PROVE HOW CLEVER YOU ARE.

In an open discussion (large group) discuss the advantages and disadvantages of open and closed
questions.

Conclusion

List the advantages and disadvantages on the flip chart for future reference.

REVISION - Appendix VII

Communication

Objective

* To help the participants understand communication in the context of group dynamics.

Method

Divide the participants into two groups. Ask one group to go outside and wait. Give each member
of the second group five small cards [any card will do, draw stars or something to make them
distinguished from those that the group use to write on.]
Explain to the group that they must not communicate with anyone unless they first swap cards. In
other words they do not speak to anyone who does not give them a card. If they want to speak to
anyone they must also give a card.

To the second group (outside) tell them to go inside and make friends with as many people as
possible inside the room.

Let the two groups "communicate" for about ten minutes.

Quietly give members of the second group cards and then let them communicate with the members
of the first group.

Bring the group together and discuss how they felt trying to communicate when they did not
understand the rules of the other group.

Discuss as a large group ("matchsticks" if necessary) what elements of communication are
necessary to make a group work.
Co-operative Learning

Objective
* To help the participants understand that for a group to work effectively there must be co-operation within the group.

Method
Divide the participants into groups of five or six and give them a problem to solve [such as the wolf, the sheep and the cabbage crossing the river; Appendix V]. Ask the groups to solve the problem and to look at how they solved the problem - who spoke, who explained, were people willing to say they did not understand in the small group? etc.

Because many people know the solution to this problem do the exercise a second time with the same small groups. Again, ask them not just to solve the problem but to look at how the group solved the problem. - The second story - The beautiful girl and the money lender (An answer is in Appendix V.)

Discuss as a large group how the small groups tried to solve the problem.
Discuss how this problem solving approach can be used with children in the class. Culturally the children belong to a society that works very co-operatively.
It is a very positive attribute of African life. Build on it and develop it so that the learning is real and more effective for the children.

Co-operative Learning - Exercise 2

Objective
* As before

Method
Show the group some honey (or sticky equivalent), some rolled oats, or ugali powder, a wire coat hanger and a hammer. Show the groups the diagram (Appendix IX). Explain that the groups are in a room with a cement floor and a pipe is cemented into the floor. Part way down the pipe is a ping pong ball. The pipe is just as wide as the ping pong ball. Using any or all of the things shown plus the people in the group, the group must find about ten different ways to get the ball out of the pipe without destroying the ball, the pipe or the floor.

Give the groups thirty minutes to find solutions and then bring them back to a plenary session. Discuss in the plenary all the solutions found and how many of them will have similar principles but the details will be different. Point out that learners will generally understand the principles but will find their own way of doing things - AND THAT THIS IS NOT NECESSARILY WRONG - JUST DIFFERENT. Unless a solution is absolutely wrong it should not be rejected - tell the group to try to get used to things being different but not wrong. Think back to perceptions.

Discuss as a group the ramifications of this exercise on the way we teach and the way that children learn.
Types of Presentation

Objective.

* To demonstrate the various types of presentation and the strengths and weaknesses.

Method
Give each participant a length of cord.
Read out the instructions on "How to Tie a Bowline Knot". [Appendix VI]
As you read, the participants should be attempting to tie the knot.
Check to see how many participants have tied the knot correctly.
* Point out that you have just given them a short lecture on the "Bowline Knot"

Now give each participant a copy of the instructions on "How to Tie a Bowline Knot".
The participants should try to tie the knot from reading the instructions.
Check to see how many participants have tied the knot correctly.
Tell the group that they have now been involved in participatory learning.

Take the participants who can tie the knot and match them with those who cannot.
Let them demonstrate how the knot is tied.
All participants should now be able to tie the knot.
Now the group has been involved in exploratory learning.

Discuss with participants which method is better under which circumstances and why. Explain
that research shows that we learn (remember) 20% of what we hear, 40% of what we see and
80% of what we do. [If you are lucky these percentages will have been proved by the three
versions of the knot ties.]

Point out to the group (if necessary) that it is not always a matter of one type of learning or
another. If someone in the group points this out that is much better than you saying it.

[Take the opportunity and draw a chalk line down the centre of the floor. At one end write "formal
lecture" and at the other write "discussion" (or "unstructured discussion").
Ask people to come and stand at the place on the line that represents how they train (Do they
lecture? do they sometimes discuss?)

When the group are sitting again ask them what they think this represents? [If you are lucky
somebody will point out that sometimes they do one thing and sometimes they do something else]

Tell the group that the line is, in fact, a continuum and that a good teacher will move up and down
the continuum as the needs of the group change or depending on the information it is necessary to
got to the group.

Methodology of the Environmental Awareness Programme

Objective
* To explore the methodology of the programme

Method
[Group work and plenary discussion]

The programme has been designed in a very particular way. The participants have been part of a
training course to help reinforce and develop their teaching skills. Now they have a chance to see
and understand the methodology of the environmental programme.
Divide the participants into groups of four or five.
Ask the groups to take their notes (from this course), their copies of the workbooks and the Teacher Guides and as a group to undertake an analysis of the methodology of the environmental programme: how the programme is to be taught (not what is in it).

The groups have forty–five minutes to look at the work they have undertaken here at this course and to see how well the programme matches this philosophy. The groups should also list any problems that they can foresee in the implementation of this programme when they go to their own schools for training and implementation. This list should be on one side of a flip chart sheet: the other side of the sheet should be for solutions. If possible the group should look for solutions themselves, but they may bring some back to the plenary session for large group discussion.

After forty minutes remind groups that they only have five minutes left. When they come back as a plenary group each group should present a short summary of the discussion of their group, the problems they can foresee and the solutions they can find. Any problems without solutions should be left to the end and an open brainstorm discussion held to look for solutions.

Remember all the rules yourself here about group work – keep circulating around the groups to guide them if necessary or to set them “on track” again if they cannot move ahead. DO NOT TELL, KEEP ASKING UNTIL THEY TELL YOU!!

In summarising the discussion point out (if necessary) that the programme has been developed with a scientific approach. This should keep the motivation of the children, which will mean fewer discipline problems. The children should know WHY a certain thing happens not just that it happens – and then know it only for the examinations. Because the schools are taking place under especially difficult circumstances, the community has been involved as far as possible because schools are one of the great socialising influence after family; and the children in the schools are the ones to lead the community in the future. Thus the community leaders of today and the community leaders of tomorrow are brought together to try and solve some of the problems that face us all.

This is also why so much of the work is concentrated in level 2 (std.3–4). After this time a lot of the children who will be the ones most influencing the environment of the future will no longer be in school. The programme has tried to instil the knowledge and understandings before the drop–out occurs.

**Critical Analysis**

**Objective**

* To help the participants understand the concept of critical analysis

**Method**  [Lecture]  [The following are notes for the lecture]

The first problem with this area is the terms we use. Critical infers a subjective approach and analysis infers an objective approach. What we really mean is a way of looking at a problem or a situation that takes into account all the elements and working out as objectively as possible and with all our professional skills what alternatives there may be.

Criticism can only really be effectively applied if it is done objectively. This means that you can criticise the idea but not the person. This still needs to be handled carefully as most people consider their ideas an extension of themselves. If you do not have a solution or an alternative suggestion, be especially careful about how you offer criticism - be very analytical. Do not use emotive or value laden language and remember that you are offering an opinion - not an absolute or
obvious truth. The level of analysis must take into account all the elements - content, method, environment (physical and psychological) and the outcome. To criticise one area (especially the psychological environment) is to make the criticism personal and subjective.

Make your analysis contain both positive and negative points - if there are no positive points then there is a good chance that you are not looking hard enough - there must be some good things (otherwise how does the person keep their job?). It is a good idea to start with some positive points about the work (NOT as personal praise - keep it objective) then raise some negative points - but offer alternatives or additions e.g. "would it make the work more effective if you tried ......" or "I had a similar situation and I tried ...... and it worked really well". Try to finish with positive comments - your aim is to improve the performance of your colleague NOT to prove how important you are or how much you know.

**Positive Feedback**

**Objective**

* To reinforce the concept of giving positive feedback and to explore its usefulness.

**Method** - Lecture  [The following are notes for the lecture]

Psychologists (the most famous of whom was Skinner) showed that positive reinforcement made learning more effective than punishment. Skinner measured the time it took for rats to learn their way around a maze (labyrinth). There were two forms of feedback. The first was an electric shock each time the rat went into a dead-end. The second was food at the "right" end of the maze. The rats who received the food learned more quickly than the rats who received the shocks. As you can guess the rats who received both learned most quickly. Even without knowing about the experiments most parents know how effective the dual (two part) approach is. One of our problems as teachers is that we feel that children need to be corrected rather than praised. In many cultures it is considered bad manners to openly praise - and it is then difficult to accept praise. But each one of us likes to be told when we are doing a good job - and the more specific that positive reinforcement the more acceptable it is; and the more useful. e.g. To say "I liked your work" is not as effective as saying "I liked the way you demonstrated with real objects and also the way you included all the group when you were speaking". You can be sure that the child will always use real objects to demonstrate with where possible and will be even more careful about including all the group. Often we feel that others become complacent ("lazy") if they are praised (WE would never do it!) - but try it and see what happens.  [Illustrate with a personal example]

Remember too that negative reinforcement is not the same as punishment. Negative reinforcement is reinforcing behaviour that is negative. i.e. Sometimes it in fact makes the behaviour occur more often rather than less often. This occurs very often with children - and is one of the reasons that we try not to provide negative models - why we are wary of providing the "drama" of the `negative teacher' for example. If we provide poor models ourselves then the fault in those we are supervising is ours. If we do not explain clearly and adequately, if we do not provide the principles/concepts with a series of examples, then we cannot expect that our children will be able to provide good reasoning, nor will they be able to provide alternative solutions if something goes wrong. To tell children only when they are wrong is to limit all their actions so that they will never try another way to see if that is right; they will only try the way that you have not yet criticised.

Positive feedback will aid the self esteem of your class, make for easier relationships between you and your children and encourage the children to become real and effective learners.
REVISION - Appendix VII
Planning a Teaching Session

Objective

* To help the group understand the elements of a training session and how to plan a session and then

Method

Discuss with the large group the elements of a teaching session: preparation; introduction; new content; revision; conclusion. Go through the elements of the handout sheet (Handout 3). Divide the group into five small groups and ask each group to look at one of the elements of the "planning of a training session". Let the groups discuss for ten minutes and then bring to the plenary group their points about their section. Add, if necessary, the importance of timing (sticking to the time allocated) and the comparative time each section should have, as well as reminding them of all the elements of training we have looked at over the course.

Divide the large group into groups of four (preferably with similar jobs or positions). Ask the groups to prepare a twenty minute presentation on one of the lessons from the environmental programme and each member of the group must give one part of the presentation - either the introduction, the content, the revision or the conclusion.

Give the groups fifteen minutes to prepare their presentations. Each group should give their presentation with a short general critique at the end of each session by the other groups. Impress on the other groups that their role is that of the audience (or trainees) as well as that of critics.

Have each group give their presentation and facilitate the critique ensuring that the critiques are both positive and constructively negative - and never personal.

Evaluation

Objectives

* To demonstrate to the participants the importance of evaluation
* To demonstrate two methods of evaluation and to discuss the importance of evaluation.

Method

Lecture/Discussion

Evaluation. This must be undertaken as thoroughly as possible if the subject and the teacher is to be credible. Evaluation should take into account
- the content of the subject or programme,
- the methodology used in the programme or class,
- the physical environment (the accommodation, seating, etc.)
- the psychological environment (the attitude of the teacher, the time available, the mix of participa
- the outcome (or product)

Discuss as a large group what elements should be included under each of these headings. Remind (if necessary) that while the children have a role in evaluation (usually as assessment) so do the teachers and senior staff of the school. We all have a professional responsibility to learn from each course we undertake to make future courses better.
1. + - ? (Plus, minus and interesting or PMI)
Divide the participants into small groups.
Ask each group to discuss the course and decide as a group the two things they thought were best about the course; two things they thought were bad, or could be improved and two things that could be follow up or interesting for the future. The groups have ten minutes.
After ten minutes call the groups to the plenary session.
On the board/flip chart draw three columns: + - ?.
Ask a spokesperson from each group to report and write the two comments in each column.

2. Evaluation Sheet.
Hand out the sheet [Appendix I] and ask the participants to wait for a week and then to fill in the sheet.
Explain that the reason for waiting is to judge the effect of the course after the participants have had the opportunity to try the new ideas.

It is important in the summary of the course to refer back to the expectations of the participants. Check these with the plenary group and discuss whether the participants feel they have had their expectations met. This is important feedback for you as the facilitator to see how well you have responded to needs.

This should be done before the evaluation so as to focus the attention of the participants on matching their expectations and the results.

Any concluding remarks need to include thanks to the organisers, the participants and any official guests.

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**APPENDIX I**

**Evaluation Sheet**

**Content**

1. How useful was the content of the course to you?
   - very useful
   - useful
   - a little useful
   - not useful at all

1 A. Give reasons for your choice.

2. Which sections of the course had information which was new to you?
3. Which sections of the course were most helpful to you and why?

4. What additions would you make to the content of the course?

5. Are there any subjects/topics you would like to see in a follow up course? Please list.

Method
6. Were there any methods demonstrated in the course that were new to you? Please list them.

7. Which of these methods would you use?

Environment - Physical
8. How would you rate the accommodation and food at the course?

   excellent  good  fair  poor  very poor

Give reasons for your choice.

Environment - Psychological
9. What do you think of the facilitator(s) understanding of the content of the course?
excellent   good   fair   poor   very poor
Give reasons for your choice.

10. What do you think of the facilitator(s) attitude and manner during the course?
excellent   good   fair   poor   very poor
Give reasons for your choice.

Outcome/Product

11. Do you have any suggestions for improving this course?
APPENDIX II
APPENDIX III
APPENDIX V

The Wolf, the Sheep the Cabbage and the Shepherd

There is a shepherd who has a wolf, a sheep and a cabbage and he must cross the river. The boat is only big enough for the shepherd and one of the other things. However if the shepherd leaves the wolf and the sheep alone, then the wolf will eat the sheep, if he leaves the sheep and the cabbage alone then the sheep will eat the cabbage. How does he get all three things across the river?

The Beautiful Girl and the Money Lender.

A beautiful young girl had a father who had got himself heavily into debt. The money lender wanted to throw him into prison (where he would surely die) but when he saw the beautiful daughter he said that he would let the father go free if the daughter agreed to marry him. The daughter refused (because he was old and wicked and ugly) but her father begged her because otherwise he would be thrown into prison where he would surely die. The daughter was a good and dutiful daughter and she wanted to save her father but the money lender was truly horrible; so she was trapped. The money lender was walking with the daughter in the garden along a gravel path made of black and white stones. The money lender said "Look, I have an idea. I will put a black stone and a white stone into a bag. You pull out one stone - if it is the white stone your father will go free and you will not have to marry me - if it is the black stone your father will go free but in return you must marry me." As he said this he bent down and picked up two stones from the path and put them into a small bag. But the daughter saw him pick up two black stones. She cannot accuse him of cheating because her father's life is in his hands. ...... What does she do?

Answer 1 - The shepherd takes the sheep across in the boat. He returns and takes the wolf across and brings the sheep back. Leaving the sheep behind he takes the cabbage across. He goes back and then takes the sheep across.

Answer 2 - The girl takes one stone out of the bag, fumbles and drops the stone onto the path (with all the other stones). She says "Oh, how silly of me, but we can find out which stone I took from the bag: if it was the black stone the white stone will still be in the bag, if I took out the black stone the white stone will be in the bag." So she takes the bag and there in the bag is the black stone so she says "well I must have taken out the white stone so my father goes free and I do not have to marry you.

APPENDIX VI

HOW TO TIE A BOWLINE

Take a length of cord (rope or string) and put it around an upright (e.g. the leg of a table).

Keep the long end of the cord in your left hand, with the shorter end in your right hand.
Make a loop in the middle of the piece in your left hand. Keep the loop flat (horizontal) and hold the place where the cord crosses between your thumb and index finger.

Take the piece in your right hand and bring it up through the loop.

Then take that same end and pass it under and around the straight piece of cord in your left hand (next to the loop).

Now take that end and put it down the loop.

Holding both ends in one hand the knot will slip towards the upright. And you have a bowline.
APPENDIX VII

Revision Exercises

1. "Hot Potato". The participants sit in a circle and pass a ball (or similar object) from person to person. The teacher makes a noise (or plays music). When the noise/music stops the participant holding the object must answer a question. For a list of possible questions for this and other revision games/quizzes see Appendix VIII.

2. "Dog and Bone". The participants from two equal teams. Each member of the first team has a number (e.g. from 1 - 15) and the second team are given the same numbers; so that there are two people in the room with the same number - one from each team. The teams line up opposite each other but as far away from each other as practicable. An object (a blackboard duster will do) is placed in the centre of the floor between the two teams. When the teacher calls number the two people with that number race for the object - the person who misses it must then answer a question.

3. "Captain Ball". Create teams of six to eight people (but all teams must be the same size). The teams line up and the first person stands about one metre in front of the rest of the team and faces the team. Each leader has a ball (or something to throw to the team members). When the teacher says "go" the leader throws the ball to the first person who throws it back to the leader and then squats down. The leader throws it to the next team member who throws it back and squats down and so on. The last member of the team catches the ball and runs up to the leader. The team who comes first has to answer a question in order to score a points (one for winning and one for answering the question). The whole team can get together to respond to the question. If they cannot answer the question or if they get it wrong the other team can try (and score a point).

4. "Master mind". Divide the participants into groups of four. Ask a question. The first team to respond by banging their hand on the table (or putting up their hand) gets to answer the question. Any member of the team can answer the question or they can get together and answer as a group. If they are wrong they lose the point and the other teams have a chance to answer and so to score points.

Daily Revisions

5. Divide the board or flip chart down the centre. On one side write "The Most Important Thing Learned" on the other side write "The Part I Found Least Useful". Either in small groups or individually ask people to fill in the two columns. If there is a large group there can be several of these sheets and people can just move to them and fill them in. If they are unsure go out of the room and leave them for ten minutes to complete the exercise.

6. Have sheets with each topic covered written on them e.g. on sheet labeled "Characteristics of a Good Teacher - Evaluation". Draw a "smiley face" on one side a "straight face" in the middle and a "frowning face" on the other side. Ask people to come and put a dot under the face they feel most closely resembles how they feel about that topic. (Was it worthwhile or awful).

APPENDIX VIII

Quiz Questions

1. Name three characteristics of a good teacher.

2. Name three expectations for this course.

3. What are the two parts of the learning environment?

4. Name the three people who gave presentations.
5. List three more characteristics of a good teacher.
6. What is the most important element of the psychological environment?
7. List three things that the physical environment contains?
8. List three things that can be taught in order to make a person a better teacher.
9. Tell two things about the facilitator of this course.
10. What were the subjects of the three presentations?

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1. Tell two things about perceptions.
2. List three advantages of two-way communication.
3. List three disadvantages of one-way communication.
4. Tell about two circumstances where one-way communication may be effective.
5. List three limitations of communication.

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1. Name the two types of learning.
2. Tell about passive learning.
3. What are the two types of information?
4. How do we decide what is really essential information?
5. Non-essential information has two parts - what are they?
6. What are the elements that must be taken into account when adjusting to different target groups?
7. What is an open question?
8. Give an example of an open question.
9. What is a closed question?
10. Give an example of a closed question.

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1. Tell two things about trust.
2. How did your group communicate?
3. What elements of cooperation did you see in the exercises?
4. List the elements of a lecture.

5. What % is retained if you just hear information?

6. What % is retained if you see and hear?

7. What % is retained if you do the work yourself?

8. Describe the difference between negative reinforcement and punishment.

9. Describe the difference between positive reinforcement and rewards.

10. Why is positive reinforcement considered to be better than punishment?

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