

## 4 Educational approaches

### 4.1 Deciding on the approach

As well as looking at the particular programmes they intend to implement, educators need to consider the type of educational approach they wish to adopt. This will vary from garden to garden and will depend on the message to be communicated, the audience to be reached the activities to be carried out and a host of other factors. Educators need to be aware that the perception of education varies from person to person, from group to group and from culture to culture. To introduce unfamiliar teaching methods as well as a lot of new information and concepts can be confusing.

Being aware of learners' expectations and their experience of education is a part of sensitive teaching.

The most important role an educator in a botanic garden can play is that of facilitator. Good environmental education needs to allow individuals to question, set goals and decide on their own values and practices.

### 4.2 Communicating your message

Successful teaching depends on effective communication between teacher and student. Every teacher encounters problems sometimes but good practices relating to the management of learning can go a long way towards avoiding pitfalls.

The importance of a student's self perception and self-esteem about his or her ability to learn cannot be underestimated. Students may be confronted with a wide variety of learning situations and yet walk away with little or no change in their behaviour or state of knowledge. Students may not attend to matters that appear to have no bearing on their views of the world or that they consider to be irrelevant to their lives. This is one reason why it is important to target education programmes effectively.

### 4.3 Equality in education

Even with targeting care needs to be taken to see that certain groups are not being overlooked or somehow excluded. When looking at educational materials some questions need to be asked: Are both sexes represented fairly? Are the women engaged in 'important' tasks not just represented as helpers and observers? Are people from various ethnic backgrounds included? Are the marginalized communities included? Are there any disabled people included? Are the materials and the teaching available in appropriate languages, so that all sections of the community can benefit? Is there a religious or cultural bias to education: for example, is there always an elaborate programme developed around certain religious or cultural festivals while others are ignored?

### 4.4 Motivation - a learner centred approach

The learner must want to learn, be exposed to an appropriate learning environment and be interested in the learning material to maintain attention. Motivation, interest and attention are very closely interrelated.

Learners' perceptions of what they are being taught are affected and altered by motivation. It is important that the teacher tries to provide a learning environment designed to attract the learners' attention and stimulate their interest. Learners need to feel confident to ask questions and explore solutions. They should be made aware of the links between the immediate learning objectives and the general aim of the instruction and also the benefits they will to derive long term.

Learners also need to know what is required of them. Teachers may set standards and targets for the learners to achieve. This gives learners a method by which they themselves can judge and take responsibility for their own learning.

## 4.5 Learning through experience

We probably all learn best by experience. Where appropriate, educators should try to devise programmes that encourage learners to see, hear, feel, taste or smell the objects under discussion. A student will learn more about the structure of a flower by dissecting it than by copying a drawing from a book and labelling it. A child may remember the smell of a plant, and what it can be used for, even if he or she does not remember the name. If children are allowed to touch the trees they may feel more urgently the importance of protecting the environment in which they live. Signs need not only be for reading, they can also invite visitors to smell or touch plants. Comparative studies are very important to understand the interdependencies of living organisms, the relationship between living and non-living components of ecosystems, protected areas and non-protected areas.

We learn by trial and error. If students are set a problem they will not necessarily always come up with the correct solution first time round. This is fine. Students need to be encouraged to discuss their results, look at where they went wrong and work out what they would do next time. It is a good idea to plan time into teaching sessions for students to repeat the task and build on their experiences. Students need space to be creative and to explore solutions without the fear of failure.

Botanic gardens must lead by example and be aware of the role model that they are providing to the public. Materials can be produced in an environmentally responsible way. Gardens could for example, use recycled paper and organic fertilisers, implement non-environmentally damaging pest control including biological control and compost garden waste.