

## **Chapter 10. Environmental awareness education and ecological research**

**“ We are surrounded by evidence that centuries of obsession with science and technology, without due regard for these activities on the environment, have left the planet in trouble. Specific outcomes in the Natural Sciences and Technology learning areas emphasise that we now have to use science and technology in ways which show responsibility towards the environment and the health of others”** Clarke & Longman (1997)

..... and one way is using it to educate.

The world today is filled with systems and structures which are designed to abuse and exploit what they call human knowledge and human ignorance. People can easily manipulate the minds of others by “educating” them (Lacey & Williams, 1987). It is important to differentiate between more and less advanced communities, with regards to their environment. Environmental education should be approached as an holistic subject, which is interdisciplinary in methodology, innovative in creative processes, and should strive to renovate educational systems in total (Lacey & Williams, 1987).

The aims of an environmental education system should not be to inform people of their environment and purely try to convey knowledge, but develop

skills to be aware of their environment and be able to observe and question.

A possible curriculum should be able to:

- Criticise conventional wisdom
- To explore the principles and concepts which form a basis for these conventional wisdoms
- To be able to change mindsets towards alternative ecological views
- To be able to apply these concepts to practical situations
- To be able to act on these thoughts and change their own environments to suit their needs.

Ecological research is an important part of information gathering and developing the correct mindset for environmental educators. If environmental education is being practised on the particular study area, an ecological research study such as this is a useful and important process of creating the correct mindset for the education, and developing the necessary skills. The holistic basis of the study extracts the necessary information about the natural environment, and presents it in a way that can be easily interpreted by the general public. The investigation of interactions both intra- and inter-specific, also forms a basis for most ecological principles, and this cannot be executed without full understanding of the principles. Management of a game park such as Bynespoort Game Park, is not dissimilar in concept to the management of the environment on global scale, and thus the management of one's personal environment. This in essence is environmental education.

Environmental education must be seen as a dynamic form of education, whereby knowledge is constantly being gained, and concepts being challenged. According to Brown (1997) the key outcome of any research is the production of new knowledge by applying existing knowledge. Research is therefore the key to maintaining a healthy flow of knowledge and challenge of ideas. It is also important to produce research as scientific as possible. Many institutions apply certain viewpoints that cannot be scientifically supported, and educators are not sufficiently trained and skilled to use scientifically based principles, and they often convey these incorrectly. These institutions act in the name of environmental education and create tarnished images of the field.

Another advantage is that this type of research can be presented in a manner which is both interesting and informative to the general public, and could inspire further research within the field. By describing and interpreting research procedures and ongoing research, people could become better informed about the importance and rewards of research, thereby dispelling certain stigmas attached to scientists and scientific research. This is also where the G.I.S. survey is very important. The visuality is far more attractive and informative in a presentation, and can provide a channel of understanding whereby the research can be carried across to "unscientific" minds.



A well formulated environmental education programme should change the attitudes of students in the following way (Briceno & Apitt, 1988):

- It develops caring attitudes and a sense of responsibility towards the environment;
- It changes mindsets, by questioning existing ideas and beliefs;
- It creates a sense of respect and recognition for the structures and systems in the environment;
- It makes people aware of their community, and involvement in this;
- It encourages a sense of continuity with past and future;
- It develops the ability to use personal talents in improving the quality of the environment.

In general environmental education can be seen as a way of broadening the horizons of many people of the disadvantaged communities of South Africa. By making them aware of their environment and equipping them with some skills to interpret their own environment, the quality of their lives can be raised to a certain extent without too much capital expenditure. With such skills these people would also be able to live in their environments with a minimum of ecological disturbance, and become more self sustainable.