

CHAPTER 2: ECOTOURISM AND ENVIRONMENTAL EDUCATION: THE LINK

In Chapter one the evolvement of tourism to emphasise environmental awareness and consequently the establishment of ecotourism as an approach to tourism is discussed. Environmental education is proposed as an approach that can foster and reinforce environmental awareness as an aspect of ecotourism. The possibility of this being realised through ecotourism trails is highlighted as the fundamental focus of this study. Chapter one also points out that the research methodology of the study draws strongly on realism and pragmatism and follows an action-oriented philosophy. This approach necessitates that the two fields of research, ecotourism and environmental education, forming part of the empirical domain of the research be clearly researched, analysed and conceptualised. This analysis is necessary to prevent the concepts from remaining abstract and their practical relevance and links not fully realised.

The purpose of Chapter two is to conceptualise, through a process of reflection, how the concepts ecotourism (2.1) and environmental education (2.2) are visualised, thought about and understood by different persons (Robertson, 1994:26). Conceptual links between the two approaches are identified in section 2.3. At the end of Chapter two, through an inductive process these conceptual links are then postulated as theoretical planning principles based on the observational statements supported by the theory in the literature. These principles will attempt to provide guidance on how ecotourism developments like trails can be planned to facilitate environmental education.

2.1 Ecotourism

Ecotourism definitions and views in the literature should be examined in order that, in the context of the research, they can allow planning principles to be extracted from them. This process provides a conceptual framework against which the

problem of the study is set. For clarity, a working definition for this study is formulated and proposed ecotourism planning principles will be formulated.

2.1.1 The concept of ecotourism

According to Robertson (1994:26) a concept such as ecotourism is a package of publicly held meaning that may have different meanings in different contexts. Ecotourism goes back only as far as the 1980s (Orams, 1995:3) yet, when the field of ecotourism is explored, it becomes clear that there are a diverse number of understandings of the term. A number of terms such as nature tourism, values-based tourism, holidays to help the planet, adventure tourism, alternative tourism, culture tourism, green tourism, soft tourism, responsible tourism and sustainable tourism are used as substitutes for ecotourism (Medlik, 1993:11; Tallantire, 1993:53; Wearing, 1993:126-127; Wight, 1993:3; Hughes, 1995:49; Orams, 1995:4; Cowling, 1996:35; Lew, 1998:92; Schaller, 2000).

In 1983 the Mexican, Hector Ceballos-Lascurain invented the term "ecotourism" (Van der Merwe, 1996:7; Orams, 1995:4) by stating that "*Ecotourism is responsible travel to relatively undisturbed natural areas with the object of studying, admiring and enjoying the natural landscape and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas*". The definition emphasises the use of the natural environment for ecotourism as well as the cultural environment. The use of the word "responsible" implies some extent of responsibility towards the environment, which in the context of the above definition would include the natural and cultural environments. The concept "studying" which is mentioned in this definition implies, according to Sykes (1976:1144) and Landau (1983:670), devoting time and thought to acquiring knowledge, information and doing investigation of an object in an attempt to train the mind, capabilities and character of individuals. Thus, the use of the word "studying" in this definition can be understood to emphasise the educational dimension of ecotourism which is a premise of this

study. The definition of Ceballos-Lascurain gives a very broad definition that could be applied in different ways. Questions that arise from the definition are; who should be responsible for providing the educational experience, which agents³ should provide this experience, for whom should the educational experience be provided, the tourist or developer, what is understood by cultural environment and what are relatively undisturbed natural areas?

Wight (1993:3) prefers to use the following definition, "*Ecotourism is an enlightening nature travel experience that contributes to conservation of the ecosystem, while respecting the integrity of host communities*". This overlaps in certain ways with Ceballos-Lascurain's definition in that the natural environment is seen as the resource. Wight's definition specifies what the cultural environment includes and refers to "respect" for the host community which implies that ecotourism should avoid degrading, insulting, injuring, interfering or interrupting the host community's life (Sykes, 1976:957). The reason is according to Huggins & Barendse (1994:2) "... that different elements of society are plugged into society in different ways and likely to react to, and be affected by change in different ways." According to Milne (1998:41), communities are seen as being capable of planning and participating in tourism development. This emphasis implies that ecotourism has a certain responsibility towards the host community and for that matter the natural environment as well. Wight's definition also refers to an "enlightening experience" that implies that an individual's knowledge should be broadened and prejudice or superstitions be eliminated (Sykes, 1976:344). This can be linked to the educational aspect mentioned in the previous definition of Ceballos-Lascurain (1983). What Wight's (1993) definition adds to the first definition is the aspects of "conservation" and "host community". The aspect of protecting the environment (conservation) is widely supported by authors like Valentine (1993b:114) and Wearing (1993:127).

3. ³ The term agents will be used to include all contributing role players such as the trail user (tourist), developer (trail owner, trail planner), authority and host community.

Wight (1993:3) expands on his definition above by identifying two views that prevail on ecotourism. The one applies to the marketing possibilities of ecotourism and its related economic value. The other is related to the conservation of the resource on which ecotourism is dependent. Wight (1993:3) is of the opinion that these two views should not be exclusive to one another but rather complementary and integrated, so that both the industry and the resource may be sustained in the long term. To achieve this, Wight (1993:3) identifies eight principles that should be followed. Ecotourism should:

- maintain the quality of the resource and develop the resource in an environmentally correct way (conservation);
- provide the tourist with a direct, participatory and enlightening experience;
- include education for all the groups including; the host community, government, non-governmental organisations, industry, and tourist (before, during and after the visit);
- urge all the involved groups to acknowledge the inherent values of the resource;
- provide supply-oriented management that implies that it willingly accepts the resource on its terms and that it recognises the resource's limits;
- involve many role players such as government, non-government organisations, industry, scientists, and locals (both before and after operations) and promote mutual understanding amongst these role players;
- encourage moral and ethical accountability and responsible behaviour by all role players towards the natural and cultural environment, and
- provide long-term benefits for the resource, host community and industry. Benefits can be of a conservation, scientific, social, cultural or economic nature. Economic benefits can include;

economic variety, long-term economic stability, higher expenditure and longer tourist stays due to different exchange rates, increase in demand for local goods and services, infrastructure development and increase of foreign exchange earnings (Wight, 1993:4).

The above-mentioned principles answer some of the questions arising from Ceballos-Lascurain's (1983) definition. The principles clearly point out who the role players and therefore, the target groups (agents) are that form part of ecotourism and to whom the educational experience should be provided i.e. the tourist, host community, developer or non-government and government organisations. Lew (1998:93) is of the opinion that the education given to these agents should try to make them more sensitive towards the destination environment. For the purpose of this study the term agents will be used, and will refer to terms like role players and target groups that are used in the literature. According to Orams (1995:4) these agents can either show a high level of human responsibility and contribute actively to the protection and improvement of the natural environment resources or they can show a low level of human responsibility and have a passive approach and behave unobtrusively and try to minimise their impact on the natural environment. According to Orams (1995:4,5) some researchers that support the active and responsible role of ecotourists are Valentine, Richardson and Ziffer, while others like Zell, Muloin and Figgis support the passive and low responsibility role. Orams (1995:5,6) suggests four indicators to quantify and measure this transformation from passive to active human behaviour, namely; satisfaction-enjoyment, education-learning, attitude-belief change and behaviour-lifestyle change. Regarding the impact tourists have on the natural environment, Orams (1995:6) suggests three indicators; tourists should minimise disturbance, improve habitat protection and contribute comprehensively to the long-term health and viability of the natural environment. This view corresponds with the conservation view of Wight (1993:3).

Two further aspects of ecotourism referred to in the principles Wight (1993:4) postulates are, the economic and participatory aspects. The benefits of ecotourism that Wight (1993:3) mentions are related to conservation, education and finance. Responsibilities that ecotourism have according to Wight (1993:3) are closely related to these benefits and include conserving the natural and human environment, providing an educational experience for all the agents, involving all agents in the planning processes and providing financial benefits to all the agents. The principles Wight (1993:4) states, further elaborate on the concept responsibility that Ceballos-Lascurain (1983) refers to in his definition of ecotourism by including moral and ethical accountability and responsible behaviour. For Wight (1993) this responsibility extends beyond the tourist. It includes all agents participating in ecotourism and encompasses the broader environment of natural and cultural domains that Ceballos-Lascurain (1983) includes in his definition.

A definition that adds two further aspects to ecotourism is that of Robinson (1993:7) who suggests that *"Ecotourism is responsible tourism which is sustainable and thus requires the protection of living and non-living natural resources, the promotion of appropriate and environmentally sympathetic development, and which contributes to the goals of achieving social justice and enhancing quality of life and stability for the communities in the immediate vicinity of the protected area ..."*. Robinson's definition encompasses much of the previous definitions but it firstly adds the aspect of sustainability. It would be possible to say that with responsibility comes accountability and without either, ecotourism will not be able to maintain itself and be sustainable. The three concepts responsibility, accountability and sustainability go hand in hand. Sustainable development is understood as development that provides for the needs of the present without compromising the possibility that the needs of future generations will not be met (Hall & Lew, 1998:3). It is the principles inherent to sustainability that link it with ecotourism. These principles are:

- holistic planning and strategy making
- preserving essential ecological processes
- protection of human heritage and biodiversity
- long term productivity for future generations
- balance of fairness and opportunity between nations (Hall & Lew, 1998:3).

It is these linking principles between ecotourism and sustainability that allow Bramwell & Lane (1993:2) to describe sustainable tourism as " ... *an approach which involves working for the long-term viability and quality of both national and human resources. It is not anti-growth, but it acknowledges that there are limits to growth. Those limits will vary considerably from place to place, and according to management practices. It recognises that for many areas tourism was, is and will be an important form of development. It seeks to ensure that tourism developments are sustainable in the long term and wherever possible help in turn to sustain areas in which they operate. And, for good measure, sustainable tourism also aims to increase visitor satisfaction.*" However, this definition of sustainable tourism does not refer to the social and political environments which are inherent to ecotourism.

The second aspect Robinson's definition adds is that ecotourism should enhance the host community's "quality of life". According to Robinson (1993:6), other definitions do not touch on the root meaning of ecotourism, namely, that ecotourism should create benefits for the host communities in terms of social upliftment and well-being and improvement of their quality of life. Valentine (1993a:64) and Hattingh (1994b:4) support Robinson's opinion that ecotourism should benefit the host community. Although, according to Wight (1993:4), benefits should not be for the host community alone but also be for all other agents.

Cowling (1993:3) sees ecotourism as a form of tourism that is based on ecological resources such as flora, fauna and scenery and if it is properly managed will justify conservation as a means of generating wealth in a sustainable way. This perception of ecotourism again focuses only on nature and mentions the idea of generating wealth. Wight (1993) elaborates on this concept of wealth in his list of ecotourism principles. Valentine (1993a:64), Wearing (1993:127) and Jacobson & Robles (1992:702) support the view of Wight. Their opinion is that ecotourism should stimulate economic activity and make a profit. The question is, is this only financial gain and for whom will this be, the developer, visitor or host community? Wight (1993:4), in his principles answers, this question by referring to all the agents, namely; tourist, host community, developer, non-government and government organisations. Wealth should also go beyond only financial gain and include conservation and education.

The definition of Evans-Pritchard and Salazar (n.d) in Porritt (1996:17) encompasses many of the previous definitions in that they see ecotourism as: *"The planned practice of tourism in which the enjoyment of nature and learning about living beings and their relationship with the environment are brought together. It is an activity which does not result in a deterioration of the environment and which promotes and supports the conservation of natural and cultural resources, thereby producing economic benefits which reach most of the population. Moreover, real ecotourism promotes justice for people and for nature"*. What this definition does do is add to the aspect of sustainability and enhancing the quality of life of the host communities mentioned in the definition by Robinson (1993:7). The definition further adds the aspect that there should be justice, not only for people, but also for nature. Evans-Pritchard and Salazar (n.d) also emphasise, like Wight (1993:3), that most of the population should gain economically from ecotourism. Using the principles, Wight (1993:3) postulates as a guideline, the term population in the above definition, can for the purpose of this study be interpreted to include all agents involved in an ecotourism development, namely; the host community, the visitor that would be the trailist and the

developer that can be the owner, government, non-government organisations or specialist ecotourism developers used by the owner.

Another definition that takes on an even broader meaning of ecotourism is the definition of the Centre for Ecotourism at the University of Pretoria (1996). It includes a large number of the aspects from the above definitions and reads as follows, *"It (ecotourism) is an enlightening, participatory travel experience to environments, both natural and cultural, that ensures the sustainable use, at an appropriate level, of environmental resources and, producing viable economic opportunities for the tourism industry and host communities, makes the use of these resources through conservation beneficial to all role players"*. This definition like Wight's (1993:3) includes the point that the ecotourism experience should be a participatory one. However, unlike Wight, the Centre is not clear on who should participate in what. Again the principles of Wight can be used as guidance and it can be deduced that all the agents that are part of an ecotourism event should be actively involved, not only in the trail experience (event), but also in the planning of the event. **A question and the premise of this study is: how can the trailist and the other agents which include the owner (government or private), and the host community, become actively involved with the developer in ecotourism trail planning to facilitate environmental education?**

It is evident from the analyses of the previous five definitions that the concept "ecotourism" has evolved over time. This is supported by the fact that Ceballos-Lascurain in 1992 adapted his original definition from 1983 (Van der Merwe, 1996:7) to include, along with the aspects natural and cultural environment, responsibility and education, three other aspects, namely; conservation, sustainable development and economic benefits. He also puts the human being, both visitor and host community, at the centre of environmental concern: *"Ecotourism is environmentally responsible travel and visitation to enjoy and appreciate nature (and any accompanying cultural features), that promotes conservation and sustainable development, has low visitor impact, and provides*

for beneficial, active socio-economic evolvement of local populations" (Van der Merwe, 1996:7).

What becomes evident from the above discussion is that there are certain core aspects that distinguish ecotourism from traditional tourism. These aspects can be summarised in Table 2.1.

TABLE 2.1 DIFFERENCES BETWEEN TRADITIONAL TOURISM AND ECOTOURISM

| TOURISM | ECOTOURISM |
|---|--|
| An activity, industry and system based on profit making | A sustainable approach to tourism |
| Large numbers of tourists | Small numbers of tourists |
| High visitor density | Low visitor density |
| Low tourist participation in the event | High tourist participation in the event |
| Centralised | Decentralised to include peripheral areas |
| Single ownership | Host community takes ownership together with the developer |
| Large economic impact | Small economic impact |
| Foreign expertise | Host community employed and local expertise of host communities utilised, subject specialists used when needed |
| Outflow of capital | Keep money in area |
| Regular and high financial return | Irregular and low financial return |
| High impact on nature | Minimum impact on nature, responsible behaviour and conserve nature |
| High impact on cultural values | Protect and share culture |
| High impact on social life | Protect, enhance and share social life with visitors |
| Emphasises escapism | Emphasises the enlightening experience for visitors |

(Compiled from Ceballos-Lascurain, 1997; Hall, 1998:23; Lew, 1998:104; van der Merwe, 1998:57; Wallace, 1998:5; Zeppel, 1998:60; Hugo, n.d:6)

Butler (1990:41) does warn against such a comparison because it is important to realise that tourism should not be portrayed as obviously undesirable and ecotourism as close to perfection. The idea of providing Table 2.1 is to differentiate between the different facets of tourism and ecotourism.

Therefore, after evaluating and analysing the definitions of ecotourism and noting the differences between tourism and ecotourism in Table 2.1, a working definition for the study can be formulated. For the purpose of this study ecotourism can be defined as, *a sustainable approach to tourism development that enlightens and involves all role players (agents), namely; the host community, tourist, trail owner (private and government), trail planner and the total environment (biophysical, cultural, social, and political), actively in a participatory manner in all phases of ecotourism planning and provides conservation, educational, social and economic benefits to all these role players at an appropriate level.*

2.1.2 Ecotourism planning principles

Establishing ecotourism planning principles according to Wallace (1998:2) is an exercise that has been performed by many researchers such as Cronin (1990), Wallace (1992), Lee & Snepenger (1992), Wight (1993) and Wallace & Pierce (1996). The reason researchers do this is so that each person can contextualise a set of principles for a specific environment and social condition by using criteria or indicators for each principle that are relevant to the specific ecotourism event and environment. Such principles and their associated criteria provide primary guidance to what action should be taken.

For the purpose of this study, the researcher extracted from the analyses of the concept ecotourism in 2.1.1, through an inductive process of generalisations, certain theoretical underlying principles that clarify and support the ecotourism definitions used for the analyses. The generic principles that the researcher extracts are later contextualised, and applied to, a specific environment, namely,

trails. The following seven broad principles are suggested to guide the planning of an ecotourism event like a trail and according to Wallace (1998:2) such a set of principles should provide an over-arching framework that can be applied in most circumstances.

Ecotourism should:

1. include the **total environment**, namely, the biophysical (natural and built), social, cultural, economic, and political in a holistic planning procedure.
2. be planned **responsibly and sustainably** for all agents (role players), namely; the ecotourist, owner (private and state), trail planner, authority, host community and total environment to instil an ethical responsibility in them.
3. provide an **enlightening and educating experience** to all the agents that are part of the ecotourism development to increase awareness and understanding of the total environment.
4. **conserve and protect** the total environment that ecotourism utilises as its resource by minimising negative impacts.
5. **involve and benefit all the agents** that are part of the ecotourism development, especially the **host community**.
6. provide **economic benefits** to all the agents.
7. provide a **participatory experience** to all the agents.

2.2 Environmental education

Like ecotourism, the concept environmental education has many different meanings depending on the context and circumstances where it is used (Shongwe, 1996:14). Definitions and views in the literature, which allow for planning principles to be extracted from them, are examined. A working definition for the purpose of this study will be formulated and guiding planning principles highlighted.

2.2.1 *The concept of environmental education*

The roots of environmental education lie in other approaches to education like nature education (fieldwork in nature), geographic education (education about space, location and environmental relationships), conservation education (teaching about wise use and management of mainly natural resources, basic ecology and conservation problems) (Irwin, 1990a; 1992:16), outdoor education (teaching and learning outside the classroom, self-development) (Staley, 1983:56; Disinger, 1984:159, Irwin, 1990a:5, Irwin 1992:16) and science education (McKeown-Ice, 1994:41). Environmental education incorporates goals and methods from these approaches to develop a new approach to education (Irwin, 1990b:35; 1992:15).

Smyth (1995:9) lists the following as descriptors that have become part of describing environmental education, namely; lifelong, interdisciplinary, holistic, learner-centred, locally relevant, concentric from local to global, quality and value, problem formulating, normative, exemplary, systemic, flexible, adaptable, forward-looking, anticipatory, interpretative, broadening, issue-based, field-based and action-orientated. Depending on the context in which environmental education is defined, these descriptors are used to contextualise and give meaning to the concept.

Furthermore, it appears from the literature that there are four major themes embraced by environmental education, namely; the interrelationship between natural and social systems, the unity of humankind with nature, the impact of society's technology and decision-making, and the continuation of learning throughout the human life cycle (Irwin, 1990a:9; McKeown-Ice, 1994:41). Pemberton (1989:8) adds to these four themes the dimension of motivating citizens to participate in environmental problem-solving. These five themes can be taught using formal subjects such as Geography, Science and History or they can be taught using the environmental education approach in an informal education situation such as on an ecotourism trail (Smyth, 1977:103; Cooper &

Smith, 1989:75). According to Tyson (1994:10-11), four education sectors, namely; the formal (primary and secondary school)⁴, non-formal (adult and out of school) (Palmer & Neal, 1994:15), community based (non-governmental organisations) and interpretation (educational and recreational activities) sectors could provide environmental education opportunities. The formal, non-formal and interpretation sectors can utilise natural parks, forests and wildlife reserves and can utilise trails, fact sheets, maps and guidebooks.

When looking at the earliest and most widely accepted definition of environmental education (Loubser, 1991a:21; Irwin, 1992:14; Palmer & Neal, 1994:12 and Schulze, 1994:165) that was formulated by the IUCN (International Union for the Conservation of Nature and Natural Resources) in 1971 it reads as follows, "*Environmental education is the process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the interrelatedness among man (people), his (their) culture and (their) biophysical surroundings. Environmental education also entails practice in decision- making and self-formulation of a code of behaviour about issues concerning environmental quality*". It is noticeable that reference is made to three of the previously identified themes by Irwin (1990a) and McKeown-Ice (1994). The IUCN's definition describes environmental education as a process through which people develop skills, values and attitudes to enable them to operate with care and understanding towards the total environment, the biophysical and the cultural, to ensure a quality life (Lisowski & Williams, 1993:73). The definition further emphasises the inter-relatedness of people, their culture and their biophysical surroundings. Skills that can be developed through environmental education according to Wade & Hughes (1994:7) and Lisowski & Williams (1993:73) are; communication, numeracy, study skills, problem-solving, personal

4. In South Africa this sector is divided into the General Education and Training Band (National Qualifications Framework (NQF) Level 1 which include the Pre-school, Foundation Phase (Grades 1-3), Intermediate Phase (Grades 4-6), Senior Phase (Grades 7-9) and Adult Basic Education Training (ABET) Levels 1 to 4; and the Further Education and Training Band which includes NQF level 2 that constitutes Grades 10-12.

and social, information technology, decision-making, identification of environmental issues and analysing issues from different perspectives.

Another definition of environmental education was adopted in 1975 at the Belgrade Workshop and in 1977 in Tbilisi at the Intergovernmental Conference on environmental education. This definition describes environmental education as "... a process aimed at developing a world population that is aware of, and concerned about, the total environment and its associated problems, and which has the knowledge, attitudes, skills, motivation, and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones."

This definition, like the previous IUCN's definition, describes environmental education as a process and refers to three of the four themes identified by Irwin (1990a) and McKeown-Ice (1994). Like the IUCN it does not make reference to the fourth theme of learning as a lifelong experience. The Tbilisi definition adds to the IUCN's definition that knowledge, motivation and commitment are needed to find solutions for environmental issues. According to Robertson (1994:22), knowledge is that which has been provided and confirmed by evidence of the senses through observation, thus implying that people should become involved in environmental education events to ensure that they enhance their knowledge. The concept environment takes on an even broader meaning than in the IUCN's definition, namely, "total" environment.

Irwin (1990a:2; 1992:14) highlights two complementary concepts of environmental education which correspond with the Tbilisi and IUCN's definitions. The first is the concept of decision-making. He is of the opinion that political processes must be understood and political structures should be in place in order to participate actively in decision-making about environmental issues on local, national and global scale. The other is, to clarify concepts related to environmental education and to acquire the necessary knowledge and understanding of ecological principles and processes before properly informed decisions about environmental issues can be made.

The Tbilisi and IUCN's definitions of environmental education discussed above contain the basic objectives, formulated at the Tbilisi Conference in 1977, that environmental education should strive to; establish an awareness of the total environment, provide opportunities to acquire knowledge, values, attitudes and skills needed to protect and improve the environment, and to create opportunities for participation in actions toward the resolution of environmental issues (Braus & Wood, 1993:6,7; Palmer & Neal, 1994:13).

A definition that includes many of the concepts in the Belgrade (1975) and Tbilisi (1977) definitions is that of Joubert & Steenkamp (1995:11) who describe environmental education as "*... basically a process that seeks to develop the necessary awareness, knowledge, concepts, ethics, values, skills, and commitment to allow people to become environmentally literate in order to be pro-active in securing a healthy and properly functioning environment that is sustainable*". The definition adds the idea of a healthy environment, the concept of sustainability, being environmentally literate and being pro-active. According to Clacherty (1992:26), by definition, an environmentally literate person will "*... have a critical awareness of social, economic and political forces in society as these relate to environmental quality and the quality of life, will not be swayed by current opinion and assumptions in society and will be committed to acting for positive change within this arena.*" The definition further adds the aspect of sustainability and by doing so implies responsibility that can, according to Tudor (1990:11), be achieved by providing environmental management skills and knowledge to decision makers. This focus of the definition would imply that the content used for environmental education should include technological aspects that can be used to understand and manage environmental problems.

Other authors do not necessarily redefine environmental education, but they do include other notions which are not contained in the previous definitions. Notions that are included in environmental education are that; environmental education uses and links a variety of learning resources both indoors and outdoors (Pohorille,

1985:2; Ryan & Ray, 1991:9; Akwa, 1994:1), is multidisciplinary and interdisciplinary (Loubser, 1991b:82; Irwin, 1992:15; Lisowski & Williams, 1993:72; Palmer & Neal, 1994:23), is a continuous and lifelong process starting at pre-school and extending into adulthood and includes businessmen (Viljoen, 1993:22; Palmer & Neal, 1994:21) and uses experience-based teaching methods like active exploration, problem-solving, touching, smelling, tasting, seeing and hearing (Braus & Wood, 1993:9) which bring the learner into direct contact with the community and nature area. Environmental education can also develop skills (NCC, 1990:3), attitudes (Lisowski & Williams, 1993:72,74) and concepts that focus specifically on environmental interrelationships, and it has a holistic approach (Irwin, 1990a:2; Palmer & Neal, 1994:32) involving all three domains of human development, namely; the cognitive, affective and psychomotor.

The tendency of environmental education definitions to evolve is one reason why these definitions are interpreted and applied differently. The interpretation and application of these definitions can be grouped into two groups, namely, the more narrow and limited issues-oriented application and the broader social-critical application.

The first of the two interpretations is an earlier interpretation of environmental education and is narrow and limited. It is perceived as issue-oriented with an ethno-centric focus that views the ecological system as part of the human environment and educating *in* and *about* the environment are emphasised (Fien in Tudor, 1990:13; Viljoen, 1993:22). Education about the environment seeks to discover the characteristics of an area using investigation techniques. The aim is to provide cognitive and factual information. Education in the environment uses the environment as a medium for observation and inquiry. Being an issue-oriented application of environmental education it tends to focus on issues such as resource destruction, pollution and conservation and ignores social, political and economic approaches (Council for the Environment, 1993:10; EEPI, 1993:9; Joubert & Steenkamp, 1995:18). It also concentrates on the communication of information

to make the public aware and change their behaviour, and nature study fieldwork experiences are conducted to change values and attitudes (EEPI, 1993:9 and Joubert & Steenkamp, 1995:18).

The behaviourist and "social engineering" (manipulation of those-who-don't-know by those-who-know-what's-best-for-the-environment) perspectives of changed education (EEPI, 1993:11) forms the basis of this ethno-centric focus. It assumes that exposing people to experiences in nature would solve environmental problems and that by informing them about conservation problems their environmental awareness will increase, their behaviour would change and the environmental problems disappear (O'Donoghue & Ashwell, 1994:14).

If this study were to focus only on this interpretation of environmental education it would mean that ecotourism trails would be seen as a means of teaching the agents only facts about the environment in which the event was taking place. Planning principles would focus on conservation, providing information and creating environmental awareness. Only so-called experts would provide information.

The second group of applications of environmental education definitions is broader and more balanced and has an eco-centric focus (human ecology approach) (Disinger, 1984:158; Fien in Tudor, 1990:13; Viljoen, 1993:22). This application of environmental education educates society as part of the ecology to achieve an ecological equilibrium. This focus is a social-critical one and aims to educate *for* the environment. Huckle (1991) defines environmental education for the environment as being, "... *a shared speculation with the pupils on those forms of technology and social organisation which can enable people to live in harmony with one another and with the natural world.*" Huckle emphasises the role of social structure in environmental problems and solutions and considers social-economic, political, spiritual and social values.

Husen & Postlethwaite ed. (n.d:1680) expand on this interpretation of education for the environment by adding that it should be for the enhancement or preservation of the human environment by producing appropriate behaviour and attitudes. This participatory and social-process approach (EEPI, 1993:11) replaces the initial behaviouristic approach to become relevant to both rural and urban societies as noted by Southern (1971:57) over two decades ago. This interpretation is more closely linked to ecotourism because it emphasises participation and a more holistic education approach. O'Donoghue & Ashwell (1994:15) identify three applications within the social-critical application of environmental education, namely; constructivism, active learning and learning based on interaction.

According to the first application O'Donoghue & Ashwell (1994) identify namely, the constructivist interpretation, learners will actively construct meaning when in the field by drawing on existing understandings of the situation. Learners would therefore bring in and build on their prior knowledge and experience of a situation. The second application O'Donoghue & Ashwell (1994:15) mention is that of active learning which focuses on the role people play in the environment both to conserve and to harvest environmental resources (Council for the Environment, 1993:10). This, according to EEPI (1994:11), implies that teaching and learning should move towards thinking skills and problem-solving. Responsibility and an awareness of the consequences of actions must be taken. This interpretation allows an active mediator to guide the learner in the development of knowledge and values. The third application is learning based on an interactive process of thinking, touching and talking (reflection, encounter, dialogue) (O'Donoghue & Ashwell, 1994:15). Learners are given an opportunity to investigate local environmental problems and try to find solutions. Learning is done through activity that can bring about a change in the meaning of the human experience (Robertson, 1994:22). According to O'Donoghue & Ashwell (1994:16), it is clear that there has been a movement from expert-driven approaches, through neutral facilitation to joint investigations and problem-solving.

The issue-oriented and social-critical interpretations and applications of environmental education can be summarised as in Table 2.2.

TABLE 2.2 ISSUE-ORIENTED VERSUS SOCIAL-CRITICAL ENVIRONMENTAL EDUCATION

| ISSUE-ORIENTED | SOCIAL-CRITICAL |
|--|--|
| Ethnocentric focus (viewing the ecological system as part of the human environment and education) | Ecocentric focus (educating to achieve ecological equilibrium with society being part of the ecology) |
| Education in and about the environment | Education for the environment |
| Nature experience provided for observation and enquiry | Broader experiential learning |
| Draws on transmission teaching and behaviourist learning | Draws on active learning, constructivism and learner based interaction |
| Social engineering, top-down learning | Action research approach to learning, down-up learning |
| Educate to get cognitive and factual information across to create awareness and modify behaviour to conserve the environment | Educate about a wide range of issues like health, social, justice, peace, economic well-being and environmental quality for sustainable development and living |

Compiled from Disinger, 1984:158; Fien in Tudor, 1990:13; EEPI, 1993, 1994; O'Donoghue & Ashwell, 1994:14,15.

From the preceding analyses of environmental education definitions and the possible two ways in which they can be interpreted and applied, it becomes clear that environmental education is a concept that is applied and interpreted in many ways. Therefore, for the purpose of this study, environmental education can be described in the context of the conceptual analyses of environmental education and both the interpretations summarised in Table 2.2 as *a holistic, multi/inter-disciplinary continuous education process, using experience-based methods to enhance the development of knowledge, skills, values, attitudes and behaviour to*

make people environmentally literate so that they can actively participate in decision-making and problem-solving regarding the total environment, and consequently improve their quality of life in a sustainable way.

2.2.2 Environmental education planning principles

Contrary to ecotourism where different researchers use a process of concept analyses as their primary basis for postulating planning principles, environmental education already has a set of twelve generic planning principles. The twelve Tbilisi principles established in 1977 form the basis and guidelines for implementing environmental education according to Irwin (1992:15). This set of principles is used by institutions such as the Wisconsin Department of Public Instruction (Engleson & Yockers, 1994:10) to develop a guide for environmental education curriculum planning. These principles clarify and support the concepts contained in the definitions in 2.2.1. These guiding principles are that environmental education should:

- 1. "consider the environment in its totality - natural and built, technological and social (economic, political, cultural-historical, ethical, esthetic);*
- 2. be a continuous lifelong process, beginning at the preschool level and continuing through all formal and nonformal stages;*
- 3. be interdisciplinary in its approach, drawing on the specific content of each discipline in making possible a holistic and balanced perspective;*
- 4. examine major environmental issues from local, national, regional, and international points of view so that students receive insights into environmental conditions in other geographical areas;*
- 5. focus on current and potential environmental situations while taking into account the historical perspective;*
- 6. promote the value and necessity of local, national, and international cooperation in the prevention and solution of environmental problems;*
- 7. explicitly consider environmental aspects in plans for development and*

- to *growth*;
8. *enable learners to have a role in planning their learning experiences and provide an opportunity for making decisions and accepting the consequences;*
 9. *relate environmental sensitivity, knowledge, problem-solving skills, and values clarification to every age, but with special emphasis on environmental sensitivity to the learner's own community in early years;*
 10. *help learners discover the symptoms and real causes of environmental problems;*
 11. *emphasise the complexity of environmental problems and thus the need to develop critical thinking and problem-solving skills;*
 12. *utilise diverse learning environments and a broad array of educational approaches to teaching, learning about and from the environment with due stress on practical activities and first-hand experience" (Engleson & Yockers, 1994:159).*

These twelve principles together with the conceptual analyses of environmental education are used to expand on the ecotourism planning principles in 2.1.2. Before this is done the links between ecotourism and environmental education are extracted from the conceptual analyses in 2.1.1 and 2.2.1 and planning principles in 2.1.2 and 2.2.2.

2.3 The links between ecotourism and environmental education

The links between ecotourism and environmental education are contextualised in the real domain of the research problem, namely, trails.

Similar to ecotourism the original motivation for environmental education was the concern for the environmental crises and the desire to **protect and conserve** the natural environment from human threat, the first link. However, in the definition analyses it becomes clear that this conservation responsibility changed into a drive

to develop a population that is aware of and respectful towards not only the natural environment but a broader environment. This expanded and amplified interpretation over time of the concept environment to include the political, social, cultural and economic dimensions of a **total environment** is the second link between ecotourism and environmental education. However, ecotourism has the tendency to develop travel experiences only in nature areas and their related cultural aspects. If ecotourism were to embrace fully, this total environment concept, the challenge would be to expand its market to include other environments such as the built, urban and indoor environments as well. The challenge is to utilise the full capacity of the local environment in which an ecotourism event is set to facilitate an environmental education experience.

A third link between ecotourism and environmental education is that both approaches deal with **human-environment relationships**. Both environmental education and ecotourism strive to reconnect people with the environment. The social agents, in the case of ecotourism the ecotourist, owner, planner and host community, and in the case of environmental education the learner, facilitator and society, are in a relationship with a broader environment. In the case of ecotourism, the environment can be a trail and for environmental education, it can be a specific local, national or global environment. Both the approaches look at the relationship people have with their environment whether it is a rural or urban trail and how this relationship can be developed to ensure responsible decision-making and help make learning possible.

Applying this to the research it can be postulated that an ecotourism activity like a trail has the potential to provide an opportunity for the agent using the trail, namely the trailist to engage in a relationship with the trail environment. Through this relationship the trailist can have an educational experience along the trail environment that can include natural and cultural aspects of the environment. The ecotourism trail, therefore, can provide an opportunity to facilitate environmental education (Jacobson & Robles, 1992:702). The concept environment, and

specifically the trail environment, is discussed in Chapter three.

This emphasis on interrelatedness of people in a broader environment leads to the fourth link between ecotourism and environmental education. Both aim to provide a **lifelong interpretive learning and enlightening experience** that will broaden people's understanding of the environment in which they live or practise their recreation and tourism, what the environment's characteristics are, how the environment functions and what environmental problems are encountered. A person can also relate local environmental issues back to global and national environmental issues. Drawing such comparisons via a learning experience relates to other aspects of ecotourism like changing the tourist's, host community's and owner's attitudes and behaviour positively towards the local environment. The enlightening experience concept also encapsulates the idea from the ecotourism concept of enabling the tourist, host community and owner to better understand the functioning of the environment and create care and understanding towards the environment thus nurturing humankind's unity with nature. This links with the first commonality between ecotourism and environmental education and can contribute to making participating agents more environmentally literate.

The fact that ecotourism and environmental education want to provide a continuous and lifelong experience implies that ecotourism will have to continuously audit developments to determine whether it is still benefiting the tourist, host community, environment and the owner. Furthermore, the two approaches do not see the agents as empty vessels but rather as active constructors of meaning, who always bring their existing understanding into the learning situation (O'Donoghue & Ashwell, 1994:15). This means that the tourists will use their previously obtained knowledge to make sense of what they see in the field when walking a trail. The host community could also share indigenous knowledge with the tourist and trail planner. The trail owner might have knowledge that could be shared with the tourist and host community. Specialist knowledge can also be used from subject specialists as long as it is not the only

source of information.

A fifth link between ecotourism and environmental education is that both strive to **involve all agents** in the ecotourism and environmental education experiences they provide. This would mean that in an ecotourism development all the agents including the tourist, host community, trail owner and trail planner should participate in the planning and development of the ecotourism event such as a trail. From an environmental education point of view this implies that the learner, who can be a tourist, should engage in the learning activities and their planning with the facilitator and the society in which the educational experience is provided. Both approaches aim at providing opportunities for **active participation** for these agents. Blignaut (1992:252) comments that meaningful public participation requires that people understand the dynamics which operate within their environments. If applied to this study it would mean that all the agents should understand the trail environment of which they will be part. To do this, the necessary knowledge, skills and attitudes should be developed in people to empower them to be actively and confidently involved with the planning of the ecotourism event. For this study it would imply involving all agents in the planning, while at the same time providing an educational experience. This would mean that the tourism planner should not be regarded as the only expert and role player in the planning and development. The host community and other agents such as the tourist and owner should also be active in the process. The process should strive to be interrelated and complementary.

Emphasising active participation leads to the sixth link between environmental education and ecotourism, namely, **host community involvement** that includes the application of indigenous and local expert knowledge. It ties in with the idea within the ecotourism approach that the host community should be involved in decision-making. Knowledge about the ecology of the affected environment should be obtained before planning decisions are taken. This approach means that there should be a balance between asking and telling the agent about the

environment and the plans for it. There should not be a top-down authoritarian or social engineering approach, but rather an active mediation of knowledge and values to agents (O'Donoghue & Ashwell, 1994:15). Both environmental education and ecotourism encourage the development of skills and methods such as case studies, issues-based work and practical involvement in real local issues. These methods can typically be used on a trail to ensure that agents engage actively in the process. Furthermore, ecotourism and environmental education encourage problem-solving. Trails can be used as a means to illustrate certain environmental problems such as erosion, pollution and invader plants. These issues can then be discussed by the tourists who could make suggestions for possible solutions. This active learning, as opposed to mere transmission of information, should allow learners to feel part of the education process. Dialogue, interaction, hands-on work, learning in the context of environmental problems, issues and processes must form part of the teaching and learning approach used on the ecotourism trail. This aspect corresponds with the participatory link between ecotourism and environmental education discussed earlier.

The seventh link between ecotourism and environmental education is that both strive to **improve the quality of life** of all agents that are part of the planning and educational experience. Both ecotourism and environmental education strive to improve the quality of human living environments including the social, visual, natural and cultural dimensions of it. The two approaches also strive to improve the economic environment of people. Economic upliftment can be achieved by involving communities in the development of projects, such as, trails resulting in job creation and financial gain. However, this responsibility of financial gain extends to all the agents including the owner and tourist. The owner should make a profit while the tourist gets value for money spent.

An eighth link between ecotourism and environmental education is that both strive through the other links to **develop environmental responsibility** in people and in this way ensure sustainability of the environment for future generations.

The ninth link is that both approaches have a **holistic** approach and focus on a total environment and a total person including the cognitive, affective and psychomotor domains of the person.

What becomes noticeable when identifying the nine links between ecotourism and environmental education is that the links are interrelated with one another. With these theoretical links as framework a set of revised principles is now postulated. Due to the close links between ecotourism and environmental education the original list of principles in 2.1.2 do not require many additions. The additional information is highlighted in cursive print and the numbers in brackets indicate the environmental education principles associated with the original ecotourism principles. Ecotourism planning principles that incorporate environmental education principles are:

1. Inclusion of the **total environment** namely the biophysical (natural and built), social (cultural-*historical*, economic, *ethical*, *aesthetic* and political in a holistic *and balanced* planning procedure. (1 and 3)
2. Planning **responsibly and sustainably** for all agents (role players) namely the tourist, owner (private and government), planner, host community and total environment *considering current and historical environmental aspects in planning* to instil an ethical responsibility in the agents. (7 and 5)
3. Provision of an **enlightening and educating experience** to all the agents that are part of the ecotourism development to increase awareness and understanding of the total environment *as part of a continuous lifelong learning process that makes use of a diverse learning environment and a broad array of education approaches to develop critical thinking and problem-solving skills*. (2 and 11)

4. **Conservation and protection** of the total environment that ecotourism utilises as its resource by *emphasising environmental sensitivity and the symptoms, causes and complexity of environmental problems* and in the process minimise negative impacts. (9)
5. **Involvement of and benefit to all the agents** that are part of the ecotourism development especially the **host community** by *taking cognisance of local, national and international inputs and contributions*. (6 and 4)
6. Provision of **economic benefits** to all the agents.
7. Provision of a **participatory experience** to all the agents *that include, practical and first-hand experiences and create opportunities for the ecotourists to plan their learning experience*. (3, 12 and 8)

The applicability of these principles to trails is reviewed in Chapter three when the concept environment and more specifically the trail environment as the agent in the real domain of this research are investigated. A revised set of principles is then compiled.