CHAPTER 7: CONCLUSION AND PROPOSALS

"Nothing is vital for science; nothing can be. Its accepted propositions, therefore, are but opinions at most; and the whole list is provisional. The scientific man is not the least wedded to his conclusions. He risks nothing upon them. He stands ready to abandon one or all as soon as experience opposes them (Peirce, 1931-5, I.347 in Bird, 1989: 347)."

The research problem (1.2) and aims (1.3) focuses the study on existing literature concerning ecotourism and environmental education, their links and existing trail planning methods. Through analyses information is gained about ecotourism, environmental education and trails which culminates into an ecotourism trail planning framework (Table 5.1). The framework's applicability in practice is reviewed against different case studies. According to Bernstein (1966:110) this end-product may serve as a means for further enquiry and research.

7.1 Research results

The results of the research are presented according to the secondary aims (1.3.2) of the research which also guides the progression of chapters. Realism philosophy underpins the study and focuses on three domains. Firstly, the ecotourism and environmental education approaches that are part of the empirical domain; secondly, the trail event and environment as part of the real domain of the research and thirdly, the agents that form the actual domain of the research and are the role players in the trail planning process. The analysis is used to achieve the secondary aims of the study.

7.1.1 Results related to the secondary aims of the study

The literature study in Chapter two shows that the two approaches **ecotourism and environmental education have links**. The conceptualisation of the two approaches

202

reveals that the approaches have many aspects in common (2.3) such as the aim to protect and conserve, the concept of total environment, dealing with human-environment relationships, to enlighten and provide a lifelong interpretive learning experience, involving all agents actively, getting the host community involved, improving people's quality of life, developing environmental responsibility and proposing a holistic approach to planning. These links make the two approaches mutually supportive of one another. These similarities form the foundation on which the ecotourism trail planning principles that facilitate environmental education are formulated in 2.3 and achieve the first secondary aim 1.3.2.1.

In Chapter three the meaning of the concept environment is conceptualised from within ecotourism and environmental education for trails. The chapter also investigates different types of trails and the value of trails for ecotourism and environmental education within the different domains of the trail environment. From the analyses it is concluded that **the trail environment can facilitate environmental education**. This is the second secondary aim (1.3.2.2) set for the research. At the end of the chapter a revised set of **ecotourism trail planning principles that facilitate environmental education** is formulated (3.3) to include the broad understanding of the term environment as proposed in Figure 3.4. This addresses the third secondary aim (1.3.2.3) and guides the case study analysis.

To achieve the fourth secondary aim (1.3.2.4) of the study, the researcher investigated the actual domain of the research, namely, the **agents that participate in ecotourism trail planning and are part of the trail environment** (Chapter four). This analysis illustrates how diverse the agents are and that each has a different role to play in the trail planning process which has to be accommodated in the ecotourism trail planning framework.

The different **trail planning processes are reviewed** in Chapter five and a trail planning framework is proposed in Table 5.1. This process achieves the fifth secondary aim (1.3.2.5) of the study.

Once the preceding theoretical analyses had been completed, the theory could be assessed in the field. This was done through researcher participation in four selected **ecotourism trail case studies** that have, as their specific purpose the aim to facilitate environmental education. This enables the researcher to achieve the sixth secondary aim of the study (1.3.2.6).

In obtaining the secondary aims set out for the study the primary aim can be achieved. This answers the problem of the study, namely, to critically review ecotourism, environmental education and existing trail planning frameworks and establish an ecotourism trail planning framework that will succeed in arousing sensitivity to the environment, provide opportunities for enjoyable aesthetic experiences along existing or new trails and lead to a further appreciation of, and an interest in, the environment by engaging in environmental education experiences on the trail.

7.1.2   *Results related to the primary aim of the study*

Participation in and observation of the trail planning processes applied in the different case studies enables the researcher to determine to what extent the theoretical principles deduced from the literature study were applied. The result of this process is that the seven principles postulated for ecotourism trail planning (Figure 5.1) could be assessed on whether or not, and how, they can be applied in practice and what the results are. These results are given in the following paragraphs and lead to the reassessment of the seven planning principles to produce a matrix of nine principles for effective ecotourism trail planning to facilitate environmental education.

■ One of the first results is that by leaving out **educational parameters,** as well as not involving the host community and intended trail users in identifying such parameters during the discovery stage of the trail planning process (Figure 5.1), the selection of the trail corridor at a later stage in the planning phase of the framework is affected. The lack of involvement and continuity from one stage to the next results in changes that have to be made to trail direction and distances at Tswaing and

204

subjective identification of educational sites on the Tswaing, Rustenburg, Windy Brow and Northcliff trails.

Educational parameters that emerged from the case studies, especially Tswaing, are that the distance between education points on the trail must not be too far or too close. The education points must be placed in a logical sequence along the trail, the direction of the trail and order of education points must coincide, the design and placement of outdoor environmental education facilities must be aesthetically acceptable. Furthermore, education points must be placed after discontinuities in the environment, not too many education points should be placed on a trail and indigenous knowledge must be incorporated into trail activities.

■ It also transpires that **no evaluation scale for educational parameters** as for the physical parameters such as vegetation and geology exists. An evaluation scale needs to be constructed for educational parameters once these parameters have been identified. If the parameter strives not to be subjective it will have to involve all the agents such as the trail owners, trail planners and host communities in establishing it. The lack of such an evaluation scale can initiate new research opportunities.

■ The case studies reflect that the trail planning process is an **interrelated process** and that what happens in the planning phase of the framework gets carried over to other phases. In the case of Tswaing, the lack of agent involvement in the planning phase resulted in redesigning the trail direction in the implementation phase.

■ Applying an ecotourism and environmental education approach to the trail planning process, as is suggested by the framework, allows for **job opportunities to be created**. Job opportunities can include building the trail and other facilities as at Tswaing and Windy Brow, doing maintenance tasks such as chopping out sickle bush (an invader plant which takes over the veld when overgrazing takes place) in the trail environment as at Tswaing, and acting as tourist guides as at Tswaing. This

empowers people, and by allowing them to be part of the continuous process of trail planning they take ownership of the trail, hence the selection of the slogan for Tswaing *"For the people, by the people"* (Moolman & de Jong, 1995:28). What is important is that they be trained and skilled in the different tasks required, such as the tour guides at Tswaing. This will enable them to actively and successfully participate in the trail planning process and as Mosidi (1996:48) states *"... community participation involves more than just ensuring benefits for the local people; it entails empowering communities in the decision-making process and in the implementation of a project, as equal partners."* It is important to direct economic and other benefits to local people that complement rather than overwhelm or replace traditional practices and, in this way, minimise negative impacts on the host community.

■ A further result of the research is that the different agents participating in the trail planning process and environment have **different understandings of the concepts and approaches environmental education and ecotourism**. These differences need to be addressed by the trail owner, trail planner and specialist groups that participate in the trail planning process. At Tswaing these differences in the understanding of concepts caused the activity developers to revisit some of the activities after piloting them with the different user groups from the formal education sector. During piloting, it emerged that concepts such as environment and environmental education were understood differently by the trail users. The South African Tourism Board (n.d:2) found in their research that a very small percentage of South Africans understand or have even heard of the term ecotourism.

■ **Community involvement** is an aspect that features strongly in the research because it is an element that is present in both environmental education and ecotourism and is one of the agents in the actual domain of the research. Buhalis (1999:57) suggests that it is an aspect critical to the success of the tourism industry and for the satisfaction of indigenous people in the long term. Community involvement contributes to the improvement of the quality of life of host communities

and encourages capacity building and participation. **Community participation** ensures that relevant issues be looked at and that the community will identify with these issues, thus enhancing the value of participation. Maximising the early and long-term participation of local people in the decision-making process helps to determine the kind and amount of tourism that should occur. The proposed framework is thus constructed to accommodate this aspect in all four of the identified phases of trail planning.

The **analysis of the needs and understandings of the host community** as stakeholder is an integral principle in the framework. The fieldwork at Tswaing proved that certain aspects directly relate to a specific community and can play an influential role in the application of the proposed approach to environmental education. The understandings of the term environmental education and environment and the diverse number of language groups that use the trail at Tswaing at the same time, created problems during the pilot programmes.

Although the initial intention of the researcher was to look at more than one trail user group, such as the formal and non-formal education sector, this did not happen. The reason is that in the case of Rustenburg, the trail planning process did not proceed into the implementation phase during the time the case studies were done. At Tswaing the non-formal group of users never became actively part of the trail either. The result is that the target audiences of the case studies are all from the formal education sector. This sector of trail users is very specialised (Chapter four). The formal education sector of trail users requires that **training be provided to the teachers** (educators/facilitators) who will use the trail to facilitate their environmental education programmes and activities. Training programmes should introduce the teacher to environmental education as well as ecotourism to place the resource, the trail, in context. This implies that a specific site (trail) functions best when used for one purpose only. If environmental education is the main objective only a site that lends itself to such a purpose should be developed.

- **Training** is also needed for the teachers as well as **for the host communities** to explain why a nature area, such as Tswaing, should be conserved and developed for ecotourism rather than allowing it to be turned into a soccer stadium or be used for housing and grazing. They need to learn more about wonders such as the impact crater at Tswaing, that ecotourists come to see. This process increases host community awareness and understanding of an area's natural and cultural systems and subsequently leads to the community's involvement in issues affecting the system. In this way they contribute to the conservation and management of the area and minimise negative impacts on the environment.

- The proposed planning framework provides a process with **structure and continuity** which, if lacking, can result in the process being stopped as in the case of Northcliff and Rustenburg.

- The framework **brings together** and facilitates the interdependency of four environment domains, namely, the biophysical, social, behavioural and physiological and agents such as the trail planner, trail owner, authority, host community and trailist via planning principles.

- It is found that existing trails such as Windy Brow and Northcliff have applied some of the proposed principles, while new trails such as Tswaing and Rustenburg have not considered many of the planning principles. Researcher participation and observation of the case studies reveal that certain **principles are applied in more than one phase** in the trail planning process and are interlinked with the different agents that are part of the trail planning process. These principles could ultimately be classified as generic principles in the framework. This makes it possible to take the detailed framework postulated in Table 5.1 and rework it into a revised set of principles for the trail environment to make the application of the framework less detailed, more streamlined and pragmatic.

In the final analysis of the research the seven planning principles proposed in section 3.3 are reformulated into nine planning principles that are part of the process of planning ecotourism trails to facilitate environmental education. Principles one and six are added to the original set of seven because the case studies have revealed that these two aspects are important if a trail wants to fulfil its specialised aim of environmental education. These principles span all four trail planning phases and include the broad understanding of the term environment.

Principle one states that the primary purpose/aim of the ecotourism trail to facilitate environmental education should be identified from the assessment stage of the trail. This principle implies that all agents should have an enlightening experience in a discovery, participatory and interdisciplinary manner. This can be achieved by incorporating environmental educationists from the initial planning phase of the framework. The environmental educationists can help to inform the host community, owner and trail planner of the associations between ecotourism and environmental education and how the two approaches can be made compatible in the trail environment. In doing this the environmental literacy of the host community, owner and planner can be developed and their attitudes and beliefs regarding the holistic trail environment be changed.

Principle two states that all the agents that will be part of the trail planning process should be identified and a comprehensive needs analysis regarding their environmental education and ecotourism needs be done. Their integrity must be respected at all times. These agents can include the trailist, trail owner, trail planner, host community and the authority. This is an important principle because the individuals' internal environments of needs influence their perceptions of the external trail environment. Non-targeted promotions of tourism events, such as trails, will not maintain the tourism demand.

Principle three sates that the purpose, aim and the needs of the trailists should be identified in context of the total trail environment (biophysical, social, behavioural and

209

physiological).

Principle four states that the agents should be involved actively in a participatory manner in the complete trail planning process. They should be involved in decision-making situations, problem-solving situations, management tasks and planning of environmental education activities along the trail. This will make the agents recognise the value of the trail environment and stimulate admiration, appreciation and responsibility towards it. This principle encourages environmental sympathy, increases the participation of people in the management of their own environment and in this way supports sustainable and responsible resource development.

Principle five states that discovery, participatory and interactive enlightening and educating experiences should be included in the trail environment in which all the agents can participate in an enjoyable, satisfying and interrelated manner. This experience should be facilitated by using a broad array of educational approaches and activities along the trail. This can help broaden their vision from the local trail environment to a more global perspective, helps them in identifying environmental issues and includes participation in solving these.

Principle six states that the diversity and discontinuities in the trail environment should be used to unlock the environmental education potential of the trail. This can contribute to creating an awareness and appreciation for both human heritage and biodiversity which again helps to protect the trail environment.

Principle seven states that wealth and economic benefits, upliftment and empowerment should be generated for the host community, value for money for the trail user and profit for the developer. This principle will help assure stability in the trail environment and enhance the quality of the lives of the host community, trail users and the developer. Adherence to this principle will contribute to sustaining productivity over a long term for future generations.

Principle eight states that responsible planning should be done towards the total environment and the trail event should be sustainable into the future. This implies that the potential of the environment as well as its limitations should be recognised. Sustainable practices should be implemented to ensure that the ecotourism trail will be able to facilitate environmental education for an extended period of time.

Principle nine states that the total ecotourism trail environment and the agents should be conserved and protected. Without the trail environment as the resource it will not be possible to apply the other principles.

7.2   Critical review of the research

7.2.1   Strengths of the framework

The proposed framework attempts to involve all those **individuals and groups** likely to be affected by the placing of an ecotourism trail in their environment. The importance of involving all the agents is that their basic objectives, values and desires with regard to ecotourism trails and environmental education will be reflected. It also becomes a learning process within and between the different agents during the planning process and in the process the trail project will gain community support and commitment.

The framework also answers to the **demand that citizens make**, especially minority groups, that they be involved in all decisions and plans which might affect or alter the quality of their community's life and future. In applying a planning framework of this nature, **physical, social and economic goals of the community can be achieved** through the participation of developers at national, state or regional level, as well as, involving host communities and special interest and civic groups from the area where the ecotourism trail will be developed. Developers thus demonstrate social responsibility.

211

A further strength of the framework is that in its complexity it relies on the **interdisciplinary** coordination of inputs from specialists in ecotourism, environmental education and trail development to ultimately reach its goal of planning ecotourism trails to facilitate environmental education for all agents (trail owner, trail planner, host community, trail user, authority and total trail environment). The framework moves away from traditional trail planning methods where only trail planners are incorporated into the planning. The framework allows for the incorporation of the accumulated knowledge of planning from other professions and seeks to accommodate the intricacies of relations between the different specialist fields.

The framework facilitates the process of **environmental awareness** of all the agents which is an important aspect of ecotourism and environmental education. It allows for communication between the different agents on how they perceive the trail environment and what they regard as sensitive issues and problem areas when a trail is to be developed in this way at a specific site. The trail environment is used to expose the ecotourist to the environmental education component of ecotourism and the importance of preserving essential processes.

The framework recognises the **total environment** in which trail planning takes place, bio-physical (natural and built), social (economic, political, cultural), behavioural and physiological. The framework thus encompasses the total welfare of the community in which it takes place and does not operate in a vacuum (Bannon, 1976:18). It has a holistic and encompassing approach. The framework integrates the three core concepts inherent to ecotourism and environmental education, namely; host community participation, financial benefits for all agents, and resource conservation. It also incorporates into the real domain of the trail event the agents from the actual domain (trail owner, trail planner, authority, host community and trailist) and the ecotourism and environmental education experience from the empirical domain of the trail.

The framework encourages the incorporation of **indigenous knowledge** which is part of true and rich ecotourism and environmental education experiences. It creates a

balance between opportunities for planners, trailists and host communities and contributes to maintaining environmental, social and cultural integrity.

The **flexibility and openness** of the framework allows for adaptions as the future trends and priorities in ecotourism and environmental education change. There is also space for interaction, monitoring, feedback, collaboration and negotiation. This is important in the context of new information, changing social attitudes and values, new technology and new ways of approaching problems because the framework should be flexible enough to reflect such changes (Sharpe, 1976:58). The framework also adopts within its flexibility and openness a holistic planning strategy by taking cognisance of all agents participating in the trail planning process as well as the total trail environment.

The application of the framework facilitates the possibility of ecotourism trails to include a specialist market of tourists, namely, **educational tourism**. This group of tourists specifically visits an area to learn more about its people and their culture, environment and politics. These tourists require specific activities that can be presented at market related prices that will broaden the income base of the trail owner and other agents involved in the trail such as the host community.

The framework proposes basic underlying principles with explanatory criteria which are not site specific and therefore make the framework **transferable to other trail sites**.

The researcher sees the strengths of the ecotourism trail planning framework as a mechanism that will provide a suitable delivery system for environmental education and ecotourism. The nine suggested guidelines can help to make the planning process more consistent, efficient, simple to negotiate and cost effective. However, the framework does have its weaknesses.

213

7.2.2   *Weaknesses of the framework*

The initial trail planning framework proposed in Table 5.1 is a **long and detailed process** but from the case study observations and analyses it was possible to identify nine principles. The list is still very comprehensive because trail planning, ecotourism and environmental education are not simple processes but rather complex due to the fact that there are so many agents that participate in the process. The revised set of principles does, however, try and simplify the trail planning framework.

The researcher would in the true sense of the realism approach suggest that the application of the framework be made practicably applicable by the owner and trail developer by placing the principles summarised above in a simplified framework with a matrix such as:

TABLE 7.1 SIMPLIFIED TRAIL PLANNING MATRIX

Trail planning phases	Planning principles								
	1	2	3	4	5	6	7	8	9
Planning overview phase									
Implementation phase									
Construction phase									
Maintenance and administration phase									

The more comprehensive framework in Table 5.1 can also be used. Using a matrix as in Figure 7.1 forces the trail planner to plan in a more focused way and take cognisance of all the principles in all of the phases of the framework. The researcher would argue that the more consistently the principles are applied the better the trail will be planned to facilitate environmental education.

The suggested **incorporation of professionals and laymen** in the planning framework can be a problem when there is an artificial distance between them. This can only be overcome when both parties become true participants in the planning process rather than the professionals being outside experts.

The case studies that were accessible to the researcher in the end all **focused primarily on the formal education sector**. Rustenburg and Northcliff did have the non-formal education sector in mind as well but these trails did not proceed into the implementation phase and thus no pilot studies could be run on this group of trail users. From this weakness in the research further research opportunities can therefore stem, such as comparing the environmental education needs of formal and non-formal education groups using trails and investigating whether and how these groups can be accommodated on the same trail.

It would be **difficult for individuals to apply the trail planning framework on their own** because not only does it require specialist knowledge on conventional trail planning parameters such as vegetation, geology and climate but it includes two other approaches namely ecotourism and environmental education. The last two are not very well comprehended by many laymen. Thus professional inputs would be needed on the technical planning and layout of the trail as well as on the ecotourism and environmental education dimensions of the trail. This will have cost implications for trail developers and can be a deterrent for planning ecotourism trails to facilitate environmental education.

7.3 Suggestions for further research

From the research presented future research ideas can stem. Research possibilities could concern or focus on:

- ■ The impact of ecotourism trails on local communities: employment, financial, socio-cultural impacts.

■ Reasons why people use ecotourism trails, their needs and values in order to deliver a more satisfying experience.

■ Comparative analyses of the environmental education needs of formal and non-formal education groups using trails.

■ Comparative analyses of the experiences of users of ecotourism trails and non-ecotourism trails.

■ The success of different educational techniques and materials that can be used on ecotourism trails.

■ The ability of ecotourism trails to develop environmental skills, attitudes and values of role players.

■ The frequency with which ecotourism trails are used for environmental education purposes.

■ Establishing educational parameters for trail planning and an associated numeric value system such as for vegetation and geology.

■ Assessing the level of environmental education that has taken place for different trailists. (Take different groups on an ecotourism trail and provide them with environmental education experiences. Develop a method of determining the environmental education experience level of each group and identify the differences.)

■ The use of effective signage and marking material for trails facilitating an environmental education experience and transfer of information.

■ Techniques to impart indigenous knowledge to ecotourism trail users.

216

- The understanding of the concepts ecotourism and environmental education by different agents such as the trailist, trail planner and host community.

7.4 Conclusion

However, it can be argued that a planning framework as proposed is unique for each situation and that every group of developers encounters different variables and conditions in space and time. It is true that reality is interpreted through conceptual systems and filters and is transformed into perception (Robertson, 1994: 24). Therefore, the proposed planning framework in this research clearly stipulates these filters. These principles can be used as a tool for coping with planning different ecotourism trails to facilitate environmental education.

A planning framework as proposed is aimed at alleviating past mistakes, preventing present mistakes from spreading, and for reducing future errors to the minimum (Bannon, 1976:3). It is also an attempt to bring together environmental educators and tourism developers and operators because though they come from different disciplinary backgrounds with different motivations they use the same environment.

The proposed ecotourism trail planning framework should, however, contribute to the multipurpose planning of tourism in such a way that it will increase and enrich the personal satisfaction of the ecotourism trail user, contribute to the protection of the very resource on which trails depend, integrate the community actively in the planning process and stimulate sustainable economic benefits for all the role players that are part of the process. The trail planning framework combines into one framework the ecological and the human dimensions of Human Geography.