

Exploration of Pre-service Teachers' Value Positions on Ecotourism at a South African University

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Abstract: The purpose of this study was to explore pre-service Life Science teachers' support for and value positions on ecotourism within the South African school curriculum context. The study used a descriptive case study design with a sample of 50 pre-service teachers who participated by filling a questionnaire. Data analysis corroborated quantitative and qualitative aspects to develop an in-depth understanding of the problem. Based on the findings, the study concludes that anthropological, eco-centric and radical value positions underpinned reasons for supporting ecotourism to various extents. Therefore, preservice teachers need to have in-depth knowledge on various value positions regarding ecotourism as they are in a key position to influence learners in their classroom. Given that there are various value positions that underpin pre-service teachers' support or non-support for ecotourism, the study recommends that scholars need to study environmental value positions in-depth. Finally, preservice teachers need to receive training on how to mediate learning in ways that support critical thinking and reflection so that the teachers' negative predispositions may not affect the learners' understanding of environmental issues.

Keyword: Ecotourism; pre-service teachers; philosophical value positions.

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Introduction

Internationally, ecotourism is fast becoming more than a buzzword as its popularity increases in the tourism industry and as people make effort to translate the concept into practice (Thomas et al., 2014; Samal & Dash, 2022). For some, it is merely convenient to use ecotourism as a form of support and alignment to global concerns of sustainable development and sustainability and to the growing popularity of another buzz phrase "go green" (Mastria et al., 2023). Naivety would make one believe that the only concern is nature in ecotourism; tourism is also economy driven (Harilal & Tichaawa, 2020; Büscher et al., 2017).

Pan et al. (2017) aver that although the concepts of ecotourism and sustainable tourism somewhat overlap, there seems, nonetheless, to be variation in definitions of both, partially or wholly. Thus, due to this lack of consensus, the definition of ecotourism depends on whom one talks to and what the traveler makes of it (Goodwin, 2015; Urias & Russo, 2009). In the same vein, sustainable development has been criticized as an "oxymoron", something that cannot be translated into reality (Judson, 2007). It seems weird that the two discourses, which have political support and are frequently at the center of academic and pragmatist debates of anthropological needs appear not to offer a clear understanding

with respect to what they are. There is a view that ecotourism and sustainable development are presently not addressing concerns about the degrading state of nature on Earth (Stronza et al., 2019; Fletcher, 2020). Indeed, the United Nations' Sustainable Development Goals (SDGs) (2015) can only ultimately be achievable through behavior modification of the masses. The SDGs provide a guiding framework to create mass awareness of the earth's depleting resources and indiscriminate destruction ultimately hoping to bring about urgent behavior modification to respond to these environmental issues.

One of strategies to respond to the rapid degradation of earth is through the education sector (Osland & Mackoy, 2012). It is for this reason that this paper focuses on how well pre-service teachers are prepared to teach ecotourism within the correct mind set. It is acknowledged that higher education (HE) institutions play a critical role in developing future citizens with foresight (Hatipoglu et al., 2014; Wals, 2012). In this regard, there is a suggestion that it is valuable to explore the environmental thinking and behavioral intentions of future tourism employees and other strategic role players (Pan, et al., 2017; Wu & Li, 2017; Wu et al., 2018). Such an exploration could be extended to pre-service teachers who carry the curriculum mandate to teach the topic of ecotourism and who will eventually become responsible for developing the learners' understanding of it.

HEIs have designed curricula for specific academic and vocational qualifications in ecotourism and/or tourism or have included them as topics in other relevant modules. In universities in Taiwan and in China, ecotourism exists as a major focus (Fang et al., 2018). In South Africa, ecotourism exists in the formal school Life Sciences curriculum - Grade 10, Term 3 (DoE, 2011) as part of the Environmental Studies strand. There are different value positions that underpin ecotourism (Carvache-Franco et al., 2020). Hence, teachers' value positions, which may consciously or unconsciously influence their teaching and the learners' perception of ecotourism, is essential to study. However, there is a dearth of literature on the views of pre-service and in-service teachers concerning their value positions on ecotourism prompting the need for further research. From a study carried out in Taiwan, Pan et al. (2017) proposed that there should be future research using qualitative techniques to explore attitudes and opinions of students, teachers

and academic administrators on sustainability and tourism related themes. Therefore, this study sought to contribute to the discourse on sustainable ecotourism and tourism.

Literature Review

There seems to be some variability in the way people conceive ecotourism, although there are fundamental similarities. The term "ecotourism" has been defined as "responsible travel to natural areas that conserve the environment and improve the well-being of local people" (Goodwin & Chaudhary, 2017, p. 437). The revised definition of ecotourism by the International Ecotourism Society (TIES) is framed as "responsible travel to natural areas that conserve the environment, sustain the well-being of the local people and involves interpretation and education" (Ogweno, 2021, p. 99). Another definition *treats* ecotourism as "mainly the interaction between the physical environmental features and people for leisure purposes, sought after by people away from their usual residence" (Adetola & Adediran, 2014, p. 562).

In addition, there is another conception of tourism framed as nature-based tourism, synonymous with tenets such as ecological, sustainability, green, alternative, mountain tourism and associated activities, such as hiking, biking, camping and hunting (Oom do Valle, et al., 2015). A concern is that definitions of tourism seem to naively focus on conservation and on the well-being of people and tend to ignore the notion that tourism cannot be alienated from the economy (Harilal & Tichaawa, 2020; Mondino & Beery, 2019). Zacarias and Loyola (2017) point out that ecotourism has become popularized as a green version of tourism and uses economic value as motivation for conservation. The inclusion of education, as advocated by TIES further loads the definition of ecotourism. Education is a vast field, and while it has the potential to bring about behavioral change, it does not provide any guarantees, though the educational value of ecotourism has some merit in enhancing environmental awareness of both tourists and local communities (Zacarias & Loyola, 2017).

A basic tenet of ecotourism is community inclusion and participation (Harilal & Tichaawa, 2020; Zacarias & Loyola, 2017; The International Ecotourism Society, 2015; Thornburg, 2014; Campbell, 1999). However, local participation has its challenges. A historical case study in the Rwenzori Mountains National Park, Uganda, is an example of the

challenges of community inclusion and participation. Some of the challenges associated with local community participation highlighted in the case study included illegal activities, which were previously normal for the community, economic disparity amongst local community members and some anti-conservation behaviors (Muhumuza et al., 2013).

Cultural appreciation, local knowledge and maximizing respect for local cultures are important for the success of authentic ecotourism (Tiwari et al., 2024; Thomas et al., 2014). Tiwari et al. (2024) opine that active community involvement in tourism promotes the sharing of local customs, knowledge and socio-cultural values. However, a key concern, is the willingness of tourists, especially with strong scientific beliefs of the western world to adapt to, accept or respect the cultural and ancestral beliefs of local communities? On the African continent, ancestral beliefs prevail within local communities. Animals constitute objects for worship and trees and forests are places for worship, and based on their sacredness, the same are protected (United Nations Environment Program, 2008). For example, in a study in North-east Ghana, ancestral beliefs ascribed to some parts of the environment as the “home of the gods” were significant contributors to conservation of the natural environment (Aniah et al., 2014). In Kenya, some trees and plant species that were considered sacred, such as *Ficus thonningii*, locally known as poncho in western Kenya, were associated with some bad omens if they were cut and hence, this belief resulted in their protection (United Nations Environment Program, 2008).

Cultural beliefs systems, unlike scientific belief systems, often appear to be irrational and sentimental (Imenda, 2010). The findings of the impacts of ecotourism reported in a study done in the Nompondo community surrounding the Hluhluwe-iMfolozi Park (HiP) in northern KwaZulu Natal, South Africa, included social impacts of lowering of traditional values and social disruption (Nsukwini & Bob, 2016). A related concern, is where local communities are not homogenous; diversity of cultures within an area create tensions when certain cultures are marginalized and do not enjoy maximum benefits from tourism (Tiwari et al., 2024). There needs to be openness of tourists to cultural diversity and belief systems, beyond scientific norms and entertainment value, if

ecotourism is to be truly inclusive and respectful of all local communities.

Ecotourism seeks to encourage tourists to become inherently aware of the social and environmental consequences of their actions and to enhance environmental ethical considerations with simultaneous modified personal behaviors (Osland & Mackoy, 2012; Alarcón-del-Amo et al., 2023). Furthermore, the environmental ideals of responsible behaviors and behavioral intentions are important prerequisites for sustainable tourism (Pan et al., 2017). The ideals of ecotourism can be achieved through education by, inter alia, promoting the development of positive attitudes, awareness, values and behavior towards the environment and local communities (Osland & Mackoy, 2012; Urias & Russo, 2009). One of the direct informal education strategies is for field guides and practices at ecotourist destinations to be living examples of expected environmental behavior. In a Costa Rica study, Osland and Mackoy (2012) reported that while tour guides value the importance of influencing behavior of tourists, the translation into reality is limited by the short period that the tourists are exposed to aspects of nature, cultural conservation and preservation. The authors stated that instructions by tour guides to tourists to keep on the trail during a walk-out in nature is conveyed in pre-tour briefings without substantiation of the reasons why such behavior is necessary. This appears to be purely behaviorist in approach, devoid of an intrinsic educational understanding accompanying the need and reflection for such behavior. Wals et al. (2017) raises the point that it should be questioned whether learning environments initiate people to reflect on values, controversies and dilemmas, as it is this reflection, which is likely to support learning-based change towards a more sustainable world.

Since The International Ecotourism Society (2015) advocates education as an important component of ecotourism, it is critical to reflect on the role of teachers in promoting the learning environment. In South Africa, pre-service and in-service teachers have become important agents in ecotourism education by virtue of the inclusion of tourism as a school subject and ecotourism as a component of the Life Sciences curriculum. Pedagogical practices of teaches include lesson content design, lesson presentation, pedagogical strategies and assessment of learning (Chen et al., 2014; Imenda, 2009). However, pedagogical practices are

influenced by teacher's belief systems. An understanding of teachers' beliefs, value positions, practices and attitudes is important to improve educational processes (OECD, 2009). Further, while there is debate on the influence of teachers' beliefs on instruction, it may be important to note that there is a positive correlation between teachers' beliefs, on one hand, and their nature and quality of instruction, on another (OECD, 2009). The challenge lies in the influence that teachers have on their students.

Studies show a tendency of teachers to influence learners through their dominance. Pillay (2017) reports from her study using a convenience sample of teachers of English in South African schools, that some teachers take a hegemonic view of their role as change agents. In other words, these teachers had a dominant perspective of teaching where they believed that they would change learner behavior in a particular way. Similarly, Buthelezi (2019) concluded from a case study in Southern Africa that Natural Science teachers still use approaches, such as telling, textbooks and questioning in a dominant way – in ways that promoted transmission teaching and passive learning, rather than using approaches that involve active learning and development of critical thinking skills in learners. This is contrary to the importance of education to promote critical thinking skills articulated in South Africa's Curriculum Assessment Policy Statement (CAPS) (Department of Education, 2011). Urias and Russo (2009) point out that education in the context of ecotourism is more than a unidirectional flow of information; it requires agencies to facilitate substantive interpretations of values within the environmental, cultural and resource management contexts. Positive environmental change is more than behaviorist change efforts; it requires an alteration of beliefs, values and attitudes about the relationship between the human and non-human worlds (Shaw, 2016). Hattingh (2016) points out that what sometimes makes these value positions problematic is, they are not explicit, we live unaware of them – and we remain without critically thinking about the implications of what we do and think. The author's point gives credence to this study in that it explores pre-service teachers' value positions underpinning ecotourism.

The above literature review provides sufficient evidence to conclude that ecotourism is not a simple and straightforward conservation strategy. In reality, with heightened attention on the ecological

environment, the development and implementation of ecotourism has raised numerous challenges (Xu et al., 2022). Further, where ecotourism is included as a topic in formal education, more especially classroom teaching and dynamics in practice are likely to be influenced by the teacher's value position.

Theoretical Framework

This study used three broad philosophical value positions, namely anthropocentric, eco-centric and radical. Value positions, in general, attempt to provide a distinct rationale to distinguish environmentally appropriate behavior from that which is not (Hattingh, 2016). There are three primary reasons for having three value positions guide the study. Firstly, it is difficult to shape environmentally responsible behavior using a single theory or model since environmental issues are complex and approaches to addressing them are sometimes controversial (Pan et al., 2017; Muhumuza et al., 2013). Secondly, the discourse of ecotourism is widely debated indicating various value positions (Saatsakis et al., 2019). Thirdly, in order to understand a possible range of perspectives and views of the pre-service teachers, the use of more than one value position is necessary.

Anthropocentric Value Position

The anthropocentric value position is based on the instrumental value of nature to provide necessary goods (food and timber) and services (fossil fuels and water) for human survival (Shaw, 2017; Hattingh, 2016). A criticism though is that it does not consider the "critical" natural capital that can limit human activities or the vulnerability of human impact on nature (Alrøe & Kristensen, 2000). Human activities have significantly contributed to environmental crises, such as climate change and its impacts and to pollution (Droz, 2022). An uncritical adoption of the anthropocentric value position is likely to promote thinking that the environment can benefit humankind; pro-ecotourism supporters are then likely to focus on the benefits for humankind to the detriment of the environment. This position is also likely to orientate the teaching of ecotourism with focus on human benefits bereft of a holistic understanding of the environment.

Eco-centric Value Position

The eco-centric value position acknowledges that there is need to value nature beyond "human-use-value" (Campbell, 2018; Shaw, 2017; Hattingh,

2016; Cairns, 2003). Individual organisms are not above ecology, as they are members of a community interdependent on the functioning of the ecosystem for survival (Shaw, 2017; Hattingh, 2016). This value position is ethically defensible with the assumption that humankind and natural systems co-evolve in a way that is beneficial to both. Critics of this position question whether human needs (hunger and poverty) can ever be subservient to conservation of species (Hattingh, 2016).

Radical Value Position

Radical value positions place emphasis on the transformation of values, attitudes and organizational patterns towards environmental issues, mainly through direct action, to defend biodiversity and the commons (Esteves, 2017; Hattingh, 2016). A radical approach to environmental issues implies not just finding strategies to counter the symptoms of environmental issues but the need to reconstruct and transform fundamental thinking (Temper et al., 2018). Radical perspectives raise a fundamental argument that we cannot address environmental issues adequately and with vigor unless basic thought patterns (e.g. superiority) are questioned and transformed (Hattingh, 2016). Teaching, aligned to radical transformation, is more likely to embrace critical thinking in teaching and learning rather than on transmission of knowledge.

Methodology

Design

This study followed a descriptive case study design located within the interpretivist paradigm. The design is useful in eliciting views, perspectives or experiences of participants (Le Roux, 2016). The study elicited the perspectives (value positions) of pre-service teachers (university students doing a teaching qualification).

Population and Sampling

The study involved purposive (pre-service teachers) and convenient (easy to access) non-probability sampling. Therefore, 50 pre-service teachers (third year students), registered for a science teaching degree at a residential South African university participated. The students were a class registered for the science teaching methodology module.

Sources of Data

A questionnaire was the source for data. The study administered the questionnaire in a lecture venue and the students had an hour to respond. Individual

written responses were required with no prior discussion. The questionnaire consisted of closed and open-ended items.

Trustworthiness and Dependability

Interpretivist researchers contend that the constructs of trustworthiness and dependability are apt constructs to describe what takes place in interpretative research (Nieuwenhuis, 2016; Rose & Johnson, 2020). In this study, categorical theoretical value positions from the literature were defined for face validity and underpinned the items for analysis. Further, the anonymous quotations from the pre-service student teachers' responses appear as descriptive data.

Treatment of Data

Data analysis corroborated quantitative and qualitative aspects to develop an in-depth understanding of the preservice teachers' responses.

Ethical Considerations

The study took place in compliance with ethical research protocols of a specific university. Participants received the purpose, process and possible outcomes of the project before obtaining the informed consent. Students' names nor numbers were required, hence, assurance that no personal information would be available. Further, assurance was given that confidentiality and anonymity would be maintained in the reporting of findings by not mentioning the exact calendar year of the study and name of the university.

Results and Discussion

The results appear according to the research questions as follows.

Research Question 1: Do pre-service Life Science teachers support the concept of ecotourism?

The results show that the vast majority of the pre-service teachers (84%) supported the concept of ecotourism (Table 1).

Table 1. Preservice Teachers' Ecosystem Support

Gender	Yes	No	Total
Females	14 (70%)	6 (30%)	20
Males	28 (93.3%)	2 (6.7%)	30
Overall	42 (84%)	8 (16%)	50

This was the case for both female (70%) and male (93.3%) pre-service teachers. Thus, a reasonable assumption is that the pre-service teachers are likely

to adopt a positive influential attitude towards ecotourism in their teaching of the subject.

Satrya et al. (2023) articulate that ecotourism has the advantage of promoting environmental awareness, sustainability and conservation. On the contrary, the literature raises concern that ecotourism is debatable; criticisms include that the ecotourism industry drastically affects the natural environment and the benefits of operators outweigh that of local communities (Anishchenko, 2016; Das & Chatterji, 2015). Some of the pre-service teachers did not support the topic (16%). The attitude and influence of teachers who do not support ecotourism is a cause for concern. Almeida (2017) avers that education ultimately affects children and Pillay (2017) pointed out that teachers serve as critical agents of change.

Research question 2: What ethical value positions underpin pre-service Life Sciences teachers' support or non-support for ecotourism?

The analysis of ethical value positions centered on a broad but categorical distinction between anthropocentric (benefits for human), eco-centric (value of nature beyond "human-use-value") and radical (need for transformation in thinking and practice) as elaborated in the theoretical framework.

Value Positions Based on Supporting or Non-Supporting of Ecotourism

Four students did not provide any feedback; hence, the analysis for research question 2 in Table 2 is based on 46 responses.

Table 2 shows that the pre-service teachers' responses embraced a single value position, even though the distribution varied through different value positions.

The majority of the pre-service teachers (71.7%) supported the argument that ecotourism is underpinned by the anthropocentric value position (A1). Only 17.4 were opposed to that view (anti-sentiments). The varying value positions confirm that the concept of ecotourism is debatable, that there are multiple ways of framing the concept and there is heterogeneity in attitude towards ecotourism as presented in various studies (Alarcón-del-Amo, 2023; Muhumuza et al., 2013).

A very low percentage of the responses (6.5%) supported the eco-centric value position (A2). Proponents of ecocentrism support this value position as essential to achieving sustainability. The eco-centric value position downplays the human-centric value of nature; eco-centrism values the intrinsic importance of all of Earth's life forms and their relationships with ecosystems (Humaida, 2020). This stance is not anti-human but acknowledges that humans have a critical role to address environmental problems in their interdependence with all other ecological components (Washington et al., 2017; Tešin et al., 2020). However, ecocentrism raises the concern of limits and the role of humans in tandem with ecological laws (Salmana & Nagy, 2019). One of the respondents reported, "Ecotourism gives tourists the opportunity to see a lot of things that are taking place in the environment. Thus, this can make them think how they contribute positively to it and heal it from wounds that the environment has."

Table 2: Value Positions from Supporting or Non-Supporting Responses

	Value positions	Yes – supported ecotourism	No – did not support ecotourism (anti-sentiment)
A 1	Anthropocentric	33 (71.7%)	8 (17.4%)
A 2	Eco-centric	3 (6.5%)	
A 3	Radical	2 (4.3%)	-
	Total	38 (82.6%)	8 (17.4%)

The radical value position (A3) was the least value position underpinning ecotourism (4.3%). Morrison et al. (2022) contextualize the word "radical" as a fundamental cause of a concern over an issue. The SDGs advocate for a holistic, innovative and integrated approach to environmental concerns (United Nations, 2015) and approaches to

addressing environmental issues require deeper philosophical probing ultimately leading to transformation in thinking and understanding (Mcphearson, et al., 2021; Morrison, et al., 2022). Ecotourism cannot be isolated from environmental concerns.

Anthropologic Value Position

Table 3, shows specific reasons for responses in Table 2, particularly about the anthropocentric value position. The highest response (36.8%) indicated support for ecotourism because of nature conservation, which relates with wilderness preservation (5.3%). Various authors advocate environmental and nature conservation as an objective of ecotourism (Alarcón-del-Amo et al., 2023; Mondino & Beery, 2019). Sustainable

Development Goals (SDGs) 8, 12 and 14 (United Nations, 2015) further call for sustainable consumption, proper use of resources, conservation of resources and economic growth. On the contrary, Shasha et al. (2020) reported that the most cited article in a review study (2001-2018) referred to biodiversity conservation and funding within the context of ecotourism while maintaining that major research topics in ecotourism include nature conservation.

Table 3: Anthropocentric Value Position Reasons

A1. Anthropocentric Value position underpinning ecotourism (With focused reasons)		Yes – supported ecotourism	No – did not support Ecotourism
A 1.1	Basis: Economy	4 (10.5%)	2 (5.2%)
A 1.2	Basis: Resource use & Conservation	14 (36.8%)	1 (2.6%)
A 1.3	Basis: Wilderness preservation	2 (5.3%)	-
A1.4	Basis: Culture	2 (5.3%)	1 (2.6%)
A1.5	Basis: Education	5 (13.2%)	-
A1.6	Basis: Aesthetic	1 (2.6%)	-
A1.7	Basis: Multiple foci	5 (13.2%)	1(2.6%)
Total		33 (86.9%)	5 (13%)

Other reported reasons include multiple foci (13.2%), education (13.2), economy (10.5%), wilderness preservation (5.3%), culture (5.3%), and aesthetic (2.6%).

Value Positions in Response to Not Supporting Ecotourism

From Table 2, preservice teachers who did not support ecotourism presented reasons. One of the respondents reported, “No, it disturbs the environment and threatens the biodiversity.” This respondent believed that ecotourism has a negative impact on the environment possibly through tourist activities. Due to their expansive travel, it is being questioned whether ecotourists leave a bigger footprint on the environment than other tourists (Samal & Dash, 2022). Another respondent reported, “I don’t support ecotourism because it destroys our environment, leaving us without indigenous plants and animals. Since ‘us’ as Africans we believe that natural environment is our territory with food and natural resources.” In a critical evaluation of ecotourism, Saatsakis et al. (2019) pointed out a perception that ecotourism is a commercial expansion of tourism. Critics have questioned whether the economic and environmental benefits, especially for indigenous communities can be attained. Another respondent reported, “No, ecotourism consumes too much money and this can lead to changes in the level of the country’s economy.” Other reported reasons

were, “It is not good for the environment (biotic community)” and “No, I don’t because as humans we have to respect animals’ territory. Samal and Dash (2022) reported similar ecosystem challenges in an ecotourism review study.

Conclusions and Recommendations

Conclusion

This study provided valuable insights on the reasons why pre-service teachers support or do not support ecotourism and the value positions underpinning the reasons given. Anthropological, eco-centric and radical value positions underpinned reasons for supporting ecotourism to various extents. Findings of this study also underline the importance of research in the scholarship of teaching and learning to improve pre-service teacher education and teaching practice at Higher Education institutions. Thus, this study concludes that preservice teachers need to have in-depth knowledge and be aware of the underpinning value positions of controversial issues such as ecotourism as they are in a powerful position to influence learners consciously or subconsciously in the classroom.

Recommendations

Teacher education providers need to pay attention to a transformative education focus in environmental topics. Practitioners also need to pay closer attention to challenges of teaching the controversial topic of ecotourism. Given that there

are various value positions that underpin pre-service teachers support or non-support for ecotourism, the study recommends that scholars need to study environmental value positions in greater depth at Higher Education institutions, especially among preservice student teachers. Pre-service teachers are then better prepared to teach controversial environmental topics.

Furthermore, preservice teachers, conservation and environmental education officers all need to receive training on how to teach about environmental issues in a holistic and transformative way. Preservice teachers need to receive training on how to mediate learning in ways that support critical thinking and reflection so that the teachers' negative predispositions do not affect the learners' understanding of ecosystem issues.

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