OUTDOOR EDUCATION: A PANACEA FOR ENVIRONMENTAL SUSTAINABILITY IN CROSS RIVER STATE, NIGERIA

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ABSTRACT

This study evaluated the influence of outdoor education on environmental sustainability in Calabar Education Zone of Cross River State. Outdoor education as learning experience simply implies learning "out-of-door" or outside the conventional classroom learning. This is also termed "outward based education", as it is mostly done outside. A well organized and arranged outdoor learning experience typically assists individuals in fostering the experience for critical thinking and reflection which is vital for young people to handle the social, financial and environmental challenges of life in the 21st century. To achieve study objectives, two null hypotheses were formulated for the study. One-Way Analysis of Variance (ANOVA) analysis was used in testing the formulated hypotheses. The results from the analyses revealed that there is a significant positive relationship between outdoor education and environmental sustainability. The two independent (experiential learning and ecotourism) variables were found to be significantly related to environmental sustainability. The researcher recommended among other things that the education stake holders promote environmental awareness through environmental education from primary education level. This will enhance future environment behaviour on a sustainable side.

Key words: Outdoor, education. Panacea, environmental, sustainability, adventure learning, ecotourism, Cross River

INTRODUCTION

Outdoor education as learning experience simply implies learning "out-of-door" or outside the conventional classroom learning. This is also termed "outward based education", as it is mostly done outside. A well organized and arranged outdoor learning experience typically assists individuals in fostering the experience for critical thinking and reflection vital for young people to handle the social, financial, and environmental challenges of life in the 21st century (Neill, 2004). Learning outdoor could be enjoyable, creative, challenging, and adventurous and usually assist people to learn about situation through experience (Igwebuike, 2014).

Outdoor learning associates' individuals with the uniqueness of the natural world, individual's cultural legacy and subsequently supports indebt activities that enhances lifelong involvement in environmental sustainability. Different outdoor learning experience offers many

opportunities for, critical thinking, working with others, solving challenges, intra and interpersonal communication and thinking abilities. Outdoor education according to Linda (2007) has contributed enormously to further developing individual literacy, numeracy as well as Health. In terms of literacy, it could set opportunities for members to utilize various precepts like the verbally expression maps, graph, schedules, and guidelines. In numeracy, there are chances to figure out how to do some calculations, allot points and do other important estimations during studies. In respect to Health of members of outdoor learning, there are chances of turning out to be physically active in various ways in addition to improvement of ones emotionally and mental well-being. Hence, outdoor education ordinarily offers numerous opportunities for students to increase and contextualize their comprehension within educational curriculum, and for teaching and learning across the educational plan in various settings in life (Linda, 2007).

The researcher considers adventure learning, and ecotourism as the sub-variables of outdoor education as learning experience in this research. According to Stremba and Bisson (2009), adventure learning joins experiential learning and self-improvement. Experience learning therefore has to do with learning from direct experience from the environment thereby creating self-assurance and initiative. Learning process that happen outdoor fuses group encounter through utilization of genuine encounters in the outdoor learning environment to promote learners' comprehension of events. Eric (2008) sees adventure learning as an outdoor learning that shows environmental mindfulness and create self-assurance through exercises that typically involves risk and stress, for example, rock climbing and endurance trek. By implication to this study therefore is that attitude change with regards to environmental sustainability are response set. They can hence be modified or changed through outdoor education mostly by direct experience. This point to the fact that peoples unconcerned attitude towards environmental sustainability can be changed for better through adventure learning (Igwebuike, 2014).

Ecotourism as an outdoor learning program depends on the standard of experiential education, where students or members learn by doing. It gives a wide scope of issues for in environmental education while applying field encounters. Ecotourism has to do with visiting area (mostly forest environment) that is somewhat undisturbed natural ecosystem. Ecotourism opens members to different parts of the environment including topographical, wildlife activities and other aspect of biodiversity that ordinarily cannot be gotten indoors (classroom) (Obach, 2009). Ecotourism empowers members to encounter untamed life and nature in a moderately safeguarded territories and perfect environment. Ecotourism is seen as a key area that ultimately support preservation of environment and untamed wildlife territory and for sure financial growth of the host communities. This study subsequently wishes to discover the history, results and future capability of ecotourism in Calabar Education Zone of Cross River State. Ecotourism is by and large an outdoor learning event that pointed toward bringing together the concepts of preservation, host communities' involvement, and sustainable travel. This implies that the individuals who partake in ecotourism exercises should attempt to adjust

to these ecotourism standards viz: limit environmental impact; have respect for the culture and conservation practices of the host communities; give positive experience to guests and hosts communities; give direct monetary as well as empowerment benefit to host communities, and raise awareness to the Host communities on the need to preserve the environment which ultimately include both economic and heath gain (Freeman, Richard and Tanigachy, 2005).

The researcher sees environmental degradation as well as unsustainability as not been brought about by the environmental changes alone, however, may equally be because of absence of communication on environmental challenges. One issue with "SUSTAINABILITY" is that the term is usually not clearly defined. What are we attempting to sustain? Is it our way of life, economy, or natural ecosystem? Freidman (2008) believes that sustainability in a real sense involves the fact that we should figure out how to think and act so that it sustains our natural environment and our cultural relationship (which include the use of natural resources) through ages (for now and future generation). If we have the intension of sustaining our environment, it should be through resource conservation as well as ecological regeneration and restoration (Walls and Jickling, 2002). Sustainability basically implies addressing material need and keeping away from ecological degeration. With the above clarification, the researcher considers some aspect of environmental sustainability to be considered in this study to include waste management, forest conservation, environmental awareness and pollution control.

As Rowland (2002) puts it forest management is the management of the forest for different benefits such as health, economic and social implications, that forest management enhances social, economic and environmental objectives. In 2007, the United Nations General Assembly, took on the non-legally binding instrument on a wide range of forest as respect to sustainability. The instrument being the first of its sort mirrored on strong global responsibility in advancing the implementation of forest sustainability through the approach of uniting all partners to take part (Rowland, 2012).

The environmental circumstances could be impacted by waste management particularly in area of waste disposal processes. The strategy for waste disposal fluctuates considering everyday environments of individuals and the acknowledged way of life in that geological region. This is on the grounds that as certain networks give water treatment and garbage assortment, others may not, which hence diminishes the capacity to control the sustainability of the environment. Whenever waste is not disposed of and properly treated, pollution happens and may prompt the spread of illness.

Generally, when processing plants or discard waste in a manner that directly influences the environment, this usually led pollution. Many investigations have shown the adverse consequence of air pollution on the environment. Air pollution can hinder individual's capacity to breath, which might possibly build the quantity of lung and heart challenges on many occasions (Rowland, 2012).

With the above need for environmental sustainability, the researcher was poised to exactly evaluate the influence of outdoor education variables, for example, experiential learning and ecotourism and environmental sustainability in terms of forest conservation, environmental awareness, waste management and pollution control in Calabar Education Zone of Cross River State

Statement of the problem

Progressively, Cross River State, Nigeria is confronted with the corruption of her neighborhood scenes and biological changes that appear to compromise species variety and, surprisingly, human security and wellbeing. These days Cross River State is witnessing a progressive loss it biodiversity and other environmental resources in a manner that if not control will lead to enormous environmental challenges in the nearest future. The pace of deforestation and environmental abuse in Cross River State is on the increase notwithstanding a few regulations made by the State government to regulate the use of our forest resources. In view of the previously mentioned, the researcher was moved to ask: could outdoor education, be a panacea for environmental sustainability in Calabar Cross River State?

Adventure learning and environmental sustainability

Adventure learning focuses on building self-confidence and leadership qualities through experiential and collaborative teaching. Adventure learning occurs outdoor using hash conditions and activities. It combines experiential learning and decision making, team building and employment of the actual world situation (Eric, 2008)

As indicated by Weir (2004) when he wrote in his paper "learning sustainability through adventure", he specified that adventure learning has as of now part of sustainability education in ways which including outdoor education and presently through technology enhanced education. Adventure is by and large characterized as a trip or field work which has to do with risk, challenge, and experience, and exciting whose result toward the beginning is usually unknown (Mariam-Webster, 2012; Miles and Priest, 1990).

The adventure learning captivates students with feeling as though they are essential part of the experience. Adventure charms one’s creative mind and brings us into the reality of the natural world. Individuals normally are caught up in wonderment due to the risk they embraced, the uncertain results yet to be determined and furthermore the mental fortitude, strength and trying showed by those included. It very well may be a type of groundbreaking experience for members and onlookers the same. Adventure is by and large characterized as an occasion or field work implying risk, challenge, fervor, and experience whose result toward the beginning is generally obscure (Mariam-Webster, 2012; Miles and Priest, 1990). It doesn't have to include an actual test; the test may rather be absolutely of the psyche. It is in any case, innately experiential and especially so assuming reflection and sharing are incorporated into experience, close by chances to work on tackling true issues which sustainability is part of (Weir, 2004). Adventure learning thus has the capability of building positive relationship between natural

environment and the sustainable action on the use of environmental resources (Allison, Stott, Fetter and Beamus, 2011).

Ecotourism and environmental sustainability

These days, the travel industry has turned into a vital global industry, having many nations all around the world relying generally upon the financial earnings it produces. Ecotourism has numerous financial benefits ranges from economic, social and environment uses of the industry (Ikiara and Ckech, 2002).

Ecotourism subsequently advances to solve the problem of environmental sustainability through the improvement of new solution in the tourism industry which limits the adverse consequences of tourism, either on the environment, or outside its limits. This can be accomplished through the improvement of new systems and thoughts for dealing with the environmental challenges, including the dynamic cooperating of the public (Dolnicar, 2002). The continuous development of the travel industry enhances the urgency to discover solutions to cpe with its impact on the environment including culture and society.

The effective implementation of tourism programmes typically rely upon the full help of local actors and different partners, which additionally relies upon a specific level of education, awareness raising and training in relevant areas of environmental challenges. Environmental education mindfulness creation has been recognized as a vital region in running after supportable the travel industry advancement (Ebito, 2003). Whenever awareness is raised, the important qualities and attitude, skill and behaviour will be created.

METHODOLOGY

Scope of the study

This study was conducted in Cross River State. The study covered four (4) tertiary institutions in Calabar Education Zone of Cross River State viz: University of Calabar, Calabar; Cross River University of Technology, Calabar; and Cross River College of Education, Akamkpa and College of Health Technology, Calabar.

The sub-variables of outdoor education as the independent variable considered include adventure learning and ecotourism. The dependent variable is environmental sustainability. This is considered for this study in the areas of waste management, forest conservation, environmental awareness, and pollution control.

Purpose of the study

The main purpose of this study is to investigate the extent to which outdoor education promotes environmental sustainability in terms of forest conservation, environmental awareness, waste management and pollution control in Calabar Education Zone of Cross River State. Specifically, the purpose of this study therefore includes to:

1. Determine the relationship between adventure learning and environmental sustainability in terms of forest conservation, environmental awareness, waste management and pollution control in Calabar Education Zone of Cross River State and
2. Evaluate the relationship between ecotourism and environmental sustainability in terms of forest conservation, environmental awareness, waste management, in and pollution control in Calabar Education Zone of Cross River State

Research questions

To examine the relationship between outdoor education and environmental sustainability in Calabar Education Zone of Cross River State, the following research questions are raised for investigation:

1. How does adventure learning affect environmental sustainability in terms of forest conservation, environmental awareness, waste management and pollution contol in Calabar Education Zone of Cross River State?
2. How does ecotourism affect environmental sustainability in terms of forest conservation, environmental awareness, waste management and pollution control in Calabar Education Zone of Cross River State?

Statement of hypotheses

The following research hypotheses will serve as a guide to this study:

1. There is no significant influence of adventure learning on environmental sustainability in terms of forest conservation, environmental awareness, waste management and pollution in Calabar Education Zone of Cross River State.
2. There is no significant influence of ecotourism on environmental sustainability in terms of forest conservation, environmental awareness, waste management and pollution control Calabar Education Zone of Cross River State

RESULTS

General description of research variables

The major independent variable of this study was outdoor education. This independent variable was operationalized (sub variable) as follows

- **Independent variables**

(i) Adventure learning and
(ii) Ecotourism

- **Dependent variables**

i) Forest conservatism
ii) Environmental awareness
iii) Waste management
iv) Pollution control

A sample of 412 respondents were selected from four environmental related department of four tertiary institutions in Calabar Education Zone of Cross River State. The responses to the

questionnaire items were scored. The descriptive data for all variables under study are presented in Table 1

Table 1: Mean and standard deviation of the study variables

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Adventure learning	412	8.00	15.00	11.9951	1.75453
Eco tourism	412	6.00	13.00	11.7621	1.78720
Forest conservation	412	10.00	17.00	13.4806	2.04977
Environmental aware	412	9.00	17.00	13.6699	2.36926
Waste management	412	8.00	16.00	13.6602	1.84063
Pollution control	412	30.00	48.00	40.8107	5.52086

There is no significant influence of adventure learning on environmental sustainability in terms of forest conservation, environmental awareness, waste management and pollution control in Calabar Education Zone of Cross River State.

The independent variable (x) is adventure learning, while the dependent variable (y) is environmental sustainability. To test the hypothesis, One Way Analysis of Variance (ANOVA) was used. The result is presented in Table 2.

Table 2: One Way Analysis of Variance (ANOVA) analysis of influence of adventure learning on environmental sustainability in terms of forest conservation, environmental awareness, waste management and pollution control in Cross River State

Adventure learning		N	Mean	Std. Deviation
Forest conservation	Low	118	14.4746	2.01156
	Average	178	12.7528	2.10612
	High	116	13.5862	1.49241
	Total	412	13.4806	2.04977
Environmental awareness	Low	118	14.3051	2.19755
	Average	178	13.0337	2.58832
	High	116	14.0000	1.92014
	Total	412	13.6699	2.36926

Waste management	Low	118	14.3559	1.33029
	Average	178	13.2921	1.74798
	High	116	13.5172	2.20861
	Total	412	13.660	1.84063
Pollution control	Low	118	44.4746	2.01156
	Average	178	42.7528	2.10612
	High	116	43.5862	1.49241
	Total	412	43.4806	2.04977

		Sum of Squares	Df	Mean Square	F	Sig.
Forest conservation	Between Groups	212.159	2	106.080	28.644	.000
	Within Groups	1514.685	409	3.703		
	Total	1726.845	411			
Environmental awareness	Between Groups	132.292	2	66.146	12.440	.000
	Within Groups	2174.815	409	5.317		
	Total	2307.107	411			
Waste management	Between Groups	83.602	2	41.801	13.063	.000
	Within Groups	1308.825	409	3.200		
	Total	1392.427	411			
Pollution control	Between groups	1181.745	2	590.873	21.301	.000
	Within groups	11345.488		27.740		
	Total	12527.233	411			

*P <.05; df 2 & 233; critical f = 3.04

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The scores obtained from the respondents were splited into three categories. The highest score a respondent is expected to have is 20; lowest 5 and the average score is 10. Any respondent that scored below 9 was below average and was low, between 11 and 14 scores were within the average and was seen as moderate while those that score above 15 were above average and was considered to be high. The statistical analysis technique deployed to test this hypothesis was one-way analysis of variance (ANOVA). The results of the analysis are presented in Table 2.

The upper part of Table 2 shows the sizes, means and standard deviation for the three groups of respondents based on the levels of basic adventure learning. The actual results of ANOVA

that compared the three group mean values are shown in the lower part of Table 2. The comparison yielded F-ratios of 28.644, 12.440, 13.063 and 21.301for environmental conservation, environmental awareness, waste management and pollution control respectively. Four of the F-ratios (environmental conservation, environmental awareness, waste management and pollution control) are each higher than the critical F-ratio of 3.02 at .05 level of significant, with 2 and 411 degrees of freedom. With these results, the null hypothesis is rejected in each of the three instances of environmental conservation, environmental awareness, waste management and pollution control. This implies that there is a significant influence of adventure learning on environmental sustainability in terms of forest conservation, environmental awareness, waste management and pollution control in Calabar Education Zone of Cross River State.

4.1.2 HO: 2

There is no significant influence of ecotourism on environmental sustainability in terms of forest conservation, environmental awareness, waste management and pollution control Calabar Education Zone of Cross River State

The independent variable (x) is ecotourism, while the dependent variable (y) is environmental sustainability. To test the hypothesis, One Way Analysis of Variance (ANOVA) was used. The result is presented in Table 3

Table 3: One Way Analysis of Variance (ANOVA) analysis of influence of ecotourism on environmental sustainability in terms of forest conservation, environmental awareness, waste management and pollution control in Cross River State

Ecotourism		N	Mean	Std.
Forest conservation	Low	188	13.5745	1.63183
	Average	134	14.0000	2.25449
	High	90	12.5111	2.19931
	Total	412	13.4806	2.04977
Environmental awareness	Low	188	14.3298	1.88088
	Average	134	13.6418	2.10049
	High	90	12.3333	3.02796
	Total	412	13.6699	2.36926

Waste management	Low	188	14.4362	1.09991
	Average	134	13.5821	2.11795
	High	90	12.1556	1.68210
	Total	412	13.660	1.84063
Pollution control	Low	188	42.3404	3.95037
	Average	134	41.2239	5.54631
	High	190	37.0000	6.48940
	Total	412	40.8107	5.52086

		Sum of Squares	Df	Mean Square	F-Ratio	Sig.
Environmental conservation	Between Groups	122.398	2	61.199	15.601	.000
	Within Groups	1604.446	409	3.923		
	Total	1726.845	411			
Environmental awareness	Between Groups	242.748	2	121.374	24.047	.000
	Within Groups	2064.359	409	5.047		
	Total	2307.107	411			
Waste management	Between Groups	317.774	2	158.887	60.470	.000
	Within Groups	1074.653	409	2.628		
	Total	1392.427	411			
Pollution control	between groups	10757.496	2	88.868		
33.643 .000						
	Within groups	10757.496	409	26.302		
	Total	12527.233	411			

*P <.05; df 2 & 233; critical f = 3.04

The scores obtained from the respondents were splitted into three categories. The highest score a respondent is expected to have is 20, lowest 5 and the average score is 10. Any respondent that scored below 9 was below average and was considered to be low, between 11 and 14 scores were within the average and was seen as moderate while those that score above 15 were above average and was considered to be high. The statistical analysis technique deployed to test this hypothesis was one-way analysis of variance (ANOVA). The results of the analysis are presented in Table 3

The upper part of Table 3 shows the sizes, means and standard deviation for the three groups of respondents based on the levels of post literacy education. The actual results of ANOVA that compared the three group mean values are shown in the lower part of Table 3. The

comparison yielded F-ratios of 15.601, 24.047, 60.470 and 33.643for family planning, immunization, HIV/AIDS and over all programmes respectively. Four of the F-ratios (for environmental conservation, environmental awareness, waste management and pollution control) are each higher than the critical F-ratio of 3.02 at .05 level of significant, with 2 and 411 degrees of freedom. With these results, the null hypothesis is rejected in each of the three instances of environmental conservation, environmental awareness, waste management and pollution control. This implies that there is a significant influence of ecotourism on environmental sustainability in terms of forest conservation, environmental awareness, waste management and pollution control Calabar Education Zone of Cross River State.

DISCUSSION OF FINDINGS

Adventure learning and environmental sustainability

Hypothesis one revealed that there is a significant influence of ecotourism on environmental sustainability in terms of forest conservation, environmental awareness, waste management and pollution control in Calabar Education Zone of Cross River State.

This ascertain agrees with the work of Weir (2004) when he wrote in his paper "learning sustainability through adventure", that adventure learning has as of now part of sustainability education in ways which including outdoor education and presently through technology enhanced education. Adventure is by and large characterized as a trip or field work which has to do with risk, challenge, and experience, and exciting whose result toward the beginning is usually unknown (Mariam-Webster, 2012; Miles and Priest, 1990).

The result is also in line with Priest (1990), stating that adventure learning captivates students with feeling as though they are essential part of the experience. Adventure charms one’s creative mind and brings us into the reality of the natural world and subsequently help to conserve it.

Ecotourism and environmental sustainability

Hypothesis two revealed that there was significant influence of ecotourism on environmental sustainability in terms of forest conservation, environmental awareness, waste management and pollution control in Calabar Education Zone of Cross River State. This conclusion is also in line with Burkley (2010) when he defined ecotourism as nature based, mainly concerned with the enjoyment of some relatively undisturbed phenomenon of nature. He also explained that under the much-promoted nature-based tourism, ecotourism was suggested as a unique way in which the increasing number of visitors seeking an intrinsically natural environment. Environmental tourism experience could be accommodated, while minimizing the ecological impact and maximizing the socio-economic and health benefits.

Mike (2007) in support of the above conclusion believed that there is a relationship between environmental awareness and much commitment to tourism because most operators in the tourism

industry are aware of the importance of a clean and beautiful environment to the tourists. Thus, tourism operators must struggle as much as possible to be environmentally friendly.

Conclusion

Based on the result of the results of analyses and the subsequent findings, the following conclusion was reached: that of outdoor education variables of adventure learning and ecotourism significantly influences environmental sustainability as far as waste management, forest conservation, environmental awareness and pollution control is concerned. This infers that occupants will be more dedicated to environmental sustainability when they are more involved in outdoor education systems, for example, adventure learning and ecotourism. The discoveries from the analyses prompted the decision that there exists a significant influence of outdoor education on environmental sustainability in terms of environmental conservation, environmental awareness, waste management and pollution control in research area. Hence the topic: outdoor education: a panacea for environmental sustainability in Cross River State, Nigeria.

Recommendations

The following recommendations were drawn from the result of the study.

1. Environmental awareness creation should be enhanced by the government and other stakeholders through environmental education from the grassroots level of education to put the future of their environmental behavior on a sustainable side.
2. Ecotourism should be enhanced by government as a tool to promote forest conservation.
3. As a new development, the government of Cross Rivers State should encourage youths to get involved in environmental clubs, where issues on environmental sustainability are discussed. These clubs from time to time takes part in environmental sensitization to enlighten the people on the need of sustaining their environment.
4. To further create a lasting environmental awareness, Government and concerned NGOs should carry out outdoor activities such as seminars and workshops. By this the citizens will be involved in planning and execution of the solutions to environmental challenges.

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