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Influence of Conservation Education Advocacy on Career Attractiveness among the Youths in South-South Nigeria: Boki, Cross River State Experience

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ABSTRACT

This study was designed to evaluate the influence of conservation education advocacy on the youths with regards to career attractiveness. The study adopted a two - stage sampling technique in selecting one hundred and fifty seven (157) respondents from three secondary schools within the operational base of the PANDRILLUS FOUNDATION. The results indicated that majority (49.7%) of the respondents were in Senior Secondary Two (SS2), 59.2% of the respondents were male while 52.2% were within the age bracket of 17 – 19years. Conservation Education (CE) messages with high index scores above 0.700, profiled by the respondents included impact of deforestation, agroforestry, afforestation/ enrichment planting, land rotation, and global warming/ climate change. Over 75% of the respondents professed that the conservation education has positive impact on them, 99.4% of the sampled respondent showed attitudinal disposition towards career in environmental conservation related discipline. Environmental management, Forestry, Horticulture and landscaping, Veterinary medicine, and Wildlife conservation/management, had well above 50% embrace by the respondents. Development of environmental extension programme, use of methods that motivate listenership and programme evaluation were among the recommendations advanced to enhance the efficiency of governmental and nongovernmental institutions involve in environmental management.

INTRODUCTION

Nigeria's biodiversity, its habitats and other natural ecosystems such as sacred groves, water catchment areas, and wetland are increasingly coming under intense pressure and threat of extirpation (local extinction). The pressure is as a result of an increasing human population, changing land uses (industrialization, urbanization, farming) and the ever-increasing need for goods and services from the ecosystems (DANIEL et al., 2016; THOMPSON, 2002; EZEBILO, 2010; DAYE and HEALEY, 2015). Nigeria has been working with its partners over the years to conserve this natural wealth, but the desired shift in the disposition of the rural dwellers seems unchanged. Throughout the 1990s and into this century, evidences have been documented of agricultural encroachment, illegal logging, and commercial hunting for bush meat in protected areas (OATES, 1999). The Cross River National Park (CRNP) and their partners from non-governmental organizations (NGOs), is not immune and continue to face the resource exploitation pressure.

STONE and D' ANDREA (2001) asserted that most international institutions and national governments have been unable to stem the accelerating loss of tropical forest lands due to reasons like unarticulated development strategy and poor environmental education. They highlighted one solution for preserving the precious resources of the forest: empowerment of local people who depend on the forest for survival.

Using this template, the Cross River State Government, PANDRILLUS FOUNDATION and the Buanchor Community in Boki Local Government Area agreed to collaborate on rural development and conservation. The Cross River State paid compensation in cash to households whose lands are alienated and also provided electricity, portable water, healthcare center, functional primary and secondary school while PANDRILLUS pays annual royalty in dollars to Buanchor Community and ensures periodic rehabilitation of Buanchor – Katabang – Kayang earth road linking Ikom – Obudu – Ranch Highway. The community on their part provides counterpart funds derived from royalties and community tax to partner with Cross River State Poverty Reduction Agency / World Bank to construct and equip a vocational training center for skills acquisition on non-forestry dependent vocations especially eco-tourism (EWAH, 2010; PANDRILLUS FOUNDATION, 2008).

The project uses a multi-faceted approach combining in-situ and habitat protection, captive care and breeding, research, training, small scale development schemes, non-formal education and positive advocacy, all aimed to promote the survival of the Drill monkeys, endangered Cross River gorillas, and ecotourism generally (OATES, 2003; PANDRILLUS FOUNDATION, 2008). The educational component's influence on this project is strategic and critical as it proffers a lot towards the effectiveness and choice of career of the young citizens of the adjoining communities. It is indisputable that learning and obtaining knowledge about nature is important for conservation. According to MORGAN and GRAMANN (1989), wildlife education enables children to understand

the importance of including animals in their view of the Earth and had resulted in positive changes in knowledge, attitudes, awareness, and actions toward wildlife. KELLERT and BERRY (1987) had also asserted that higher levels of education and a greater perception on the ecosystem have positive effects on the way humans feel about protecting the environment while BJERKE et al., (1998) reported that increased knowledge and understanding of nature provides a more positive attitude towards carnivores. Through structured educational experiences and activities targeted at varying age groups and population, conservation education enables people to realize how natural resources and ecosystems affects each other and how resources can be used wisely (www.fs.usda.gov).

Amongst the target audience of the FOUNDATION which includes the youths, hunters and local community dwellers, the youths are of great concern since majority of them are still in school and the impacts of current advocacy activities could influence their future engagements. Thus, this research was designed to ascertain whether the level of conservation knowledge successfully imparted by the FOUNDATION on the youths have any relative influence on their career attractiveness towards conservation. Specifically, the study identified the socio economic characteristics of the respondents; analyzed the contents of the extended conservation education by PANDRILLUS FOUNDATION; and assessed the influence of conservation education on the respondents' attractiveness to career towards conservation, since younger minds are believed to be easily oriented on issues than older ones.

LITERATURE REVIEW

An understanding of the dynamics of forest ecosystem provides people with insight about how human activities will actually affect the ecosystem, and it will also influence the attitude towards the ecosystem and the way local people think about conservation biology. Conservation biology covers a set of integrated knowledge about how we can utilize nature in a sustainable way, (PRIMACK, 2010).

Education certainly is important in shaping peoples' attitudes (KIDEGHESHO et al., 2007), but the elements of interest and ability are the basic factors influencing individuals in their choice of subject while lack of interest leads to low efficiency. STORKSDIECK et al., (2005) had shown that positive outcome occurred on readiness to embrace conservation messages in all three cases of urban public school partnership with: nature centre, exhibition on biodiversity, and hotel water conservation. KRUSE and CARD (2010) also reported increasing score in campers' self-reported knowledge, attitude and behavior, with increasing levels of advocacy. Their result further indicated that campers with previous camp experience had higher knowledge and attitude self-ratings than did those without experiences. Therefore, advocacy can help to develop the critical thinking skills/ interest in a subject and this

may go a long way to enhance a high performance in any examination result and eventual future interest.

Interestingly, in 1987, the Nigerian Conservation Foundation (NCF) helped to develop and drafted a national conservation education strategy that suggested that the subject be integrated into the primary and secondary schools' curricula. This was not successful because of inadequate resources in most schools in the country but the establishment of Conservation Clubs in many schools appear to be more effective (EZEILO, 2010). This gave the students the opportunity to learn more about natural environment and how to promote forest and biodiversity conservation (EZEILO, 2010). Further interest and career development is believed to have been developed during sessions of this extracurricular activity. Conservation education as asserted by MBUGUA (2012) is a necessary management tool to inform and impart knowledge, particularly to local communities as well as enhance indigenous and traditional knowledge that is useful for conservation.

MATERIALS AND METHODS

The study area was conducted in Boki Local Government Area- the operational base of PANDRILLUS FOUNDATION. Boki is one of the Local Government Areas in Cross River State. It lies approximately between latitude $6^{\circ} 15'$ and $6^{\circ} 25'$ North and between longitude $8^{\circ} 55'$ and $9^{\circ} 15'$ East. It is bounded in the west by Ogoja, in the north by Obudu, in the south by Ikom Local Government Areas, and in the east by the Republic of Cameroon (AGBOR, 2003). The area lies within the tropical high forest vegetation zone with annual rainfall between 3,000 mm - 3,800mm but with a variation increasing from lowland to uphill. Rainy season starts around late March / early April to September with a break in August. The dry season starts from October and ends in March. The mean monthly maximum temperature ranges from 22.2°C to 27.4°C (ITUEN, 2015; AGBOR, 2003). Boki (also referred to as Nki Tribe) has a population of 186,611 people (NPC, 2006).

It bears an international reputation for being a major commercial centre for forest and international agricultural commodities such as cocoa, coffee, timber, and palm products. All of these products are sourced and supplied for international consumption in the territory, (www.en.wikipedia.org).

A two- stage sampling technique was used in selecting respondents used for the study. at the first stage, three schools were randomly selected by simple random sampling from the nine (9) secondary schools in the LGA, at the second stage sixty (60) students were selected by simple random technique from the pool of Senior Secondary one to Senior Secondary three (SS1 – SS3) students in each school. One hundred and fifty seven (157) out of the one hundred and eighty (180) targeted respondents were successfully samples. This gives 87.2% sampling success. Selected schools were: Commercial Secondary School (CSS), Bateriko; Buentsebe Secondary school (BSS), Wulla; and Commercial Secondary school (CSS), Okwabang. This was to ensure that any sampled student must have spent considerable number of academic years in the area and is able to express his/her self appropriately.

Primary data were collected with the aid of structured questionnaires and was analyzed by descriptive statistics, Incidence Index analysis and relative rank order positioning.

RESULTS AND DISCUSSION

A. Socio-Economic Characteristics of the Respondents

Table 1 shows the distribution and Socio economic characteristics of the respondents. Majority of the respondents (49.7%) were in senior secondary two (SS2), while most of the respondents (52.2%) were within the age bracket of 17 – 19years adjudged to be the late adolescent grade. The table also shows that 59.2% of the respondents were male.

Table 1: Distribution and socio- economic characteristics of respondents

S/N	Characteristics	Frequency	Percentage (%)
1.	School		

	CSS Bateriko	55	35.0
	BSS Wulla	53	33.8
	CSS Okwabang	49	31.2
2.	Class		
	SS1	54	34.4
	SS2	78	49.7
	SS3	25	15.9
3.	Age		
	14-15	47	5.7
	16-17	78	29.9
	18-19	32	49.6
4.	Sex		
	Male	93	59.2
	Female	64	40.8

B. Beneficiary Awareness Incidence Pattern about the Dissemination of Conservation Topics by PANDRILLUS FOUNDATION

The subsection explored the areas of extended conservation education by PANDRILLUS FOUNDATION to the students during their outreach program to the schools and when they receive the students on excursion. Out of the 20 topics attested to by the students as areas covered by the FOUNDATION (table 2), analyses identified five major focus indicated by the right-sided alphabetical superscript and summarized as follows: Superscript a – environmental mismanagement impact and mitigations; b – sustainable forest and wildlife management; c – practical/ experimental procedures in natural resource management; d – issues in in-situ wildlife conservation; and e – park management. Higher index means higher rating of reception of the topic and higher impact on the

respondents. The highest ranked messages received by the respondents, which had index of above 0.700 were items 8, 16, 17, and 20. All the four items centered on ecological remedies for deforestation, which is the core challenge PANDRILLUS FOUNDATION is attempting to resolve. Eight items with index between 0.600 – 0.699 (ranked 6th - 12th) were all concerned with sustainable forest and wildlife management. Practical approach/ procedure in the management of natural resources had only 3 items with index range of between 0.500 – 0.599. Issues in in-situ wildlife conservation also had 3 of the profiled items with index between 0.400 – 0.499. The list ranked item was Park Management Operation with index of 0.236. The analysis revealed that the students received the basic environmental information which is the core to attitudinal change in forest resource management by indigenous forest community dwellers that see such resources as nature's blessing to be exploited (DANIEL et al., 2016).

Table 2: Areas of Extended Conservation Education by PANDRILLUS FOUNDATION to Students

Items	Extended Topics on Conservation	Index	RROP
1	Wildlife Management	0.662 ^b	8 th
2	Training on Natural Resources Management Protection/Conservation.	0.548 ^c	15 th
3	Conservation Status of different Species of Wildlife	0.611 ^b	12 th
4	Wildlife Protection Laws	0.376 ^e	19 th
5	Safety Precaution for Animals	0.401 ^d	18 th
6	Effects of Hunting	0.631 ^b	9 th
7	Environmental Protection	0.682 ^b	6 th
8	Impact of Deforestation	0.790 ^a	1 st
9	Global Warming	0.745 ^a	5 th
10	Park Management Operation	0.236 ^f	20 th
11	Management of Zoological Garden	0.484 ^d	17 th
12	Waste Management	0.497 ^d	16 th
13	Tree Nursery Establishment	0.624 ^b	10 th
14	Soil Conservation Technique	0.586 ^c	14 th
15	Plantation Establishment	0.669 ^b	7 th
16	Agroforestry	0.790 ^a	1 st
17	Afforestation (Enrichment planting)	0.790 ^a	1 st
18	Effects of Forest Fires	0.618 ^b	11 th
19	Pasture Establishment and Management	0.611 ^b	12 th
20	Land Rotation	0.777 ^a	4 th

C. Influence of Conservation Education on the Attitudinal Disposition of the Respondents

On the attitudinal disposition of the respondents to career in conservation related discipline, Table 3 reveals that the conservation education (CE) programme of PANDRILLUS FOUNDATION has a positive impact on over 75% of the respondents who declared that the FOUNDATION activities has improved their knowledge of wildlife and natural conservation. The study reveals that a greater percentage (99.4%) of the respondents would like to take up a career in conservation related

discipline as they grow up. Environmental management, Forestry, Horticulture and landscaping, Veterinary medicine, and Wildlife conservation/management, had well above 50% embrace by the respondents (Table 4). The above results corroborate assertions by STORKSDIECK et al., (2005), Kruse and Card (2010), Bjerke et al., (1998), Morgan and GRAMANN (1989), KIDEGHESHO et al., (2007) and KERLLERT and BERRY (1987). They had in various ways asserted that positive outcome occurred on readiness to embrace conservation as a result of education advocacy.

Table 3: Deposition of Respondents on Impact Profile of PANDRILLUS FOUNDATION Activities

S/N	Variable	Frequency	Percentage
1.	Improvement of Respondent's Knowledge on CE		
	Yes	125	79.6
	No	32	20.4
2.	Propensity to take up career in Conservation related discipline		
	Yes	156	99.4
	No	1	0.6

Note: N = 157; RROP = Relative Rank Order Positioning

Table 4: Incidence of Disposition on Career Acceptance

S/N	Possible Future Career Area	Index	RROP
1	Forestry	0.548	3 rd
2	Horticulture and Landscaping	0.637	2 nd
3	Wildlife Conservation/ Management	0.510	5 th
4	Zoology	0.414	6 th
5	Pollution Control	0.299	7 th
6	Veterinary Medicine	0.529	4 th
7	Environmental Management	0.662	15 th
8	Agroforestry	0.248	8 th
9	Botany	0.191	9 th

Note: N = 157; RROP = Relative Rank Order Positioning

CONCLUSION

There is a high profile on conservation education awareness by respondents. Thus, PANDRILLUS FOUNDATION and its partners could be adjudged to have made reasonable progress with respect to the goal of having an informed and involved citizenry on important matters of wildlife conservation.

Citizenry tends to understand the value of wildlife resources and appreciate the conservation and management of their natural resources when they are well informed. The level of conservation education advocacy has positively influence the youth's disposition towards choosing career in environmental management. It is obvious the relative outcomes of the PANDRILLUS

can be strengthened if institutions, Organizations (Community Based, Governmental or Non-Governmental) and agencies involve in environmental management should develop environmental extension education programme as activities to its operational area as means of promoting effective mass delivery of messages. Combination of methods should be employed such as the use of audio-visual equipment to communicate, engage students in practical aspect of conservation so as to spore their career interest in the discipline. Lastly, evaluation of conservation programmes which is often overlooked is necessary to understand whether the target audiences are effectively impacted.

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