THE ATTITUDES OF BIOLOGY TEACHERS AND STUDENTS TOWARD THE CONSERVATION OF NATURAL RESOURCES IN EKITI STATE, NIGERIA

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Abstract

The study investigated the attitudes of Biology teachers and students toward conservation of natural resources in Ekiti State. The participants for this study were 50 Biology teachers and 100 Biology students. The selection was based on purposive sampling technique which involved 10 secondary schools. Data collected from teachers' and students on conservation of Natural Resources Questionnaire were analyzed using frequency counts, percentage, mean, standard deviation and t-test.

The findings indicated that both teachers and students had a good knowledge of natural resources conservation concepts. The attitudes of both teachers and students point more to positive than negative. On a general note, the teachers had higher mean scores than the students indicating that teachers tended to have more favourable attitudes than the students toward natural resources conservation. It is recommended therefore, that the Federal and State environmental protection agencies should continue to make schools their principal focus in their bids to create, promote and sustain public awareness of the importance of natural resources conservation to mankind.

Keywords: Attitude, Conservation, Natural resource

Introduction

Earth is the only place in the universe known to sustain life through its life support system and essential ecological process. The maintenance of such processes and system is a necessity for all societies, regardless of their stage of development. In the beginning man was endowed with natural

environmental resources which include wildlife, clean water, air, soil, forest and everything else which was placed in the care of man by God. Our natural environments as created by God are orderly, stable, pure and supportive of flora and fauna in an interdependent manner (Egu, 1993).

Tropical forest alone form the most diverse and complex ecosystem on earth. A virtual power house of evolution, a natural supermarket, a rich reservoir of biodiversity, containing 40% of all living species. The forest provides us with food, water, medicine, shelter and new types of energy sources. They form an essential part of the complex web of life on and around our planet. These natures given resource in our natural environments are so dispensable to the daily lives and needs of people on earth that one could hardly think of survival without them. There is empirically based evidence to show that human beings are destroying the natural resources at a rate detrimental to their continues survival on the planet. The situation is further aggravated in recent time by growth of human population and its various needs as wells as scientific and technological advancement degradation.

Our forests are being ravaged every year by agricultural expansion, dispossession of large expanse of land for urbanization, industrialization, indiscriminate bush burning, uncontrolled logging and over exploitation of fuel wood. Nest (1991) reported that Nigeria's land, water, atmosphere, vegetation, wildlife, population and culture have been and are still being degraded. The Nigeria natural resource is ill and beset with problems, visible signs of environmental problems such as flooding, soil erosion, gully erosion, coastal and marine erosion, deforestation, surface and ground water pollution, oil spillage, gas flaring, industrial pollution, loss of biodiversity, water hyacinths invasion, indiscriminate waste disposal etc. These problems can be attributed to various factors; prominent among such factors are low level of awareness about the consequences of our actions on the natural resources, our poverty level, consumption pattern and the adoption of non-sustainable mode of development (Fafunwa, 1991).

Conservation of natural resources is the most important challenge of the present century. Nothing affects the quality of our lives quite like the welfare and state of the nature and no future can be quite so bleak as one in which the living resources such as plants and wildlife, which are essential for human survival and development are not attended to. There must be a change of attitude and reversal of current trend by government, organizations and individuals to revive our natural resources from depletion.

Research Questions

The following research questions were raised to guide and direct the study.

i. What is the level of teachers' knowledge of natural resources conservation?
ii. What is the attitude of teachers towards their natural resources conservation?
iii. What is the level of students' knowledge of natural resources conservation?
iv. What is the attitude of students towards their natural resources conservation?
v. Is there any significance between the attitudes of teachers and students toward their natural resources conservation?

Methodology

Research Design

The research design used in this study is descriptive research method of survey type.

The population consisted of teachers and students in the secondary schools in Ekiti State, Nigeria.

Sample and Sampling Techniques

The sample for this study was 100 students and 50 teachers drawn from 10 secondary schools in Ekiti State. Ten senior secondary schools II (SSS II) students and five teachers were selected from each school to participate in the study. The selection was based on purposive sampling techniques.

Research Instrument

Two sets of questionnaire were adopted for the study – the first set was designed for teachers while the second set was designed for the students. The questionnaire were subjected to face and construct validation. The test-retest of reliability of the teachers' questionnaire yielded a correlation coefficient of 0.58 while that of the students' questionnaire yielded a correlation coefficient of 0.62 these are found significant at 0.05 levels.

The questionnaires were personally administered by the researcher in all the schools.

Data Analysis

Data collected were analysed by using descriptive and inferential statistics. Frequency count and percentage were used for research questions 1 and 3. Mean and standard deviation were used for research questions 2 and 4 while t-test was used for question 5.

Results and Discussion

The results are presented in appropriate tables in sequence according to the research questions.

Research Question One

What is the level of teachers' knowledge of natural resources conservation?

Table 1: Teachers' knowledge of Natural Resources Conservation.

No of items	Items Description	Right option	%
1.	Forest as reservoir of biodiversity.	47	94
2.	Importance of plants and animals.	6	12
3.	Environmental awareness.	33	66
4.	Shifting cultivation	47	94
5.	Environmental education through conservation clubs.	27	54
6.	Habitat destruction	40	80
7.	Depletion of forest resources.	20	40
8.	Refuse disposal.	43	86
9.	Environmental education sustainable development.	37	74
10.	Timber exploitation.	23	46
11.	Desertification.	30	60
12.	Indiscriminate bush burning.	17	34

Table 1, above revealed that a greater proportion of the teachers showed more favourable environmental knowledge as represented in their response to eight out of twelve items used to measure natural resources conservation. These items are 1, 3, 4, 5,6,8,9 and 11. A relatively low proportion of the teachers made responses to four out of twelve items which are 2, 7, 10 and 12. The result therefore indicated that the teachers used in the study have a good knowledge of natural resources conservation.

Research Question Two

What is the attitude of teachers towards their natural resources conservation?

Table 2: Mean and Standard Deviation of Teachers' attitude towards natural resources conservation.

No of items	Items Description	Mean	SD
1.	Keeping of flowers.	3.67	0.59
2.	Pet keeping.	3.20	0.98
3.	Tree planting programme	2.73	1.18
4.	Environmental protection	3.60	0.88
5.	Clean environment	3.73	0.77
6.	Management of solid waste	3.27	0.77
7.	Effective dissemination of environmental information	3.73	0.57
8.	Over exploitation	3.8	0.75
9.	Soil erosion	3.8	0.54
10.	Insects as pollinations	3.53	1.02
11.	Deforestation	3.07	0.99
12.	Conservation of natural resources	2.47	0.80
	Over all	3.38	0.85

Table 2 above showed that the mean attitude of teachers towards natural resource conservation for the 12 items used in the study range from 2.47 to 3.80 with an over all attitude of 3.38.

The result indicated that the overall attitude of teachers to natural resources conservation tends to be positive than negative. Their mean scores on individual item also indicated that their attitude to each item constitutes the natural resources environmental scale is also positive. The teachers tend to have more favourable attitudes with respect to items 1, 2, 3,5,6, 7, 8, 9, 10 and 11 while they tend to exhibit the least favourable attitudes with items 4 and 12.

The table also showed that the standard deviation value ranges from 0.58-1.18. The low standard deviation – values also indicated that the individual scores of the teachers on each item tend to cluster around the mean. This further point to the fact that the teachers used in the study are more favourably disposed to natural resources conservation.

Research Question Three

What is the level of student's knowledge of natural resources conservation?

Table 3: Students knowledge of natural resources conservation.

No of items	**Items Description**	**Mean**	**SD**
1.	Forest as reservoir of biodiversity.	80	80
2.	Importance of plants and animals.	66	66
3.	Environmental awareness.	94	94
4.	Shifting cultivation.	52	52
5.	Environmental education through conservation clubs.	98	98
6.	Habitat destruction.	70	70
7.	Depletion of forest resource.	98	98
8.	Refuse disposal.	24	24
9.	Environmental education sustainable development.	62	62
10.	Timber exploitation.	46	46
11.	Desertification.	56	56
12.	Indiscriminate bush burning.	84	84

Table 3: showed that a greater percentage of students demonstrated a good knowledge of natural resources conservation with respect to ten items – 1, 2, 3, 4, 5, 6, 7, 9, 11 and 12 while a small percentage of the students exhibited poor knowledge of natural resources conservation with respect to two items (items 8 and 10). The result therefore showed that students have good knowledge of natural resources conservation.

Research Question Four

What is the attitude of students towards their natural resources conservation?

Table 4: Students attitudes toward natural resources conservation?

No of items	Items Description	Mean	SD
1.	Keeping of flowers.	3.42	0.90
2.	Pets keeping.	3.18	0.96
3.	Tree planting programme	2.72	1.06
4.	Environmental protection	3.30	0.85
5.	Clean environment	3.04	0.96
6.	Management of solid waste	2.68	0.17
7.	Effective dissemination of environmental information	2.94	0.95
8.	Over exploitation	3.04	1.21
9.	Soil erosion	3.34	0.92
10.	Insects as pollinations	2.80	0.94
11.	Deforestation	3.00	0.98
12.	Conservation of natural resources	2.96	1.20
	Over all	3.00	1.01

Table 4: showed that the mean of students attitude towards natural resources conservation for the items descriptions range from 2.46 to 3.42.

The overall mean score is 3.00. The students' attitude could therefore be regarded as positive since the overall mean attitude points more to positive than negative.

Research Question Five

Is there any significant difference between the attitude of teachers and students toward natural resources conservation?

Table 5: t-test summary of mean comparison between teachers and students in their attitudes toward natural resources conservation.

Item No.	Group	N	X	S.D	df	t cal	t tab
1.	Teachers Students	50 100	3.67 3.42	0.59 0.90	43	1.04	2.01
2.	Teachers Students	50 100	3.20 3.18	0.98 0.96	43	0.06	2.01
3.	Teachers Students	50 100	3.60 3.30	0.88 085	43	0.96	2.01
4.	Teachers Students	50 100	2.73 2.72	1.18 1.06	43	0.03	2.01
5.	Teachers Students	50 100	3.73 3.04	0.77 0.96	43	1.60	2.01
6.	Teachers Students	50 100	3.27 2.68	1.12 1.17	43	1.69	2.01
7.	Teachers Students	50 100	3.73 2.94	0.57 0.95	43	1.69	2.01
8.	Teachers Students	50 100	3.80 3.40	0.75 1.21	43	2.42	2.01
9.	Teachers Students	50 100	3.80 3.34	0.54 0.92	43	1.71	2.01
10.	Teachers Students	50 100	3.53 2.80	1.02 0.94	43	2.48	2.01
11.	Teachers Students	50 100	3.07 3.00	0.99 0.98	43	0.24	2.01
12.	Teachers Students	50 100	3.47 2.46	0.80 1.20	43	0.04	2.01
Overall	Teachers Students	50 100	3.38 3.00	0.85 1.01	43	1.37	2.01

Table 5 presented t-test comparison of teachers and students attitude to natural resources conservation for each item and for the overall scales. The results showed that on the overall, there is statistically significant difference between students and teachers in their attitudes towards natural resources conservation at 0.05 probability test.

The result showed that statistical significant difference exist between the items with respect to four items (items 5, 7, 8 and 10) at 0.05 probability level. In both cases, teachers had higher mean scores than the students

indicating that teachers tended to have more favourable natural resource conservation

Discussion

Teachers have a high level knowledge of their environment due to the awareness created by the government. The government gave their orientation and stressed the points raised in the National Council of Education of Nigeria2004 that Nigerian should adopt a national conservation education strategy to vigorously pursue and promote teachers knowledge of natural resources conservation.

Student's knowledge of environment conservation was low because they were not informed about the danger of not taking care of their natural resources. According to the National Policy on Education 1981 (revised 2004) which stated the important roles of primary and secondary education to other level is that environmental teaching and learning would be given adequate emphasis within the overall framework of the national conservation education strategy which is lacking behind in our curriculum today.

In this finding, teachers have the higher mean scores in their attitudes toward environmental conservation than students. This is in line with Gbadamosi and Adebakin, (1996) and Olagunju (1999) that teachers' attitudes toward environmental conservation must be favourable enough to carry students along. Teachers are role model to the students and they are easily mimicked, therefore they must be careful about what they teach and their attitudes in the class.

Conclusion and Recommendations

The findings is very encouraging and points to the fact that Biology teachers are putting their best to ensure that students maximize what they learn, despite government inadequate attention and commitment to teachers welfare.

Based on the findings, the following are recommended:-

i. The federal and state ministries of education should regularly organize workshops, seminars and conferences on environmental awareness to update teachers' knowledge of natural resources issues.
ii. Biology and environmental education teachers should be encouraged to embark on field trips and excursions to make the teaching and learning of environmental education concepts more practical and meaningful to students.
iii. Environmental Protections Agencies should make schools their principal focus in their bid to create, promote and sustain public awareness of the importance of natural resources to mankind.

iv. Environmental education like shifting cultivation, indiscriminate bush burning, over exploitation to forest resources and their grave consequences to mankind should be given adequate emphasis in the school curricula.

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