
CHALLENGES AND PROSPECTS OF ENVIRONMENTAL EDUCATION PROGRAMME IN NIGERIAN UNIVERSITY SYSTEM

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ABSTRACT

The study investigated the problems and prospects of Environmental Education Programme in Nigerian Universities. The study employed a survey design. Structured questionnaire was developed and used for data collection. A sample of 860 respondents, comprising 60 Environmental Education Lecturers, 15 Administrators and 785 Environmental Education students from five (5) universities in three (3) geo-political zones viz: South-East, South-West and South-South were obtained from a population of one thousand two hundred (1,200) for the study using purposive sampling technique. Two research questions were raised, answered using mean and standard deviations. A null hypothesis was raised and tested using t-test statistic at 0.05 level of significance. The instrument used was Environmental Education Implementation Questionnaire (EEIQ) for data collection with a reliability index of 0.90 using Cronbach-Alpha (α) coefficient. The findings revealed that: students lack science orientation, lecturers are poorly motivated, limited level of training and re-training of lecturers. It was therefore recommended that: the problems identified should be tackled by the government and that the prospects also identified should be vigorously pursued by the stakeholders.

Keywords: *Environment, Education, Challenges, Prospects, University System.*

INTRODUCTION

Very recently, some universities in Nigeria have started to develop programmes on formal Environmental Education (EE). What is needed now is a well-coordinated programme of action that will involve experts drawn from universities in the country to develop a universal curriculum on Environmental Education based on the environmental problems and needs of the country (Nwafor, 2006). Efforts are put in place via international seminars and conferences by National Universities Commission (NUC) to support and encourage the development of curricula in environmental education at University level, using the integrated and holistic approach. These efforts will assist in curriculum development and implementation for sustainable development in the environment (Eguabor, 2009).

Among the Nigerian universities, only the University of Calabar; University of Ibadan; University of Nigeria, Nsukka; University of Port Harcourt; and the Lagos State University; that have developed comprehensive programme in Environmental Education. The programme has functioned for more than a decade from inception. This programme would invariably boost teaching and the production of Environmental Education materials (Adara & Eguabor, 2004).

However, in order to ensure the achievement of the goals for societal education, NUC, established guidelines to follow by both Federal and State Universities. These guidelines are contained in a Federal Government document called the "Approved Minimum Academic Standards for Education for all Nigerian Universities" (Anijah-Obi, 2004).

Environment connotes the natural, social and the constructed world we live in, we should care for it the same way we care for ourselves. The health of the environment strongly correlates with the human health (Eze, 2008). Environmental quality therefore, is defined as an environment with healthy and beautiful attributes to live in (Olawajun, Agusiobo & Vowa, 2006). It is clean and well ventilated, the air and water are not polluted, the temperature is moderate, it is well-lit and the grass around the home is properly maintained. Besides, people are protected from diseases and economic development of the community improved (Environmental Education Research (EER), 2002, Farmer, Knapp & Benton, 2007).

Environmental Education research emerged during the 1970s. Since then, formal as well as non-formal education programmes addressing child and adult environmental education have been designed and implemented from regional to international levels (United Nations Education, Scientific and Cultural Organization (UNESCO), 2007).

According to Yoloye (2006) three basic concepts of Environmental Education include: (a) education from the environment; (b) education about the environment; and (c) education for the environment. He indicated that education from the environment could be regarded as the application of all the human senses to learn from the environment. Education about the environment focuses on the body of knowledge on the environment as reflected in school subjects like Geography, Biology and Agricultural Science. Education for the environment is a situation where education is focused on the need to promote personal responsibility of the conditions of the environment.

The EE stakeholders in the university system include the lecturers, administrators and students. EE lecturers comprise all the teaching staff ranging from Graduate Assistants to Professors with qualifications from B.Ed/B.Sc. to Ph.D within the area of study. This category of the population is considered appropriate based on the fact that they are directly involved in the

implementation of EE curriculum as custodians of knowledge of the subject matter and instructional strategies.

The administrators comprised the Deans/Deputy Deans and Heads of Departments of the faculty/college/school of education where the Environmental Education is domiciled. These are lecturers elected/appointed by staff members with specific responsibilities to the University administration. The administrations of the university/faculty/department are placed in the hands of qualified professionals with considerable experience. The leadership ensures the maintenance of the facilities for staff and students, routine administration, conducting examinations, scheduling of staff and interpretation of policies to the staff, students and public. The implication is that the quality of EE programme should be based on the adequacy of the facilities and resources for the realization of the goal and objectives of the nation's educational system.

The students were all those from 100 to 400 levels that have enrolled in Environmental Education programme and satisfied the admission requirements as stipulated by National Universities Commission (NUC). This was to ensure that EE programme provide quality products to the society.

Environmental Education programme is associated with numerous challenges. Perhaps, the deficiencies in scientific skills, methods and knowledge of teachers are not peculiar to Nigeria (Adara, 2005). The causes of these difficulties include: incompetence on the part of environmental educators, lack of properly equipped laboratories, insufficient funding, poor teaching conditions, absence of environmental culture in the society, language of instruction, lack of equipment, inappropriate mode of admission (Eguabor 2004; Kola-Olusanya, 2005; Nwafor, 2006; Schutt, 2006; Madumere, 2008; Eguabor, 2009).

The cumulative effect of the above difficulties is that students' mastering of the concepts outlined in the National Policy on Environmental Education (NPEE) could not be achievable (Anijah-Obi, 2004). Therefore,

a programme evaluation would help to address these challenges.

Research reports (Bush, Mullis & Mullis, 2008; Madumere, 2008) however, point to inadequate environmental ethics, ignorance, dearth of well-trained environmental education lecturers and lack of equipment and facilities as problems facing the effective implementation of the programme. It is against this background that the study seeks to investigate the challenges of Environmental Education Programme in Nigerian University system.

Purpose of the Study

The purpose of the study was to investigate the challenges of Environmental Education Programme in Nigerian universities and specifically to:

- i. Identify the problems affecting the implementation of Environmental Education programme in Nigerian universities.
- ii. Identify the prospects of Environmental Education in Nigerian universities.

Research Questions

The study was guided by the following research questions:

- i. What are the problems affecting the implementation of Environmental Education programme in Nigerian universities?
- ii. What are the prospects of Environmental Education programme in Nigerian universities?

Hypothesis

To guide the study, a null hypothesis was stated. Thus;

- i. There is no significant difference between the mean perception values of lecturers and administrators on the problems affecting the implementation of Environmental Education programme in Nigerian universities.

METHODOLOGY

The design for the study was survey. The population of the study was one thousand two hundred (1,200) respondents comprising 120 lecturers, 30 administrators and 1050 students. Sample of 860 respondents was made comprising 60 Environmental Education lecturers, 15 administrators and 785 students from five (5) universities in three (3) geo-political zones (South-East, South-West and South-South). Data for the study were collected using Environmental Education Implementation Questionnaire (EEIQ). However, the research instrument (EEIQ) was subjected to face validation by experts from University of Nigeria, Nsukka, University of Calabar, Calabar and Federal University of Agriculture, Makurdi.

The instrument sought information from the Environmental Education lecturers' and administrators' perception on likely problems of implementation of EE programme in Nigerian universities. The instrument was sub-divided into three viz.: student related problems (4 items); staff related problems (6 items) and institution related problems (7 items). For each of the statements, there were four response options: Major Problem (MP); Problem (P); minor Problem (mP) and No Problem (NP). These options were weighted 4, 3, 2 and 1 respectively.

Reliability of the instrument was established using Cronbach-Alfa (α) co-efficient. Procedure of administration of the instrument involved training of two (2) research assistants in the administration of the questionnaire. The data collected were analyzed using mean, standard deviation and t-test statistics.

RESULTS AND DISCUSSIONS

The data were analyzed and presented as follows:

Research question I: What are the problems affecting the implementation of Environmental Education programme in Nigerian Universities?

The means and standard deviations of respondents on the problems affecting the implementation of Environmental Education

programme in Nigerian universities are as presented in Table 1.

Table 1: Mean and Standard Deviation of the Respondents on the Problems Affecting the Implementation of Environmental Education Programme

S/N	EE Implementation Problems	Mean (\bar{x})	Standard Deviation (SD)	Remarks
1	Students always crowd together to receive lectures	2.77	0.49	Problem
2	Students poor science background from secondary schools makes understanding difficult	3.48	1.01	Problem
3	Many students have language problems which affect them badly in writing, speech and reading.	2.96	1.12	Problem
4	There are too many tests and assignments	2.80	0.53	Problem
5	Lecturers are not sponsored for academic conferences	3.06	1.06	Problem
6	There is little or no motivation for teaching staff.	3.40	0.91	Problem
7	Insecurity negatively affects the effectiveness of lecturers	3.04	1.42	Problem
8	There is the problem of coping with the task of continuous assessment because of large number of students	2.85	0.62	Problem
9	Underfunding of education hinders the growth and development of academic staff	2.97	1.10	Problem
10	Time allotted to a semester is not enough to cover the course content	3.29	0.95	Problem
11	There are inadequate current texts for lecturers and students.	2.85	0.62	Problem
12	Current national and international Environmental Education journals are not available for lecturers and students.	3.34	0.73	Problem
13	Electricity supply is very irregular	2.85	0.62	Problem
14	Facilities for meaningful laboratory activities are not available	2.88	1.17	Problem
15	The length of period for teaching practice is not enough.	2.78	1.27	Problem
16	Some lecturers who have no education qualification supervise teaching practice.	2.82	1.23	Problem
17	Science Education students choose their project topics mainly from their area of subject specialization.	3.49	1.00	Problem

The represented mean scores; Decision mean = 2.50; 100% of identified problems affected implementation of EE programme with mean responses ranging between 2.77 and 3.45 as shown in Table 1 above.

On the basis of Table 1 above, the study reveals that 17(100%) identified problems affected the implementation of Environmental Education programme in Nigerian universities. Their mean responses of these problems ranged between 2.77 and 3.45. The problems were: students always crowded

together to receive lecturers; student's poor science background from secondary school made understanding difficult; many students have language problems which affected them badly in writing, speech and reading; and too many tests and assignments.

Identified as problems were: lecturers were not sponsored for academic conference; little or no motivation for teaching staff; insecurity negatively affect the effectiveness of lecturers; coping with the task of continuous assessment because of large number of students; and underfunding of education hindered the growth and development of academic staff.

Furthermore, these problems affected the implementation of Environmental Education programme in Nigeria; time allocated to a semester

was not enough to cover the course content; inadequate current texts for lecturers and students; current national and international Environmental Education journals were not available; the length of period for teaching practice was not enough; some lecturers who have no education qualification supervised teaching practice; and science education students chose their project topics mainly from their area of subject specialization.

Research question 2: What are the prospects of Environmental Education in Nigerian Universities?

The means and standard deviations of respondents on the prospects of Environmental Education in Nigerian universities are presented in Table 2 below.

Table 2: Mean and Standard Deviation of the Respondents on the Prospects of Environmental Education Programme in Nigerian Universities.

S/N	EE Implementation Prospects	Mean (\bar{x})	Standard Deviation (SD)	Remarks
1	Only students with sound science background should be admitted into EE programme	3.17	1.01	Agreed
2	Lecturers are sponsored for academic conferences to promote competencies and professional growth	2.92	0.85	Agreed
3	Teaching staff are well motivated to discharge their responsibilities.	3.18	1.06	Agreed
4	Facilities for meaningful laboratory activities are made available	3.17	0.94	Agreed
5	Allocate enough period of time for teaching practice.	3.10	0.82	Agreed

The represented mean scores; Decision mean = 2.50; 100% of EE prospects have been agreed upon with means ranging between 2.92 and 3.18 as shown in Table 2 above.

On the basis of Table 2 above, the study reveals that one hundred percent (100%) of the prospects were agreed upon. Indeed, the following prospects will mitigate the problems; sound scientific background on the parts of the students, sponsoring of academic conferences, motivation of teaching staff,

efficient laboratory equipment and ample time for the conduct of teaching practice.

Hypothesis

There is no significant difference between the mean perception values of EE Lecturers and Administrators on the problems affecting the implementation of Environmental Education programme in Nigerian universities.

The means of Lecturers and Administrators on the problems affecting the implementation of EE

programme were analyzed and the result of t-test statistic is presented in Table 3 below.

Table 3: t-test Statistic on Difference in Mean Between EE Lecturers and Administrators on Problems Affecting the Implementation of Environmental Education Programme in Nigerian Universities.

Respondents	N	Mean (\bar{x})	SD	df	t-cal	t-critical	Remark
EE Lecturers	60	3.14	0.57	73	-0.38	1.66	NS
Administrators	15	3.20	0.51				

df = 73; ($P \geq 0.05$)

Table 3 above showed that t-calculated 0.38 (absolute value) was less than the critical value of t (1.66) at 73 degrees of freedom and 0.05 level of significance. This showed that there was no significant difference between the mean scores of the problems affecting the implementation of EE programme in Nigerian universities as perceived by lecturers and administrators. Therefore, the null hypothesis was not rejected.

DISCUSSION OF FINDINGS

Research question one sought to find out the problems affecting the implementation of Environmental Education programme in Nigerian universities. The study revealed that 17(100%) identified problems affected the implementation of Environmental Education programme in Nigerian universities (Table 1). These problems that can be categorized into three (3) namely: student related problems, staff related problems and institution related problems have means ranging from 2.77 to 3.45. This is consistent with the findings of Madumere (2008) on problems of Environmental Education curriculum delivery in Nigeria. According to her, the problems revolved around integration of science subjects in EE, insufficient literature, reaching the non-formal sector and the application of appropriate teaching methods in EE for sustainable development. Another militating factor was inadequate infrastructural facilities. Asanya (2009) contended that teacher training was paramount for the successful development of formal EE in Nigeria.

There was no significant difference in means of Lecturers and Administrators on the problems

encountered by students and staff in the implementation of EE programme in Nigerian universities as H_0 was accepted at $P \geq 0.05$. The calculated t-value of 0.38 (absolute value) was less than 1.66 (Table 3). This is consistent with studies of (Eguabor, 2004; Kola-Olusanya, 2005 & Eguabor, 2009) who evaluated the functionality of Environmental Education at secondary school level.

Research question two (Table 2) revealed that five of the prospects of Environmental Education (100%) were agreed with means ranging between 2.92 and 3.18 in Environmental Education programme in Nigerian universities. This was in line with Hari (2005) who in one of his adopted definitions of EE from UNESCO (2007) stated that EE is a process in which individuals gain awareness of their environment and acquire knowledge, skill, experiences and also the determination which will enable them act individually and collectively in order to solve their present and future environmental problems.

CONCLUSION

The study revealed that the implementation of EE programme after several years of inception was still confronted with a number of problems. These problems included inadequate provision of resources and inappropriate teaching strategies. If EE must serve to help establish creative and technological reasoning, as it has assisted to discover new ideas and relevant information on identified problems in this study, there was need to monitor the development and progress, with a view to rectifying these defects as well as finding lasting solutions to the implementation problems highlighted. On the basis of the apparent

dangers of environmental problems, a robust economic development and clean environment, an intensification of EE is suggested. This is a big challenge to Nigerian educators. However, Environmental Education programme in Nigerian universities is a success and the future looks bright.

RECOMMENDATIONS

The following recommendations were advanced, from the findings of this research:

- i. The problems identified should be tackled by the government.
- ii. The prospects also identified should be vigorously pursued by the stakeholders.

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