CORRELATES OF ENVIRONMENTAL CONSERVATION HABIT OF MEMBERS OF A SCHOOL- BASED ENVIRONMENTAL EDUCATION PROGRAMME

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ABSRACT

The focus of the study was on empirically providing a composite picture of the relationship of some representatives of school, student and teacher factors on students' environmental conservation habit of a school-based Environmental Education programme.

The study sample comprised 584 members of the Nigerian Conservation Foundation (NCF) School Conservation Club Programme. The sample was drawn from 25 schools having the Club using stratified random sampling technique. Data collection was through the use of an instrument developed by the researcher. The instrument was named Environmental Conservation Habit Inventory (ECHI) and it yielded a Cronbach alpha reliability coefficient of 0.8853.

Results of the study indicated that the fourteen independent variables investigated accounted for 12.12% of the variability of students' conservation habit. Four of the variables made significant contributions to the explanations of the variability in students' environmental conservation habit, these were: school ownership status, school Club activity status, students' class level and students' level of activity in Club (at the 0.05 level).

Based on the results, the study then surmised that the best attainment of environmental conservation habit can only be achieved by active members of the Club who are in senior secondary classes of private schools having the Club active in them. Suggestions were then offered as to the means of producing future citizens who would be environmentally responsible.

KEY WORDS

Environmental Conservation
Environmental Education
Environmental Education Programme
Nigerian Conservation Foundation
School Conservation Club

INTRODUCTION

Globally, human's activities have resulted into various environmental disasters (IUCN, 2004). In addition, the rate at which environmental degradation occurs is becoming very alarming (NCF, 2005). This has thus led to environmental issues being tackled from various perspectives (WWF, 2005). However, a major common concern has always been the provisions of solutions. The point of convergence usually being the advocacy for a type of education most commonly referred to as Environmental Education (EE) (Roth, 1992; Sauvé, 2002).

In Nigerian schools, elements of EE have been infused into some subjects such as Agricultural Science, Biology and Geography at the senior secondary school level (Adara, 1993; Adepoju, 2003). However, the major means through which EE is presently acquired is through the School Conservation Club Programme of the Nigerian Conservation Foundation (NCF), a non-governmental organization with its headquarters at Lekki, Lagos State (Abe & Adepoju, 2004; NCF, 2005).

Adepoju (2003) has argued (based on a scrutiny of the goals of some EE programmes) that essentially, any EE programme should lead to a change in individuals' environmental knowledge, attitude and habit. From this perspective, it could be argued further that ultimately, the goal of any EE programme should be positive changes in the participants' level of environmental conservation habit. It is thus believed that, the ultimate goal of the NCF School Conservation Club Programme should be positive changes in members' environmental conservation habit.

Studies have indicated that various factors are capable of influencing the expected outcomes of this school – based EE programme. For example, Mansaray & Ajiboye, (2000) reported a significant positive relationship between membership of the Club and environmental knowledge. Based on the outcome of their findings, they predicted a positive relationship between membership of the Club and environmental attitude.

However, Adepoju (2003) had argued that the issue of membership of the programme as it affects the programme's outcome should be probed beyond the mere members and non-members dichotomy categorization. He opined that membership of the Club should be in addition to how "active" the Club is in a school as well as the ownership status of the school having the Club.

Gender is also another factor capable of influencing students' environmental conservation habit. NEST (1999) posits that "the consequences of environmental degradation have a gender –bias effect", Adepoju (2006) likewise is of the view that the outcome of EE on students should be gender sensitive. This view was supported by Mansarray & Ajiboye (1997) findings of a significant gender difference in students' environmental knowledge, attitude and practice.

The number of years of membership of a student in the Club as well as the class level is expected to have influence on students' environmental conservation habit (Abe & Adepoju, 2004). It is also logical to expect that the more the participation in the activities of the Club, the more the likelihood of exhibiting improved environmental conservation habit. Related to this is the issue of position of responsibility occupied by members of the

Club. It is reasonable to expect that members occupying positions of responsibilities in the Club would be more active than ordinary members and thus, the latter are expected to exhibit better environmental conservation habit. Since elements of EE are infused into some school subjects, it is thus expected that students offering these subjects, should exhibit improved environmental conservation habit than those that do not offer such subjects.

One of the activities of the NCF is the annually held World Environmental Day (WED) Flora and Fauna Fancy Dress competition. Involvement in this competition is expected to have positive influences on members' environmental habit. It is equally expected that the more the visits to the Lekki Conservation Center (LCC) (a 78 hectare nature reserve of the NCF in Lekki, Lagos State Nigeria), the better should be the individual's environmental conservation habit.

It is expected that some factors associated with the teachers who are coordinators of the Club should have influence on members' environmental conservation habit. For example, Adepoju (2003) had reported that 76% of the coordinators of the Club were male teachers while only 24% were females. It may thus be expected that this gender differential involvement of teachers as coordinators of the Club should have influence on members' environmental conservation Habit.

The possession of professional qualification by teachers is likewise expected to have a relationship with students' environmental conservation habit. This is because, professionally trained teachers should be able to make more positive impact in the

running of the Club than teachers with no qualification in education. In the same vein, it is also expected that the more the years of involvement of a teacher as a coordinator of the Club, the more the likelihood of his influence on the members.

EE is said to have its roots in the ecological paradigm (Roth, 1992). Based on this, it is then expected that the coordinators of the Club whose areas of specialization are in the life and biological sciences should have more influences on members' environmental conservation habit in comparism with members having non-science teachers as coordinators.

The Problem

Based on this contextual background information, this study attempts to empirically provide a fairly composite picture of the relationship of representatives of some school, student and teacher factors with environmental conservation habit of members of a school-based environmental education programme.

Research Question

To address the focus of the problem, the study sought to provide an answer to this question: to what extents do the following fourteen variables: (i) school ownership status, (ii) school Club activity status, (iii) coordinators' gender, (iv) coordinators' qualification in education (v) coordination's' area of specialization (vi) coordinators' number of years of experience as coordinator (vii) students' gender, (viii) students' class level (ix)

students' stream of class, (x) students' number of years of membership (xi) post held by students in the Club (xii) frequency of excursions to the Lekki Conservation Center (LCC) (xiii) Frequency of participation in the World Environmental Day (WED) competitions (xiv) students' level of activity in the Conservation Club, when taken (a) together and (b) individually correlate with students' environmental conservation habit?

METHODOLOGY

Sampling and Sample

There were two hundred and fifteen (215) Lagos State secondary schools with the Conservation Club as at the time of the study. These schools were stratified into two, based on their ownership status (private and public schools). Each of these was further stratified into two, based on the activity status of the Club in the school. The activity status of the Clubs was determined based on the NCF Education Department records of participation in the WED competitions; schools, which had participated consistently in the competitions for a period of three years prior to the time of the study, were classified as schools with active Clubs (SWAC), others were grouped as schools with less active / inactive Clubs (SWLAC).

In each of the four obtained strata, 10% of schools were selected at random. All the available members of the Club in each of the selected schools constituted the study

sample. In all, the sample comprised 584 members from 25 schools. The summary of the distribution of the study sample is presented in Table 1.

Table 1: Distribution of study sample

School Club activity status	*School Ownership Status*		Total
	Public	*Private*	
SWAC	292 (12)	93 (4)	385 (16)
SWLAC	111(5)	88 (4)	199 (9)
Total	403(17)	181 (8)	584 (25)

Number of schools in parenthesis.

Instrumentation

An instrument called Environmental Conservation Habit Inventory (ECHI) was developed by the researcher. ECHI sought from the respondents the frequency of their involvements in some environmental practices on a 3-point scale: very often; once in a while and never. ECHI has two sections. Section I solicited for the required demographic data related to schools, members and coordinators.

Section II is a 30 – item instrument. Each item is a statement of an environmental conservation action. The task of the respondent was to indicate the extent of his/her involvements in each of the actions. The instrument yielded a Cronbach alpha reliability coefficient of 0.8853, an indication of its internal consistency reliability and construct validity.

Data Collection and Analysis.

The instrument was administered on the respondents by the researcher. The administration of the instrument was carried out on Wednesdays during the Clubs and societies' meeting periods of Lagos State secondary schools.

The scoring of the instrument was as thus:

For item with positive statements,

Very often (VO) - = 3

Once in a while (OI) - = 2

Never (N) - = 1

This order was reversed for items with negative statements. The summation of the points of each of the respondents for the 30 items was taken as a representation of his/her level of environmental conservation habit.

The obtained data were then analyzed using multiple regression analysis (backward solution) with the aid of the SPSS package.

RESULTS

Table 2: Regression summary of the 14 variables on students' environmental conversation habit

Multiple R	=	0.34806.
R Square	=	0.12115
Adjusted R square	=	0.09952
Standard Error	=	10.02588
F (14,569)	=	5.66241*

* = Significant at P < 0.01

Table 2 indicates that the fourteen variables investigated collectively had a correlation of 0.35 (as indicated by the multiple R Value) with students' environmental conservation habit. The Table further indicates that 12.12% of the variability in students' environmental conservation habit can be accounted for by a linear combination of the fourteen variables. The F- ratio of 5. 66241 yielded by the analysis of variance of the multiple regression data was significant (at the 0.01 level).

Table 3: Relative Contribution of the Independent variables on Students' Environmental Conservation Habit

S/n	Variable	Regression Coefficient	SE B	T	SIG. T
1	School ownership status	0.182079	0.996136	4.071	0.0001*
2	School Club activity status	0.255847	1.058409	5.518	0.0006*
3	Coordinators' gender	0.037642	1.104465	0.845	0.3986
4	Coordinators' qualification in education	0.053168	0.945540	1.195	0.2325
5	Coordinators' area of specialization	0.025342	0.332987	0.572	0.5676
6	Coordinator years as Coordinators	0.044930	0.598703	1.071	0.2845
7	Students' gender	0.011443	0.985696	0.270	0.7870
8	Students' Class level	0.143854	2.142383	2.606	0.0095*
9	Students' Class stream	- 0.059878	0.504469	- 1.094	0.2745
10	Students' no years of membership	0.012281	0.655165	0.258	0.7962
11	Post held in Club by students	- 0.067782	0.868935	- 1.676	0.0942
12	Frequency of excursion to LCC	- 0.047029	0.529537	- 0.895	0.3709
13	Frequency of participation in WED	- 0.084746	0.567269	- 1.706	0.0885
14	Students' level of activity in Club	0.157796	0.922362	3.320	0.0010*

* = Significant at 0.05 Level

As shown in Table 3, the T-values associated with the regression coefficient of four of the fourteen variables studied made significant contributions to the explanations of students' environmental conservation habit at the 0.05 level. The four variables are school ownership status (var. 1), school Club activity status

(var. 2), students' class level (var. 8), and students' level of activity in the Club (var.14).

DISCUSSION OF RESULTS.

The results have indicated that the combination of the fourteen independent variables investigated can account for 12.12% of the variability in students' environmental conservation habit. The results revealed further that only four out of these fourteen variables can significantly account for the variations in students' environmental conservation habit. The four variables were: students' class level (var. 8), students' level of activity in the Club (var. 14), school ownership status (var. 1) and school Club activity status (var. 2), in the increasing order of their contributions to the explanations of students' environmental conservation habit.

The results of this study with respect to school ownership status (var. 1) and school Club activity status (var. 2) support previous research findings of significant contributions of school quality as vital predictors of learning outcomes (Faronbi, 1998, Inyang, 1999, Ayodele & Betiku, 2000). Further analysis of the results indicate that the level of environmental conservation habit of students of private schools was higher that of those of public schools. It was also observed that the aggregate environmental conservation habit score of students in schools with active Club (SWAC) was higher than those schools with less active / inactive Clubs (SWLAC).

This result may be due to the different nature of the utilization of material and financial resources between private and public schools (Faronbi, 1998). Informal observations by this researcher had indicated that private schools generally tend to take

environmental conservation issues more seriously and often devote more resources to the running of the Club than public schools.

The significant effect of the level of participation in the Club's activity (var. 14) may not be surprising. This may be accounted for by the fact that the level of participation in a programme in itself is an indication of one's attitude to the focus of the programme (Ntia, 1995). That is, members participating more activity in the Club's activity are those of better attitude to the programme and hence, exhibited better environmental conservation habit.

The result as regards students' class level (var. 8) is as expected. The result indicates that students' class level had significant effect on their environmental conservation habit. A further breakdown of this result indicates that the senior secondary students had better environmental conservation habit in comparism with the junior secondary students. A possible interpretation of this result could have been that the senior secondary students must have been members of the Club for a longer period than the junior secondary students. This however may not be a plausible explanation. This is because, student's number of years of membership of the Club (var. 10) had no significant relationship with their environmental conservation habit, which is in line with the result of a previous study (Abe & Adepoju, 2004).

An alternative explanation may be sought from factors other than those associated directly with the membership of the Club. Perhaps, it could be that students' environmental conservation habit is reinforced by various elements (content) of EE

which the students must have been exposed to in subjects such as Agricultural Sciences, Biology and Geography (which are offered only at the senior secondary school level).

This explanation might be extended further to account for the influence of students' class stream (var. 9). The result indicates that students' environmental conservation habit is independent of their stream of class. This is most likely due to the fact that these subjects having elements of EE infused into them have almost assumed the status of compulsory subjects. Thus, these subjects are offered by most of the students. The attendant effect being exhibition of similar trend of environmental conservation habit by students irrespective of their school subject combinations (science, arts or social sciences).

The results of this study had indicated that none of the teacher variables studied (variables 3, 4, 5 & 6) significantly contributed to the explanations of students' environmental conservation habit. This does not seem to agree with previous research findings and assumptions (Mansarray, Ajiboye & Audu, 1998; Iozzi, 1989). Could it then be that teacher factors have no contributions to the explanations of students' environmental conservation habit? This resent result may not be interpreted to imply this. A possible interpretation of the result is that the teacher variables investigated may not have direct influence on students' environmental conservation habit. Perhaps, other teacher variables outside the scope of this study have more potent potentials in the explanations of environmental conservation habit of students.

CONCLUSION AND RECOMMENDATIONS

Based on the results of this study, it can therefore be postulated that the best attainment of environmental conservation habit would be by active members of the NCF Conservation Club who are in senior secondary classes of private schools having the Club active in them.

The obvious implication of this is that to produce a future generation of youths who would be environmentally responsible, there is the need for Nigerian secondary schools to have environmental conservation Clubs established in them. Membership of such Clubs should be made compulsory to all students and all members must be encouraged to be actively involved in the activities of the Clubs. In addition, such Clubs must regularly be involved in interest sustaining environmental conservation activities that would encourage students to cultivate the desired environmental conservation habit.

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