APPRAISAL OF THE EXTENT OF ENVIRONMENTAL EDUCATION AMONG STUDENTS IN MUBI METROPOLIS, ADAMAWA STATE, NIGERIA

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ABSTRACT

Environmental education has become a major concern in recent times. Tremendous effort has been made at global, national and local levels to raise awareness among the populace on the importance of environmental process, problem and protection. Most of the studies on the importance of environmental education conclude that its impact is yet to be felt significantly in Nigerian schools. The present survey investigated the level of environmental education among Senior Secondary three (SSIII) students in Mubi town. Data were collected on students' familiarity with man-environment relationships, environmental problems and effects, and the factors militating against adequate environmental education among students. The method used to gather information included field observation, questionnaire administration and oral interview. The questionnaire administrated was collated manually. Tables were used to summarize the frequency and percentage of the variables. It was revealed among others that adequate environmental education is hampered by scarcity of trained teachers, lack of elaborate curriculum on environmental education, inadequate programme communication and lack of organization. These findings formed the basis of the research recommendation for the promotion of environmental education in Mubi metropolis for enhanced healthy environmental conditions.

Keywords: Environment, awareness, students, Mubi metropolis

INTRODUCTION

Human society formally lived in harmony with his environment, but eventually man exerted an ever-increasing influence on the environment. This created changes, which resulted in the depletion, dilapidation, degradation and destruction of the environment. The attention of both scholars, governments and non-governmental agencies is directed toward the need to manage protect and reserve the global environments. This is why the United Nations conference on the human environment was held in Stockholm in 1972. The Environmental Education Programme (EEP) was formed in 1975 to handle the issue of human environment globally. The Tbilisi, Russia 1977 inter-governmental conference provided the objectives, operational guidance and the principles to consider in

curriculum development on environmental education for schools worldwide. In Nigeria, the Federal Education Protection Agency (FEPA) was formed in 1988 to sensitize the public to rise to our environmental responsibilities. Since then, we have come a long way.

Agbo (2001) is of the opinion that no conscious efforts have been made to give environmental education the focus it deserves in Nigeria. Faniran in Osutokun (1997) observes that efforts have been made to implement environmental education in Nigeria. Researches conducted by Agbo (2004) and Igwe (1998) indicated that the impact of Environmental Education is yet to be felt significantly in Nigerian Schools. This study therefore, sought to determine the extent of environmental education among secondary school students in Mubi metropolis. The research objectives include:

a)   To establish the extent to which the students are aware of man-environment relationship.

b)   To find out the students level of familiarity with environmental problems.

c)   To explore the students knowledge of the effects of environmental problems on life existence.

d)   To examine whether the students are aware of the skills to protect and improve environmental management.

e)   To identify the factors, which influence environmental education among the students.

f)   To proffer suggestions on how to promote environmental

Human-Environment Interaction

The Oxford Advance Learners Dictionary defines environment as the natural world in which people, animals and plants live. In other words, environment is seen as the sum total of all external condition which may act upon an organism or community, to influence its developments or existence (Osuntokun, 1997). The two definitions given above view environment as a product and as a process respectively. in another dimension, Adegoroye is Osuntokun (1997) see environment as the aggregate of the physical and biological entities outside of man and supporting the existence of man whether on land in water and air. This explains environment in terms of its function. Environment could also be seen as a community of organism with complex levels of interactions between the past creation and the unforeseeable future (Osuntokun, 1997). The present study considers environment as the combination of the physical and biological entities which support the existence of mankind.

Mankind and the environment have been in a state of continuous interaction. The relationship was first explained in the concept of environmental determination. The environment was considered to influence human behaviors and the impact of man on the earth's surface (Faniran and Ojo, 1980). Man

was said to be shaped by the environment which acted, as a selecting agent and controlled the evolution of his present features. Rogers (1978) conceived that Our physical nature, our mental health, our opportunities for challenges and fulfillment, our very survival all of these are directly related and affected by the environment in which we live. In subsequence, Human Possibilism was developed to explain the Human-Environment Interaction (H.E.I). This models sees man as all-powerful controller of this environment and is to be explored through Environmental Education Process. Man utilizes the earth's natural resources and modifies the physical world to suit his needs (Faniran and Ojo, 1980). According to Faniran (1997) the most obvious evidence of human impact on land is in connection with the various types of land forms being created virtually on a daily basis including those resulting in the process of road, railway, airport and port construction, waste production and disposal, quarrying and animal operation, wells and other water development projects, agriculture and city development. The involvement of man with the environment is unguided or poorly controlled. As a result various environmental problems are generated. The effects of such problems are experienced both at local, regional and global levels. The following are some of the major environmental problems which have today become global phenomena.

They are discussed along side with the effects they inflict on the living being. Over-cultivation reduces the fertility of the soil, damages structure and exposes it to erosion and results to deforestation. Such over-cultivation problem is worst in the savannah region of Africa. Awake magazine (January 8, 2005) reported that in Africa after a plot of land has been cleared of bush, within three years it losses up to 50% of its fertility. As a result, millions of hectares are already beyond recovery and millions more are heading that way as agricultural yield in some areas decline year by year. Over-grazing has serious implication for environmental degradation. It is one of the factors noted to accelerate the expansion of desert areas. Mabbutt (1984) discovered that over-grazing accounts for almost 90% of decertified land.

In Nigeria, animals especially cattle pose threat to regeneration of the natural vegetation and encroach on farms planted to arable crops, which they grossly devastate (Osuntokun, 1997). Man accelerates the process of erosion through poor land management. The United Nations Development programme (UNDP, 2005) discovered that land degradation affects about two-thirds of the word's agricultural land. As a result, agricultural productivity is declining sharply annually. China displaced erosion, today has about 25 percent of its landmass as desert (Awake, 2005). The greater landmass of Nigeria is said to be devastated by soil erosion. Okorie (1992) disclosed that about 50 million people are affected by soil erosion in Nigeria. In effect, extensive farmlands and development projects such as infrastructural facilities are destroyed yearly in Nigeria.

Environmental pollution range from water, land and air pollutions, more than a billion people world wide are said not to have easy access to clean drinking waters. Awake magazine (January 8, 2005) reported that French rivers are in a very poor state of health due to nitrate rich run often from fertilizers used for farming. Similarly in Japan, chemical fertilizers and pesticides led to underground pollution. Brazil also has a chronic shortage of clean water. The report noted that about 90% of Mexico's diarrhea cases are attributed to contaminated water. In Nigeria, particularly in cities like Lagos, Port Harcourt, Bonny and Calabar, the dumping of domestic and industrial waste unto waster has generated threat. As a result, Lagos has been polluted (Olukoju in Osuntokun, 1997: 73). Thus, the realization of these environmental problems and their harmful effects on human health generated in man the concern to manage, protect and conserve the environment for good health and future generation.

Philosophies Of Environmental Management

The following are the three most popular models of environmental management identified by environmentalist (Adepetu & Eziashi, 1998; Faniran and Ojo, 1980).

Ecological environmentalism: The proponents of this theory are some times known as emotions or ecocentrics. They believe that there are limits of the capacity the earth can cope with human demands upon it. Therefore, mankind needs to guard the natural environment by the cessation or restriction of development.

Technological Environmentalism: This model convinces that natural resources are expendable in a state of depletion. But through scientific ingenuity (skill) and technological application, man is able to control physical, biological and social process for the benefit of the present and future generations.

Rational Environmentalism: The model conceiver man as an integral part of the ecosystem, but man is powerful, rapacious and capable of destroying nature unless his activities are guided and controlled. Hence, the proponents conceive that proper education and orientation can change man from a wanton destroyer into a constructive manager, conservationist and buider of the environment for generation to come.

In the light of rational environmentalism, the position of this study is that man can be educated, oriented and mobilized to live in harmony with his environment and preserve it for his future generation. The citizenry require basic environmental education to uphold to the principles of environmental friendliness. This may provide for adequate and proper management of the environment.

Environmental Education

The term environmental education has been defined in different ways by different scholars and authorities. Meadows (1989) sees environmental education as "the preparation of people for their lives as member of the biosphere". Such preparation involves the understanding, appreciation and sustenance of the environment. Environmental education is designed to develop and produce a citizenry that is aware of and is concerned about the total knowledge, commitment, toward solution of current problems and of the immediate environment (MANASAC 1996). According to Igwe (1997) Environmental Education encourages the development of self-confidence and attitude to effectively ginger commitment in solving environmental problems. Another positive function of environmental education is to foster harmony with the environmental and guarantee sustainable development and continued human existence. It also increases understanding of citizens positive and negative relationship with their environment and how they are affected by their environment (Faniran, 1997; Osuntokun 1998).

In the light of the foregoing functions and applications, the International Environment Education Programme (IEEP) was launched in 1975 to faster Environmental awareness worldwide. In Nigeria the Federal Environmental Protection Agency (FEPA) was created in 1988 to mobilize, Motivate, Educate orientate and raise the level of environmental activities. Actions and awareness at both the local, state and national level, the Agency in collaboration with secular organs, especially Schools and Colleges, Non-governmental Agencies, Health, Agencies, National Orientation and Education Agencies have been charged with the responsibility of implementing environmental Education in Nigeria. A lot of Human and material resources have been allocated and budgeted for the agency yearly.

The awareness of environment is important in child development in clean environment including, water and shelter is important for human growth and development. Healthy and befitting environment is very essential for human wellbeing and survival. Henceforth, the teaching and learning of environmental education is imperative for our daily life. This will enable children to be aware of the joy and beauty of physical environment. It will make youth protect and preserve the earth's vitality, value, and diversity which will improve quality of life.

METHODOLOGY

Information was collected on the subject familiarity with the environment. Data were also required on environmental problems and their effects on life existence. The factors influencing environmental education and the possible ways to promote it among student were also sought. The primary sources comprised focused group field interviews with both teachers and students. A structured questionnaire was also administered to 242 students,

whereby 200 copies were retrieved. The secondary sources include: school statistical records, which provided information on the total population figure of students. A variety of published journals, books, seminar papers and other research carried out on environment was also reviewed for the purpose of this study. Simple random sampling technique was used in the selection of a manageable number of students for this study. The research was limited to SSS III students. Six Senior Secondary Schools were selected within the metropolis for student sampling.The total number of students in each school was obtained from their statistics records. The researcher decided to pick 15% of SSS III students at random, i.e.per school. The number of students selected in each shown in column C of table 1 came to a total of 242.

The main instruments of data collection employed for this study were questionnaire, oral interview and observations. A set of structured questionnaire was administered to students for the purpose of this study. The questions were two sections. The first section was organized to obtain information on personal data of the respondents like school, age, sex family background. The second section concentrates on environmental awareness, environmental problems and its effects on life. The factors influencing environmental education and the possible ways to promote it among students were also enquired. The total number of 242 questionnaires was administered for this research work. A total of 20 persons were orally interviewed for this study. The questions asked include the problems generated by environmental issues, and the effects of environmental problems on life existence. The factors influencing environmental education and the ways to promote it among students were asked. The interview was held informally and often arose out of general discussion on the respondents' general perception of environment in Mubi and the State at large.

The data collected for this research was manually collated by the researcher. Tables were frequently used in the analysis of the data collected. The frequency and percentage of responses were often cited and applied in explanation of the variables investigated from the respondents.

Table 1: Number of students sampled in six senior secondary school in Mubi Metropolis.

Name of school/ of students	Total number	Total number of SS III Students	Total number of SS III students sampled
GSS (SS) Mubi	1978	256	37
GSTC (SS) Mubi	2049	616	92
GDSS Digil	1350	68	10
GDSS (SS) Lamurde	2075	520	78
Baptist High School	1125	115	17
Int'l Private Sch, Mubi	365	55	8

Source: Individual School Record

RESULTS AND DISCUSSION

Familiarity with Environment: Investigation on students' knowledge of the relationship that exists between mankind and the environment shows that about 136 (68%) of the respondents were aware of Man-Environment Relationship (MER). It is evident from this finding that majority of the students in Mubi know of Man-Environment Relationship. The ability to identify the importance of environment of mankind serves as a motivating factor for human beings to manage and conserve the environment. In this regard the respondents were enquired of the importance of environment to mankind. The data set in this respect is presented in table 2 below:

Table 2: students' view of the importance of environment to mankind

Importance	frequency	percentage
Shelter	32	16
Resource supply	64	32
Food supply	88	44
Scenic beauty	16	8
Others	0	0

Source: Survey 2010

Table 2 reveals that 88% (44%) of the respondents consider food supply as the greatest importance of environment to mankind. This ascertains the fact food is one of the basic needs of man for survival. It also clarify the belief that environment sustains man. About 64 (32%), 32 (16%) and 16 (8%) of the respondents indicated resources supply, shelter and scenic beauty respectively as the importance of environment. This confirms the need for environmental education for human continuity.

Table 3: Perception of the level of Environmental Education among Students

Rate	Frequency	Percentage
From 70% - 100%	88	44
From 60% - 69%	62	31
From 50% - 59%	24	12
From 40% - 49%	14	7
Below 40%	12	6

Source: Survey 2010

Students, Level of Environment Education: It is glarer from table 3 that majority 88 (44%) of the respondents rated students' environmental education to range from 70% - 100%. About 62 (31%) said it ranged from 60% - 69%. This indicates that majority of the students in Mubi metropolis have acquired basic environmental education. It confirms the fact that environmental education is taught in the schools. This is vital because an individual's level of environmental education determines the desire to manage, protect and conserve his environment for better and future utilization. Students' deserve to have the knowledge of environment. Environmental education is fundamental to all students, present and future life existence.

Environmental Problems and Effects: The intervention of man in the environment generates diverse physical and social problems. This was investigated to verify students' view on the environmental problem experienced in their respective localities. The result is as shown in table 4.

Table 4: Students' Views on Environmental Problems

Environmental problems	Frequency	Percentage
Environmental Pollution	116	58
Land degradation	44	22
Resource depletion	24	12
Environmental warning	16	8

Source: Survey 2010

Table 4 shows that majority 116 (58%) of the respondents indicated environmental pollution as the most common problem experienced in their locality. The reason could be that most of the students are from cities or big towns where pollution is noted to be worse. Because in cities human actions is packed into relatively small space land degradation, resource depletion and environmental warning were also indicated by other respondents as the common environmental problems experienced today. The extent to which students are conversant with the negative effect of environmental problems was also investigated. The data collected and analyzed shows that 192 (96%) of the respondents confirmed that they were aware of negative effects of environmental problems. Only 8 (4%) of the respondents where not aware of the effect of environmental problems.

Data was also collected on the types of the negative effects of environmental problems mostly experienced in Mubi and the State at large. Majority 100 (52%) of the respondents identified health hazards as the major negative effect of environmental problems. The human health is continuously threatened worldwide today. This is more serious in cities, which experience more number of vehicles causing more traffic, more traffic, more factories and more household cooking and heating. The other negative effects of environmental problem identified include decline of general environmental quality, decrease in agriculture produce (Crop yield) and decrease of environmental resources. The factors which militate against students environmental education in Mubi metropolis was inquired from the respondents and the following were indicated:

i)   Inadequate trained and qualified teachers.
ii)   Lack of elaborate curriculum on environmental education for secondary schools.
iii)   Unavailability of school programme on environmental education for students.
iv)   Inadequate programme communication on environmental education.
v)   Absence of organizations to create environmental awareness in the schools.

The respondents further suggested the under listed as the best strategies for improving environmental condition and awareness:

i)   Encouraging environmental sanitation through community mobilization orientation, educating people and health inspection.
ii)   Sitting factories of the out sketch of towns to minimize pollution.
iii)   Enhancement at environmental sanitation by providing required operational facilities and equipments.
iv)   Control of human activities which may lead to environmental degradation.
v)   Government to make and enforce environmental policies and laws.
vi)   Enlightenment of people on their environmental responsibilities.
        In synopsis, the data generated on students' response to the various aspects of environment education reveal that:
i)   Majority 68% of the students interviewed were aware of man-environment interaction.
ii)   About 87% of the respondents rated the level of environmental education among students range between 50% - 100%.
iii)   About 58% of the students identified pollution as the most common environmental today.
iv)   About 96% of the students were aware of the negative effect of environmental problems.
v)   Most (52%) of the students interviewed identified health hazard as on of the major negative effects of environmental problems.

CONCLUSION AND RECOMMENDATIONS

Environmental education develops a good and functional relationship between knowledge, awareness and action in citizens. These help people to adopt environmentally safe or friendly behavioral attitude. The present research besides other findings identified numerous factors militating against adequate environmental education in Mubi. Solving these problems may curtail the implication emanating from the factors. Therefore, the following recommendations are made based on the findings identified.

Teachers should be trained to be conversant with the importance of environmental education and how to sustain it. This will prepare them to transfer the teaching-learning process, the knowledge and skill to students, which will assist in maintaining equilibrium between the qualities of human life and human environment. Elaborate curriculum should be designed on environmental for schools. The curriculum should include topics such as environmental concepts, management, protection and preservation, skills, values and participation to enhance environmental sensitization for effective management and protection.

Programmes such as public lecture, mass mobilization and orientation,

and meaningful film shows on environmental issues should be organized in schools, community township wards and villages. This will be a forum to enhance environmental education among students. The zonal offices of State Environmental Protection Agency (SEPA) should collaborate with the Non-Governmental Organization (NGOS) in Adamawa State to disseminate information and mobilize a grass-root participation in environmental management and protection. They should assists in Educating the Public and students on environmental issues. The NGOS are to be invited by SEPA for seminars, conferences and workshops in which the Agency's Environmental awareness activities are to be published.

Environmental committee should be established both at the District and local government levels. The Committee should form communication structure with combined approach (that is, interpersonal and traditional) to disseminate information on environmental issues. State Government should provide adequate funding for effective execution of environmental projects especially the issue of staff salary and equipments for all operations.

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