

EVALUATING THE LEVEL OF ENVIRONMENTAL EDUCATION AMONG NIGERIAN STUDENTS: THE CASE OF UNIVERSITY OF ILORIN

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Abstract

Environmental education is very important for the provision of the expertise that can utilize scientific knowledge towards the preservation and solution of environmental problems. Knowledge about the changes that have altered the environment is essential in environmental education. Most studies on the importance of environmental education conclude that its impact is yet to be felt significantly in Nigerian schools. The study investigated the level of environmental education among Nigerian students, using the Faculty of Business and Social Sciences at University of Ilorin as a case study. Through questionnaire administration and oral interview, data were collected on students' knowledge of environmental problems and effects, man-environment relationship, and the factors working against adequate environmental education among students. The study revealed that an average of 69% of the students was aware of man-environment relationship and environmental problems but not aware of environmental education because only few students offered courses that are environmentally inclined. The study, therefore, recommends that environmental education should be included in the curricular of all programmes in Nigerian tertiary institutions. Indeed, this should even begin from the primary schools so that pupils and students can understand the environment and imbibe the culture of protecting it for the achievement of sustainable development in Nigeria.

Keywords: Development, education, environment, problems and sustainability.

Introduction

Environment is the basis of all life and, therefore, deserves proper care and management. Environmental issues continue to dominate our discussions and consciousness as it is now clear that the physical, chemical as well as the biological integrity of our planet is being compromised daily. The destructive processes are not only continuous but are increasing both in quantum and in rate. While some of the impacts such as loss of biodiversity might be gradual, there are hosts of communities around the world today that are being consumed by coastal and gully erosion, sea incursion, bush fires etc. with lives and billions of dollars worth of properties being destroyed. (Jenkins, 2005).

Environmental education may best be defined as a process directed at creating awareness and understanding about environmental issues that lead to responsible individual and group actions. Environmental education is also a learning process that increases people's knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action (UNESCO, Tbilisi Declaration, 1978). Environmental education becomes very important for the provision of the expertise that can utilize scientific knowledge towards the preservation and solution of environmental problems.

Environment and development axes have been the most underlying theme of the last four decades. While development is crucial in bringing prosperity and feeding the teeming population of the world, the realization of back-lash effects on environmental balance and ecology has made the ecologists think that unguarded development could be self-destructive. The reconciliation of the two concepts has led to the expression, "Sustainable Development" which was the main highlight of the "Earth Summit" held at Rio de Janeiro in June 1992.

The declaration of the United Nations Conference on Human Environment organized in Stockholm in 1972 proclaimed: to defend and improve the environment for present and future generations, it has become an imperative goal for mankind. This undertaking urgently calls for new strategies, incorporated into development which particularly in the developing countries is a prerequisite for any such improvement. Environmental education is also a learning process that increases people's knowledge and awareness about

the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action (UNESCO, Tbilisi Declaration, 1978).

In Nigeria, the Federal Environmental Protection Agency (FEPA) was formed in 1988 to sensitize the public to rise to our environmental responsibilities, also 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.

In rural surroundings, direct daily contact with the basic natural resources was prevalent, especially within man's immediate environment. As man became progressively urbanized, his intimate association and interaction with natural resources diminished and, with it his awareness of his dependency on them (Stapp, 1969). Information revealed that majority of people lack understanding about ecosystem function and have no regard for the environment. Civilization, urbanization, population and socio-economic changes caused the depreciation in the attributable value and aesthetic for the environment. Respected traditional superstition and taboo that initially protected the aesthetics of the environment before are no longer there.

The main objective of this study is to examine the level of environmental education awareness among undergraduate students and their perception about the present environmental situation in the country.

Concept of Environmental Education

The most frequently cited definition of environmental education is offered by Stapp (Stapp, 1969) as 'environmental education is aimed at producing a citizenry that is knowledgeable concerning the biophysical environment and its associated problems, aware of how to help solve those problems, and motivated to work toward their solution'. Also, North American Association for Environmental Education defined environmental education as a process which promotes the analysis and understanding of environmental issues and questions as the basis for effective education, problem-solving, policy-making, and management (EPA, 2013). They see the main purpose of environmental education as to fostering the education of skilled individuals

to be able to understand environmental problems and possessing the expertise to devise effective solutions to them.

Highly visible signs of environmental deterioration such as oil spills and flammable rivers, and less visible problems are effects of environmental quality. The symptoms of environmental deterioration such as widespread chemical exposure were emphasized in Rachel Carson's (1962) book, *Silent Spring*. The focus on human health and quality of life highlighted the responsibility that people bear, individually and collectively, for the quality of the environment in which we all live today. It also clearly emphasized that humans are an integral part of the environment, rather than apart from it, and highlighted how human activity affects the environment. According to Disinger (1993), from nature study, for example, environmental education draws on learning through observation, inquiry, and discovery. In the view of Michele (2013), from conservation education comes environmental education's focus on current environmental problems and the wise use of natural resources.

Goals and objectives were established for environmental education in 1979s and 1980s by international and national conferences with the aim of engaging citizens in resolving environmental issues and preventing new problems from arising. According to UNCED (1978), the five broad objectives set forth by the world's first inter-governmental conference on environmental education, held in 1977 at Tbilisi, in the former Soviet Republic of Georgia, included awareness and sensitivity about the environment and environmental challenges, knowledge and understanding about the environment and environmental challenges, attitude concern for the environment and help to maintain environmental quality, skills to mitigate the environmental problems, participation for exercising existing knowledge and environmental related programs. Vipinder (2012) in her work on environmental education awareness of a school teacher also submitted that the goal of environmental education is to develop a world population that is aware of and concerned about the environment and its associated problems and who has the knowledge, skills, attitudes, motivations and commitment to work individually and collectively towards solving current environmental problems and preventing new ones.

Environmental Education (EE) lies within the concept for Sustainable Development which is defined as meeting the needs of the present without compromising the ability of the future generations to meet their own needs (Brundtland, 1987), where needs can then be described as economic, social

(cultural & health) and political needs and safeguarding the needs of future generations by minimizing the use or waste of non-renewable resources; sustainable use of renewable resources; ensuring that the waste from cities keeping within the absorptive capacity of local and global sinks (Global Forum, 1994). Within this concept of sustainable development lies the concept of environmental education for sustainable development which has been defined by Fien (1993) as follows: "The development of human capacity and creativity to participate in determining the future, encourage technical progress as well as fostering the cultural conditions favouring social and economic change to improve the quality of life and more equitable economic growth while living within the carrying capacity of supporting ecosystems to maintain life indefinitely".

Environmental education utilizes processes that involve students in observing, measuring, classifying, experimenting, and other data gathering techniques. These processes assist students in discussing, inferring, predicting, and interpreting data about environmental issues. In her work on environmental education awareness among school teachers, Vipinder (2012) submitted that the school system provides the largest organized base for environmental education and action. It offers an effective instrument for embedding in them the desirable environmental ethics.

According to Musa and Nuhu (2011),

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 environment 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.

Mere looking at the globe at large, overpopulation, urbanization, technological advancement and socio-economic changes are greatly increasing the rate of environmental deterioration and degeneration faster than what to cope with. The problems created from the inception of industrial revolution in Europe present scientific and technological development in developing nations and need to meet up with the need of the world teeming population are the major causes of environmental degradation. To safeguard the present and the future, there is need for sustainable development through environmental education. This study aims

at examining the level of environmental education among Nigerian students with emphasis on the awareness of environmental education, problems and reasons for environmental deterioration.

Environmental Education and Sustainable Development

Education for sustainable development is a life-wide and life-long learning endeavour which challenges individuals, institutions and societies to view tomorrow as a day that belongs to all of us, or it will not belong to anyone? (UNESCO, 2004). At the conference held in 1997, Federico Mayor, the Director General of UNESCO, in his statement said "the key to sustainable, self-reliant development is education – education that reaches out to all members of society through new modalities and new technologies in order to provide genuine lifelong learning opportunities for all." He also emphasizes that basic education, as noted at the World Conference on Education for All, is essential for sustainable development and must remain a priority for many countries of the world.

EE could be viewed as indispensable to achieving the broader goals of ESD, thus as "one of the pillars of sustainable development" (Jenkins & Jenkins (2005). For instance, according to Jenkins (Jenkins, 2005), both Environmental Education (EE) and Education for Sustainable Development (ESD) can be used to inform traditional landowners about the environmental and social impacts of land use changes as well as the effects that such changes could have on local economies. Simultaneously, commercial operators need to understand the wider impact of their proposed endeavors and the need to establish appropriate environmental standards and a process through which they can engage with landowners to negotiate intended land uses.

Environmental Education also serves society by providing a critical reflection on the world, especially its failings and injustices, and by promoting greater consciousness and awareness, exploring new visions and concepts, and inventing new techniques and tools. Education is also the means for disseminating knowledge and developing skills, for bringing about desired changes in behaviours, values and lifestyles, and for promoting public support for the continuing and fundamental changes that will be required if humanity is to alter its course, leaving the familiar path that is leading towards growing difficulties and possible catastrophe, and starting the uphill climb towards sustainability (UNESCO, 1994).

Study Area

The University of Ilorin campus is located at latitudes $08^{\circ} 29'N$ and $04^{\circ} 35'E$ and longitudes $08^{\circ} 28'N$ and $08^{\circ} 30'E$. University of Ilorin is one of the Nigerian second generation Universities that was established in 1975. As at now, there are 12 Faculties and many centres in the University of Ilorin. Ilorin as the host city is commonly referred to as gateway between southern and northern part of Nigeria. In terms of relative distance from some important cities in the country, University of Ilorin campus is 500km from the F.C.T. Abuja, 306km from Lagos and 600km from Kaduna (Kwara State Diary 1997). It is bordered to the east by Ifelodun LGA, Moro to the North and Asa to the West, as shown in Figure 1.

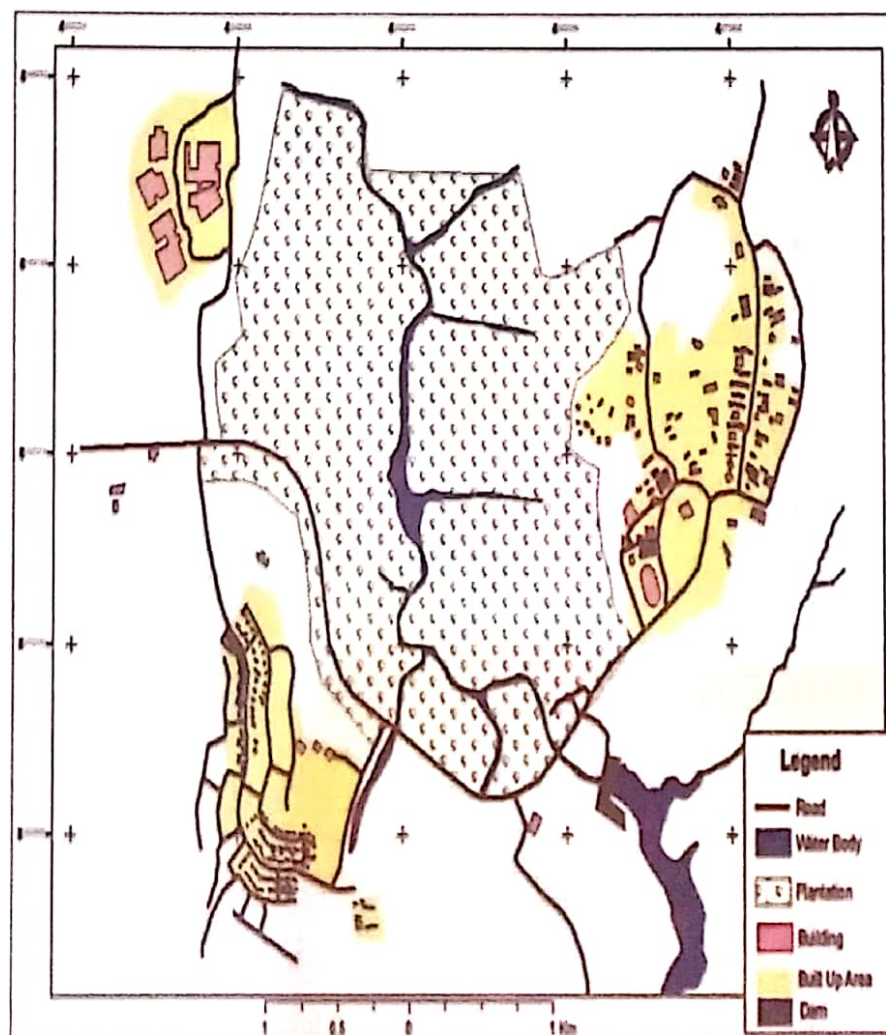


Figure 1: Map of the Study Area.
Source: Adapted from Google Earth (2012)

Materials and Methods

The study utilized purposive random sampling. The Department of Geography and Environmental Management student from the Faculty of Business and Social Sciences, University of Ilorin was used as the case study due to their familiarity with the environmental courses. The selected department houses both undergraduate and postgraduate students but undergraduates were selected, based on the fact that they all offered environmental compulsory environmental courses. Stratified sampling method was used to classify the student according to levels. Fifty (50) students were selected from each of the levels (100 level to 400 level), leading to 200 (100 male and 100 female) respondents. Questionnaire was used to obtain information from the concerned students. Environmental education related questions were set in order to verify the degree of their understanding about the environmental education. Students' responses with respect to the options in questions were subjected to the descriptive (table and percentage) statistical analysis.

Results and Discussion

In order to evaluate the level of environmental education among the selected sets of students, certain environmental problems and effect variables were considered. These variables are highlighted in the table below.

Table 1: Showing Environmental Problems and Effect Variables

S/N0	Problems	Effect
1	Global warming	Environmental quality
2	Natural resource exploitation	Environmental pollution
3	Air pollution	Man-environment interaction
4	Flora and fauna species extinction	Agriculture
5	Oil spills	Environmental degradation
6	Excessive waste generation	Water pollution

Source: Authors Survey (2013)

Two hypotheses were set to evaluate the level of environmental education. They are:

H₁: Students are not knowledgeable about environmental problems and effects.

H₂: Students are not aware of man-environment relationship.

Table 2: Showing Hypothesis Testing on Level of Knowledge of Environmental Challenges

Hypothesis	100L	200 L	300L	400L	Total
Knowledgeable about environmental challenges	32	35	35	40	142(71%)
Not knowledgeable about environment challenges	18	15	15	10	58(29%)

Source: Authors Survey (2013)

Table 3: Showing hypothesis testing on level of Knowledge on Man-Environment Relationship

Hypothesis	100L	200L	300L	400L	TOTAL
Knowledgeable about man-environment relation	27	30	38	39	134(67%)
Non knowledgeable about man-environment relation	23	20	12	11	66(33%)

Source: Authors Survey (2013)

Result from the tested hypotheses revealed that the level of understanding environmental problems and awareness were synonymous with the level of academic attainment from the lowest to the highest. Table 1 above shows that more than half of the respondents have an idea about the environmental problems. At least, a total number of 142 (71%) of the respondents responses indicate that concerned students were knowledgeable about the environment and its associated problems. Also, 134 (67%) of the respondents were aware about man-environment interaction. This might be attributed to the nature of the courses they offered as compulsory courses in their department. However, an average of 69% of the interviewed students were

knowledgeable about the environment compared to 31% that were not. These were found in 100 level that were yet to pass through most of the environmental courses in the department.

Findings

This study reveals that majority of the students are knowledgeable about environmental problems and their effect with response from 100 level (32), 200 level (35), 300 level (35) and 400 level (40) (Table 2). It also indicated that there is a high level of understanding of man-environment relationship among the students although the response from Level 100 level students (27) was lower, compared to Levels 200(30), 300(38), and 400(39) students respectively (Table 3). However, if about 31% of the students in the Department of Geography and Environmental Management were unaware in terms of environmental problems and awareness, there is every possibility that other students from the other departments that did not consider environmental courses in the curriculum would be three times unaware in environmental issues. Furthermore, if 69% of the students in the selected department, that is, one out of the six departments in the faculty, out of about 9 faculties in the University of Ilorin were knowledgeable about environmental situation, this is an indication that not all Nigerian graduates are knowledgeable about the environment.

Conclusion

The study revealed the basic knowledge and awareness of the environmental issues among the students in environmental oriented department. Out of 200 students examined, it was discovered that more than half of them were aware and had the basic knowledge of the environmental issues. This is as a result of environmental courses taken in the Department of Geography and Environmental Management. It was also obvious that the knowledge was in sequence with respect to the increasing academic level from the lowest to the highest levels. However, if 31% of the students from environmental-oriented department were unaware environmentally, how would students from non-environmentally oriented departments fare?. This has been the bane and major causes of incessant environmental abused by so-called learned people from other fields of study (Musa & Nuhu, 2011; Vipinder, 2012). The solution is to incorporate environmental education (EE) into the academic curriculum from the primary to the higher schools of learning across the countries and continents. This will go a long way in reducing the implications of the environmentally inclined problems in future.

Recommendations

The study, therefore, recommends that environmental education should be included in the curricular of all programmes in Nigerian tertiary institutions. Indeed, this should even begin from the primary schools so that pupils and students can understand the environment and imbibe the culture of protecting it for the achievement of sustainable development in Nigeria. Indeed, this will create room for the attainment of environmental sustainability.

This recommendation is based on the premise that environmental education is the process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the interrelatedness among men, his culture and his biophysical surroundings (International Union for the Conservation of Nature, 1971). It is thus a viable tool to solve the problem of ecosystem imbalance. Following the seven principles of environmental education (EE), summarized by the 1977 Tbilisi Conference, environmental education is considered as a lifelong educational process that occurs at all levels of education. It is aimed at producing citizens that are knowledgeable concerning the biophysical environmental and its associated problems, aware of how to help solve these problems, and motivated to work toward their solution (Stapp, 1969). In view of the fact that environmental education is based on knowledge about ecological and social systems, it draws on and integrates knowledge from disciplines that span the natural, sciences, social sciences, and humanities. Environmental education considers humans and their creation to be part of the environmental, along with biological and physical phenomena. It emphasizes the role of attitude, values, and commitments in shaping environmental issues (Disinger & Monroe, 1994).

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