

ENVIRONMENTAL EDUCATION AS A PANACEA FOR SUSTAINABLE DEVELOPMENT IN NIGERIA

OJO Matthew Olubamiji & OLANIYI Oladiran Paul

Department of Geography, Emmanuel Alayande College of Education, Oyo

Abstract

Environmental education and protection have become inevitable in Nigeria considering the numerous environmental problems such as soil erosion, desert encroachment, oil spillage, flooding, among others occurring in many places within the country. This paper reviews the concept of education, environment, environmental education, sustainable development and challenges to environmental education, method to be employed in environmental education. This underscores why the objectives of the paper includes to identifying some of the environmental problems confronting Nigeria, challenges of environmental education; and to proffer solutions to the persistent environmental problems. It is concluded that the Nigerian environment suffers great abuse by its citizens and is being beset with enormous problems. Therefore, it is recommended among others that the Federal Government should enforce laws that would control the use of natural environment. The core subjects that contain lots of environmental content viz geography, biology, social studies, civic education, agriculture, health education amongst others, should be made compulsory in primary and secondary schools. Also, environmental education should be taught as general studies for students in tertiary institutions across the country.

Introduction

The pressure on the environment due to climate change, higher temperature, shifting seasons, more frequent and extreme weather events such as floods and droughts, the challenge for food production becomes more serious. Human activities as a result of search for 'quality standard of living' through science and technology have brought other problems on the environment. These problems, Bosah (2013), called "the issue wheel". Such issues include over population, greater pollution, the death and destruction caused by toxic spills and dumps, the massive deforestation of the world's rain forests for commercial purposes, the harm caused by numerous oil spills, the destruction of wildlife habitats for

human development, the release of dangerous gases (greenhouse effect) in the atmosphere such as sulfur dioxide (SO₂), nitrogen oxide (NO₂), methane (CH₄), chlorofluorocarbons (CFCs), the hydroxyl radical (OH), and carbon dioxide (CO₂).

The pressure on the planet (environment) due to some human activities (agriculture and industrial) and some natural activities (flood, earthquake, eruptions) seem to be weighing much. This, according to Akintunde, (2008) calls for new trends and ideas where all, both 'young' and 'old', 'educated' and 'non-educated', privileged and non-privileged would take part in saving the planet from 'total physical collapse' since all life depends on it for survival. The unwise use of the natural

environment due to ignorance, poverty, overpopulation and greed amongst others has led to the degradation of the environment. Environmental degradation occurs as Nigerians attempt to adjust their seemingly endless wants and desires for food, shelter, recreation, infrastructural facilities (Omofonmwan & Osa-Eдох, 2008).

The concern of this paper is that environmental problems started appearing in this country many decades ago. The government and people of Nigeria were conscious of the existence of the said problems; but little or nothing is being done to curb it. Most of the control and preventive measures of the problems remain in government files both print and electronic media without enough physical proper follow-up to ensure their success. Environment is inseparable from life. There is every need for the proper management of it. This calls for the need for environmental awareness to all and sundry in schools at all levels especially in developing countries such as Nigeria which has little or no provision for such awareness in curriculum/syllabus in areas of related subject(s).

Environmental education therefore, has become inevitable in Nigeria, if actually the country wants to achieve sustainable environment for self-reliance and positive development. This is consequent upon the fact that the environment suffers severe abuse from people which has led to its degradation. In south eastern region of Nigeria, gully erosion has caused untold damage to numerous farmlands such that many people find it difficult to acquire enough farmland for farming, (Gbamenja, 1998). Also, oil spillage and gas flaring from oil companies have brought about a lot of destructions in the south – south states of the

country. In the northern fringe, the Sahara desert is rapidly encroaching on the lands, and this results in shortage of rainfall and poor crop yield each year (Akintude, 2008).

Many developing countries are beginning to realise the role of environmental education in abating the environmental issues – the African Social and Environmental Studies Programme (ASESP). This organization, according to Abubakar(2010), encourages and promotes the creation of environmental awareness and protection of pupils and students and at the same time develops useful activities for the pupils during instruction.

The manifestation and persistence of environmental problems have prompted the federal government to bring about environmental policy and environmental education with a view to preventing and ameliorating environmental damage. The interventions as observed in the national policy on the environment are two in numbers, that is, short term and long term. Akintude (2008) has observed that the short term measures are both preventive and ameliorative and the long term measures have to do with provision of solution to environmental problems through a policy intervention such as environmental tax and inclusion of the private organizations in the environmental protection. Another measure embarked upon by the Federal Government is the introduction of environmental education whose target audience is the youths who are mostly found in schools at various levels. All these interventions are geared towards saving the environment from total destruction by people.

Objectives of the Study

The focus of the study is to create a holistic environmental consciousness and awareness in Nigerians as a key to

participation in community action, decision-making and problem solving in issues of environment. Such is a step towards actualizing sustainable development.

The objectives include, the following:

- (i) Identify environmental problems confronting sustainable development in Nigeria.
- (ii) Examine the challenges of environmental education in Nigeria.
- (iii) Assess the role environmental education can play as an integral part of the holistic processes of reversing the degradation trend of sustainable development.

Concept of Environment

The term, environment is conceived as a system where living organisms interact with the physical elements. This level of interaction propelled different types of human activities which consequently translate into different environmental related problems which have some negative influences on man (Jeje&Adesina, 1996). The eventual decline in the condition and integrity of the environment arising from these processes results in environmental degradation (Omisore&Akande, 2003). Environmental degradation, according to Ojo and Aderounmu (2003), is described as, a state of overexploitation of the available environmental resources. The Encarta Dictionary (2007) summarizes it as a process of decline in the quality or performance of living conditions.

Environment is a broad concept. It refers to all or part of an object's or a living beings surrounding. It becomes everything that surrounds man, hence, everything that is used by man including man himself. Whiston, (2000) described it thus:

“environment is not a residual, but an entity which incorporates attitudes, values, institution, economic, science and technology and ideology. He went further to state that “environment is not an issue”. It is life itself. Life is the environment and the environment is life.

Bain (1973) defined environment as all the external and non-personal conditions and influences that affect the welfare of a people in a given area. Efobi, (1994) quoted Haggets' definition of environment as “the sum total of all conditions that surround man at any point on the earth's surface,” while the Federal Environmental Protection Agency in Nigeria (FEPA) stated that the environment includes water, air, land, plants, animals, and human beings living therein, and the inter-relationships that exist among them (FEPA, 1989).

However, a more comprehensive and all-embracing definition was offered by Keller in Efobi (1994) who defined the environment as total set of circumstances that surrounds an individual or a community, these circumstances are made up of physical conditions such as air, water, and climate and landforms; the social and cultural aspects such as ethics, economics, aesthetics and such circumstances which affects the behaviour of an individual or a community.

From these definitions, environment can be viewed as all physical, non-physical, external, living and non-living situations surrounding an organism or groups of organisms that determine the existence, development and survival of organism(s) at a particular time. It encompasses constantly interacting sets of physical (natural and man-made) elements and non-physical, living and non-living (e.g. social, cultural, religious, political, economic) systems which determine the characteristic features,

growth and sustainability of both the component elements of the environment and the environment itself.

Our environment is bedeviled with problems and this is gradually attracting the attention of the Federal Government and even non-governmental organizations, such as world commission for environment and development (WCED). Gbamenja (1998) observed that Nigeria may lose as much as five billion US dollars' worth of natural resources to environmental degradation each year without some form of remedial action. In South Eastern states of Nigeria for example, Imo, Anambra, Abia and Enugu, gully erosion has caused untold damage to numerous farmlands such that many people find it difficult to acquire enough farmland for agricultural purposes.

Concept of Education

Education, according to Abubakar (2010), involves the imparting of knowledge and development of skills for self-realization. It liberates man from the 'shackles of darkness', making life more meaningful and worth living. The English dictionary defined it as "the process of acquiring knowledge, the process of imparting knowledge especially in a school, college, or university. Education has always been part of the process by which people become fitted in live successfully in their world. The essence of education is the transmission of values, that education comprises ideas that would make the world and people's lives intelligible to them. Intelligibility gives one a sense of participation. Norris (2016) defines education as "the transmission of ideas which enable man to choose between one thing and another"

Education is concerned with development of an individual's ability to

think, reason, and create. One of its fundamental needs is how learners of all ages learn and what they can learn. The 'how' has much to do with the teacher and the 'what' of the curriculum or syllabus as the case may be; and kind of interaction among the 'how', the 'what' and of course the 'receiver' - learner. The teacher has the duty of imparting knowledge to the children; this knowledge is reflected in effecting changes in values, behaviour and attitudes of the learner. This can only be achieved by his ability to present the learner with the necessary materials needed for learning and involving him with it. The involvement makes the learner think, and the thought aids in development

Concept of Environmental Education in Nigeria

The Concept of Environmental Education is a process of imparting awareness and adequate knowledge about the problems and functions of the environment, how to use it wisely and proffer solutions to the current environmental problems. Abubakar (2010) opined that the concept is concerned with the analysis of the nature, causes and consequences of the current environmental issues.

The National Environmental Education Curriculum which was based on the various career subjects and the ecological zones in Nigeria was developed by NERDC (now NERC) under the guidance of the United Nations Development Program and UNESCO (Okukpon, 2008). The curriculum was approved in 1998 with its main focus on designing and infusing Environmental Education objectives and strategies into the teaching of the various career subjects in the school system; developing learners values,

Environmental Education as a Panacea for Sustainable Development in Nigeria...

skills and information. The main goal to be achieved from this curriculum is creating an environmental sustainable condition in the society by improving the literacy rate of her citizens. This is done by motivating and informing citizens on how to apply their skills, commitments, positive attitude and adequate knowledge to identify, solve and prevent environmental problems being faced now and perceived in the future.

Environmental education is essential for developing a healthy, sustainable society. Many current environmental problems are due to ignorance of basic ecological facts of life. To counter these problems, well-funded, scientifically accurate and carefully designed educational courses in schools and colleges are needed. There is need for an overall awareness of the public through learning basic natural resources. This is to ensure that on-coming generations understand the value and importance of pollution control, resource conservation and wildlife habitat protection.

Akintunde (2008) defines environmental education as the expansion of the study of ecology; a branch of biology dealing with the interrelationship of living organisms with one another and with their surroundings. Therefore, the fundamental role of environmental education (E.E.) is to give concrete awareness about the environment and how to use it for sustainable development. Hence environmental education (EE) has a significant role to play in creating such knowledge and positive attitude and behavior about the environment among the individuals in the society. As it helps enlighten individuals and give them greater insight into their own nature and the consequence of their actions. As education can help find novel ways of fostering positive attitude and attribute to overcome

environmentally destructive behaviors (Thathong, 2012) thereby leading to the individual desire and willingness to take action for the environment.

Abubakar (2010) outlines the objectives of environmental education as follows: (a) Awareness: - To help social groups and individuals acquire an awareness and sensibility to the total environment and its allied problems and/or issues. (b) Sensitivity: - To help social groups and individuals gain a variety of experience in, and acquire a basic understanding of the environment and its associated problems and/or issues. (c) Attitude: -To help social groups and individuals to acquire a set of values and feeling of concern for the environment and motivation for actively participating in environmental improvement and protection. (d) Skills: -To help social groups and individuals acquire skills for identifying and solving environmental problems and/or issues. (e) Participation: -To provide social groups and individual with an opportunity to be actively involved at all levels in working toward, resolution of environmental problems/or issues.

Challenges of the Environment in Nigeria

Any problem in any human society requires a suitable solution. The introduction of environmental education in education system is fundamental to solving environmental problems in the long – term. However, the complex interdisciplinary nature of the course would not only demand changes in teacher education programmes, but also that the current shortage of trained teachers to handle the discipline could serve as a challenge to the implementation of the programme as well as its effectiveness in most places in Nigeria (Ajiboye & Oyetade, 2005).

To control environmental degradation, there is need to reduce human population. But the population of Nigeria continues to increase. The implication is that the high demand for food to feed many “mouths” would be on the increase; and there would be a corresponding cutting of trees and clearing of grasses in order to expand farmland for high crop yield to cater for the increasing population. Cutting of trees and burning of grasses facilitate soil erosion in the southern region, and desert encroachment in the north, these activities encourage both erosion. Since the action of man on land for agricultural purpose is continuous, the effectiveness of environmental education for self – reliance will continue to be challenged.

Most of the people interacting with the environment through farming, mining, hunting, fishing and lumbering are ignorant of environmental education as well as how the ecological system functions. Besides, the environmental education under review was recently introduced and its target population are the students in schools (Abubakar, 2010). More so, people tend to consider and value the short-term economic gain derived from the exploitation of the environment without being mindful of the damage being done to it and the sustainable use of the natural resource available in the environment. The bulk of our population in Nigeria is not well educated about the environment, and reckless use of it will remain perpetual if not addressed.

Poverty has become a problem in Nigeria such that both rural and urban dwellers use firewood for cooking in homes. Consequently, there is high demand for wood fuel by the citizens of Nigeria either for business or for cooking. This act is consequent upon high cost of kerosene and cooking instruments (gas cooker and stove),

(Kwale, 2010). The poor condition of the ordinary man has reached a stage the if it is not being controlled and improved, our surrounding environment shall continually suffer degradation by man; and in consequence of that, the education curricula under review may not actualize its target objectives.

In Nigeria, because of population increase and relative improvement in economic status of civil servants and some few business people, the numbers of vehicle owners as well as the use of vehicles have increased. Therefore, there is continual smoky discharges into the atmosphere causing carbon-monoxide emissions from fairly used cars and industries not in accordance with the United Nation's (UN) prescribed environmental friendly emission standard (Udoye, 2001). Smokes and industrial effluents, dangerous gases such as carbon – monoxide, sulphur, etc. will continue to be emitted into the atmosphere and always leads to continuous environmental pollution; and ultimate but gradual depletion of the ozone layer with destructive consequence on human, plants and animals, (Menyu, 2010).

Closely related to the above challenge is the issue of high dependence on petroleum sector of the national economy. This has reached an alarming rate that the nation cannot rely on and develop any sector of the economy much better than that of oil. Consequently, in the oil producing states of the country, gas flaring and oil spillage have greatly impacted on the environment, changing and degrading the value of the seashores and aquatic organism, (Udoye, 2001). Therefore, this is a big challenge to the effectiveness of environmental education in Nigeria. Other challenges include illiteracy, lack of proper implementation of environmental laws,

indiscriminate dumping of solid waste materials, among others

The Need for Sustainable Development

Though visions of sustainability vary across regions and circumstances, a broad international agreement has emerged that its goals should be to foster a transition toward development paths that meet human needs while preserving the earth's life support systems and alleviating hunger and poverty – that is integration of the three pillars of environmental, social and economic sustainability. This should be achieved through policies that are empowering and also sensitive to the needs of future generation

Environmental sustainability, a component of sustainable development, is defined as the continuous and optimal functioning of the environment in the service of the people. It entails that the processes of interaction with the environment are pursued with the idea of keeping the environment as naturally possible based on ideal-seeking behavior (Wikipedia, 2009). Environmental sustainability consists of both natural and built up environments; in which case, the natural environment serves the purpose of supporting human life and activities, while the built environment provides shelter and security for various human activities and also facilitates the activities - especially in towns and cities (Folarin, 2003).

A lot of control measures have been suggested to the environmental problems, but good and appropriate as these measures are, it is clear, according to Ajibade (2000), that none of these measures can work without carrying the people concerned along. In other words, the people must be aware of the possible consequences of their actions with respect to interaction with the

environment. In addition, they must also be informed of all legislations guiding against the destruction of the environment. Environmental education is a necessary ingredient for a successful implementation of environmental policy in Nigeria. This is because, failure of some of our measures are sometimes attributed in part, to lack of public awareness. It is through environmental education that all efforts towards preventing damage to the environment can be effective. If people are aware of the dangers in some of their actions, it will bring about a possible change and thereby prevent any future catastrophe, that can arise from environmental problems. It can therefore be said that, the magnitude of the existing environmental problems depends on individual level of environmental awareness and perception

Ajibade (2000) stressed that introduction of environmental education in schools will guarantee the younger generation to have the required knowledge and attitude to preserve an ideal environment. Thus, it should be thought in simple language. In fact, it should also be extended to non-formal education programmes. According to him, some possible techniques useful in creating environmental awareness among the Nigerians include legislation, training programmes, drama, discussion, jingles, print and electronic media, visual display (posters), public campaign and incorporation of environmental education in school curricula.

Conclusion

It is glaring that our environment suffers great abuse by man and as a result, it is being surrounded by enormous problems. Even now that the Federal Government is

trying to tackle environmental problems through environmental education, the challenges to this effort are numerous and persistent. This requires collective effort of all Nigerians in order to salvage the highly cherished environment from total decay and sustain it for future use by our generations yet unborn.

Recommendations

Based on the submission of this paper, it is suggested that:

Relentless efforts are required to address current environmental problems to steer Nigeria towards sustainable development. To achieve sustainability, national environmental education strategies should be comprehensive and integrated on a large scale.

The present national education strategy has to be re-examined and improved upon with the education curriculum formulated for maximum environmental understanding and

knowledge. Education for sustainability needs to entrench in our educational system, with schools and higher learning institutions as centers for developing sustainable society skills.

Since development and environment are intertwined, they must be integrated into educational activities to ensure the educational system produce environmentally responsible citizens to enhance sustainable development.

The core subjects that contain lots of environmental content such as geography, biology, social studies, civic education, agriculture, health education amongst others should be made compulsory in primary and secondary schools.

Also environmental education should also be taught as general studies for students in tertiary institutions across the country.

Nongovernmental organization and government agencies should show more will in fostering or increasing environmental awareness in the country.

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Environmental Education as a Panacea for Sustainable Development in Nigeria...

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