ENHANCING THE TEACHING OF ENVIRONMENTAL EDUCATION FOR VALUES, SKILLS AND NATIONAL DEVELOPMENT

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Abstract

Sustainable use of environment is one of the ways of achieving national development; this can be attained through effective teaching of Environmental Education in our schools. This paper highlighted the issues and problems of teaching Environmental Education (EE) in Nigeria vis-à-vis the place of science teachers in the implementation of EE curriculum in schools for values and skills development. EE in Nigeria came to limelight in the early 1980s. It was by 1990s that the National Council on Education approved the introduction of EE components in school curricula, and Nigeria adopted the approach of integrating EE components within school subject disciplines. It was observed among others that there was no National Policy on EE in addition to lack of political will by government to implement the programme in Nigeria. The programme can be enhanced by designing an effective national policy on EE and improved condition for teaching and learning the programme among others.

An environment by its Bio-geographical connotation means the surroundings. These surrounding encompasses minerals, animals (including man), plants and the physical climatic conditions that operate within the environment (Chapman 1992). The world today is facing very serious environmental problems which include erosion, pollution, deforestation, wildfire, volcanic eruptions, earth quakes, mass movements, landslides, dumped toxic wastes, floods, vandalism, overgrazing, over fishing, desertification, drought, exhaustion of natural resources, ozone layer depletion etc. These environmental problems can be grouped into natural and artificial types, but it was found that the most serious and re-occurring environmental problems are artificial such as pollution, deforestation, ozone layer depletion, wild fire etc.

Man in his environment is the only animal that can control and influence his environment. This can be done through the education of his kind about the environment, its management or good governance and sustainability. This education according to Black in Ndambi (2007) includes acquainting people on the nature, economic, social, political, cultural, religious and philosophical issues on the environment.

The efforts of man to teach how natural environment function and particularly, how human beings can manage their behaviour and ecosystems in order to live sustainably found its way into school system in the late 1960s and early 1970s, in what is termed as Environmental Education (EE) (Wikipedia, 2009). This paper highlighted issues and problems of environmental education EE in Nigeria vis-a-vis the role of science teacher in implementing the EE curriculum for the attainment of environmental sustainability.

The Concept of Environmental Education (EE)

Wikipedia (2009) defined Environmental Education EE as an organized efforts to teach about how natural environments function and particularly how human beings can manage their behaviour and ecosystems in order to live sustainably. The term is often used to imply education within the
Ndambi (2007) held that “Environmental Education is about the preservation of the environment through better uses of both natural and cultural resources of the environment. It is about the development of positive attitudes by people towards the environment through discussion of viewpoints, attitudes, values and with their active involvement in projects aimed at improving the environment”. The science of EE should lead us to understand the local and global impact of our decision on the environment including the social, economic, cultural, political, religious and philosophical issues about the environment.

The Origin of Environmental Education in Schools

Environment education EE gained recognition when the United Nations conference on human environment held in Stockholm, Sweden, in 1972, declared that EE must be used as a tool to address global environmental problems. The United Nation Scientific and Cultural Organizations (UNESCO) and the United Nations Environment Programme (UNEP) created three major declarations that have guided the course of EE.

1. **The Stockholm Declaration of (1972):** This declaration was made up of 7 proclamations and 26 Principles to “inspire and guide people of the world in the preservation and enhancement of the environment.”

2. **The Belgrade Charter (1975):** This charter was built upon the Stockholm Declaration and added goals, objectives and guiding principle of environmental education programme. It defined an audience for environmental education, which includes the general public.

3. **The Tbilisi Declaration (1977):** This declaration updated and clarified the Stockholm declaration and the Belgrade charter by including new goals, objectives, characteristic, and guiding principles of environmental education (Wikipedia, 2009).

The first effort to incorporate EE in the school curriculum was as a result of a conference organized by International Union for Conservation of Nature and Natural Resources (IUCN) and UNESCO, in Nevada United States of America (USA) (IUCN, 1971).

Baez, Knamiller and Smith (1987) reported that, internationally the rationale for introducing EE in schools is that children, as future decision- makers are seen to represent the long- term hope for the sustainable use of natural resources. The school is seen to offer a worldwide institutional base for mass transmission of environmental principles.

According to Olusanya (2006) in Nigeria the early 1980s witnessed the growth of concern for environmental issues particularly at the non-formal level with setting up of the Nigeria Conservation Foundation (NCF). The concern became stronger with the dumping of toxic waste in Koko, a village in then Edo state of Nigeria in 1987. As a discussions and concern for natural and physical environment, which use to be treated as esoteric assumed national prominence. He said this singular event set tone for the development of EE in Nigeria.

At the fore front of EE in Nigeria are the NCF and the Nigerian Educational Research and Development Council (NERDC). These two Organizations contributed a great deal of efforts toward the development of EE curricula for primary and secondary schools as well as, the popularization of EE within the non schooling communities.
Approaches to Environmental Education in Schools

According to Baez, Knamiller, and Smith (1987) three basic approaches were considered in order to resolve the controversy over how and where to place EE content in school curriculum.

a. Integrates within subject disciplines (cross curricula approach);
b. creation of separate courses; and

Extra-curricular (out of school) programme.

Consequent upon this, most educators in various countries readily opted for the integration within subject disciplines approach.

According to Tolba in Wushishi (2007), the Belgrade-Charter on EE recommended the use of inter discipline and multidisciplinary approaches. The inter-disciplinary approach involves teaching EE concepts infused (integrated) in subjects such as Integrated Science, Primary Science, Biology, Chemistry, Social Studies, Geography and all other arts subjects, while the multi-disciplinary approach involves teaching specific topic e.g biodiversity under existing subjects in schools such as Agriculture Biology, Chemistry, Integrated Sciences e.t.c, so that such infusion will provides students with diverse opportunities to learn about biodiversity from different perspectives.

Nigeria adopted the integration of EE components within school subjects disciplines approach as a result of the development of a National Conservation Education Strategy (NCES) in 1988 and the formulation and release of a national policy on environment in 1989. By 1990, the national council on education of environmental education components in schools curriculum starting with citizenship education curriculum (Adeniyi in Wushushi, 2007).

Also in 1992 NERDC developed a national prototype EE curriculum at a workshop it held. The components of their curriculum has since been integrated into existing subjects such as Agriculture, Biology, Chemistry, Integrated Science, Physics, Geography and all other arts and social science subjects (Ahove and Eguabor in Washishi, 2007).

Science Teacher and Environmental Education in Nigeria

Being important agents in the education enterprise, science teachers are therefore at the heart of any successful effort to promote environmental education (Okebukola, Ahove, Olusanya, Akpan and Bandele, 1997).

The challenges pose to science teachers as a result of incorporation of EE components in his traditional science subjects is enormous. The infusion according to Simmons (1989) generated concerns and anxieties from the teachers, who viewed the infusion as overloading of the already loaded curricula. In a response to the infusion problem, the Science Teachers Association of Nigeria (STAN) in 1996 through its National Environmental Education Project (NEEP) commenced, a regimen of training for environmental educators (i.e. train – the – trainer workshop), with regard growing teachers concern on overloading of curriculum (Okebukola, Ahove, Olusanya, Akpan and Bandele 1997). Organized on annual basis, the workshops presented opportunities for secondary school science teachers, to learn about the strategies which can best allow easy assimilation of knowledge, as well as, facilitate students’ understanding of environment concepts or principles.

In addition, Olusanya (2006) conducted a research titled “Environment Education in Nigeria” A look beyond the infusion problem. He gathered a qualitative data from a sample of 15 secondary school teachers who attended and participated in the teaching strategies workshops organized by STAN between 1997 and 2003. He used interview to conduct his study. The study investigated the post primary teachers approach towards the delivery of good science quality EE in Nigerian Schools. The study also identified the problems encountered in classrooms and also ascertained the readiness of the teachers in the teaching of EE as school subject.
Concept mapping and lecture method appear most widely favored by teachers in the delivery of environment science concepts in the class. The participants revealed that they may not be able to teach EE as a core subject because of the number of subjects currently being taught at junior and senior secondary schools levels. In addition they agreed that there is “too much workload” as reported by the participants. The overloaded nature of the daily subject timetable exerts so much strain on them, coupled with the fact that they need to cope with large and sometimes extra large class population.

Problems of Implementing Environment Education Curriculum in Nigeria

Some of the problems of implementing EE curriculum in Nigeria were identified by experts and listed in Wushishi (2007. Pp154-155) include:

1. The lack of good national policy on environmental education;
2. The lack of required political will by the government to implement the integration approach;
3. The lack of established pattern of assessment of students on the infused EE themes other than the traditional method,
4. The nonchalant attitude of teachers to teach EE themes;
5. The lack of EE course at secondary school level that could form part of the entry requirement for higher certificate program;
6. Curriculum overload;
7. The perception among students, parent and employers that EE has lower prospect and only those with inferior ability undertake them;
8. Regarding EE as a fringe activity which is less serious and more recreational. Therefore it is the job for some civil society groups and
9. The lack of awareness of the vitality of EE among policy-makers, some educators and employers of labor vis-à-vis the role of environmental scientist.

Conclusion

It was found that the rational for introducing Environmental Education in schools is that children as leaders of tomorrow represent the long – term hope for the sustainable use of natural resources. The school and science teachers are seen to offer a worldwide institutional base for mass transmission of Environmental Education. In Nigeria the EE process started in the early 1980s with the Nigerian Conservation Foundation (NCF) and the Nigerian Education Research and Development Council at the fore front.

Nigeria adopted the approach of integrating environmental themes into the existing school subjects which is faced with shortage of informed teachers to convey the themes to student. However, efforts were made by the Science Teachers Association of Nigeria (STAN) to acquaint teachers with skills of teaching Environmental Education concepts in schools through workshops and seminars.

Finally, it can be said that the success of Environmental Education programme in Nigeria is faced with a number of obstacles ranging from teacher and curricular problem, nonchalant attitude from government towards EE and the societal problems etc.

Recommendations

After going through some literatures on Environmental Education in Nigeria and with my experience as a science teacher, I would like to make the following recommendations for improving EE in Nigeria:

i. There should be a clearly stated national policy on Environmental Education in the Nigeria National Policy on Education.

ii. There is need for creation of a separate Environmental Education discipline in science teacher education awarding institutions.
iii. The course unit Environmental education should be introduced and made compulsory for every science teacher education programme as oppose to the present situation whereby some institutions are not offering it and those offering the course categories it into elective courses.

iv. The general condition of teaching and learning science in schools should be improved.

v. The existing approach whereby Environmental Education concepts were integrated into the existing school subjects should be maintained in limit the number of school subjects on the timetable.

vi. Assessment of students’ performance on the infused EE theme should be done by observing outdoor efforts in environmental management.

vii. There is need for a functional Environmental Education unit in Federal and state ministries of education as well as the Local Government Education Authorities (LGEAs), to be headed by an experienced EE teacher.

viii. The work of Environmental related agencies (Governmental and Non-Governmental) such as Local Empowerment and Environment Management project (LEEMP) and state Environmental protection Agencies (SEPA), National Environmental Standard and Regulatory Agency (NESREA) etc in Environmental Education should be encouraged.

References


