



*Full Length Research Paper*

# Is formal education and environmental education a false dichotomy?

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Abstract

**Can formal education and environmental education marriage be false dichotomy? The paper presents its findings on the interwoven relationship that probably exists between the two education systems. It was concluded that there is no a learning system, be it formal or informal or non-formal that can effectively cover the range of necessary environmental education.**

**Keywords:** Formal education, environmental education, false dichotomy.

## INTRODUCTION

Discussing formal education may not entail many technicalities. It is "bookish" and related to qualifications from schooling. To obtain a formal education one must have passed through a school. It ranges from kindergarten to Tertiary Institutions. However, environmental education is not school - based. It is not qualification biased. It is the totality of Knowledge, attitude and practices about the environment. This is why environmental education is at times defined as environmental behavior or environmental awareness.

Environmental education is a policy of preventive strategy for environmental management as a best practice approach. It is a public investment for the formulation of a more rational environmental solution. In this policy, the theme is "earth in heart" for ecological literacy (Orr, 1994). That is, it is better to stop environmental problems from happening at all, than to be thinking of "mitigation" and "adaptation". Instead of looking for environmental regulatory standards to control and guide the environment which human behaviour can violate, environmental education is awareness - focused and knowledge-based for ecological continuity.

Instead of seeking for difficult answers to naughty environmental questions through laws and regulatory standards environmental education fights against environmental ignorance to promote peace with the earth and peace with each other. Such peace is achieved by learning to cooperate with nature in developments and consumptions.

Environmentally-educated people and government would readily adopt environmental policy that would prevent the ecosystem from damaging at all. Without this kind of education, Agbola, (2006) opines that, an increasing number of people with unsustainable consumption life "style would eventually overstep and outweigh the ecological foundation for destruction. One cause of environmental degradation and depletion is the over use of common property resources. These are resources owned by no one but available to all users free of charge. They are known as "global commons" because they are the common heritage of mankind. Most of them are potentially renewable resources like "clean air" and "ozone content".

When a person is mindful in the exploitation of such common resources, the level of environmental education had advanced. It is assumed that the level of consciousness on the danger of over -stepping the earth's ability to sustain the ecological integrity determines the level of environmental education (Palmer 1998).

Environmental education is built on ethical guidelines for working with the earth. Doing this, is working with nature to help sustain the ecological integrity, biodiversity and adaptability of earth's support systems. It is earth education which makes people to change their world view from economic interest to ecological pursuits. This does not mean that humans will not use the environment for economic development to survive and advance but this will be achieved by living simply. It entails lifestyle of voluntary simplicity based on "principles of enoughness". The principle states that the earth provides enough to satisfy every person's need but not every person's greed.

When any person takes more than is needed, he had simply taken from another person and borrowed from the future. This voluntary simplicity is an end to over-consumption with a view to preserving the diversity and adapting to earth's unpredictable ever-changing conditions.

The concept emphasizes the need for humans to learn how to transform the society into a sustainable one. The teachers are nature and its imperative laws. Galileo Galilei, 1564-1642 who ushered in sciences as a means of understanding the universe says "humans and all things on earth were subject to natural Laws which Physics and Mathematic could describe" (National Academy of Sciences, 1993). Sustainable society occurs, when everyone learns the necessity of embracing environmental laws. These laws emphasize partnership rather than domination, cooperation rather than competition/ love rather than power. It affirms justice and security. It is knowledge of nature's working and respect for all life.

Top priority of this concept is "ecosystem" and next priority is "human society". Ecosystems function splendidly without human and animals but human society cannot without viable ecosystems. The concept therefore believes that humans should think ecologically. Such thinking involves thinking holistically, systematically and futuristically. The key maxim of such thinking is that "everything must go somewhere", "energy should not be wasted" and "everything is connected". For these reasons, humans have to learn to anticipate consequences for contemplated major societal actions.

## MATERIALS AND METHODS

The study area was Metropolitan Ibadan in Nigeria which was made up of eleven Local Government Areas (LGAs) administratively carved out by the Federal Republic of Nigeria for political convenience. Each LGA was demarcated into Enumeration Area (EA) Maps by the National Population Commission in 2005. The researcher used housing units inside each EA as units of operation for data collection from the respondents. A systematic random technique was used to sample ten EAs from each LGA, five housing units from each EA and two respondents from each housing units. On the whole, the sample space of one hundred and ten EAs, five hundred and fifty housing units and one thousand and one hundred respondents were selected from all the LGAs. A face-to-face open-ended questionnaire survey was adopted to capture data.

### Data Collection

Two basic indicators constituted the data sources. They were "formal education" and "environmental education".

There were four variables that served as proxies for these indicators. The first, which was associated with formal education indicator, was "school education variable". The other three variables which consisted of "information, communication and indigenous knowledge system" were contextually found to be sources of environmental education.

## RESULTS

From the outcome of the survey, Table 1 revealed that 74.9% of the respondents got their environmental education through information from government and the community. A percentage of 51.7% got environmental education through school education. Such schools were also owned by governments and the community. The role of communication media through radio and television recorded 79.3% of the respondents on environmental education. The use of taboos, folklores and stories for environmental education was traced to indigenous knowledge system with a record of 82.6%.

"School education", as a proxy to formal education recorded the lowest percentage as a source of environmental education. Other sources like information, communication and indigenous knowledge system showed a staggering percentage record above formal education. Indigenous knowledge system which is often tagged to be primitive and too traditional had the highest incidence of environmental education in the study area.

## DISCUSSIONS

Formal education allows large number of people to expose to knowledge. Such knowledge acquisition empowers the recipients with consciousness of self-realization. Apart from promoting self improvement, it trains people's mind to understand the world around them. It promotes right thinking attitudes and values to develop appropriate skills, mental and physical competence for useful living within the society.

For formal education to be effectively organized, it has to involve curriculum criteria whereby materials are selected, contents are outlined, instruction procedures are developed and tests and examinations are prepared. Such curriculum is intended to be a functioning instrument of education intended to have educational consequences. Garret (2007) sees curriculum as a series of carefully designed activities which are intended to lead to the attainment of students' desirable learning outcome.

From the curriculum, formal education are acquired through all courses and disciplines taught in classrooms as well as other academic exercises in which the students are involved. In the curriculum programme, the society manages its stocks of knowledge through schooling. A school therefore could be designed as an

**Table 1.** Summary of Statistics on the sources of Environmental Education

Serial Number	Sources of Environmental Education	Major Media for Environmental Education	Percentage of Respondent
1.	Information	Government and Community	74.9
2.	School Education	Government and Community	51.7
3.	Communication	Radio and Television	79.3
4.	Indigenous Knowledge System	Taboos/ Folklores and Stories	82.6

entity of the multifarious agencies of formal education which includes the family, peer groups, churches, mosques, shrine and mass media. Thus, Fafunwa (1974) describes formal education as a "means to an end" for social changes and not an end in itself. This is why "going to school" alone cannot be equated with "being educated". In pre-colonial Africa, there were no western schools and this may be the reason for the misconception that Africans had no education of their own because the Europeans had the notion that "formal education" was the whole of education.

Formal education is western education with westernized curricula through which foreign systems had been imposed; Africa is a region where such imposition took place without consideration to human indigenous knowledge system. Consequently western education has become preponderant in the national educational system of Nigeria. For a reason like this, there are situations where western education assumes that all problems must be solved by it. However, there is a fallacy in making a straight conclusion like this because western thought and African tradition may not be comparable in the area of education.

Based on careful analysis, formal education had modified people's views on what the concept of environmental education connotes. Instead of allowing integration of culture to bring knowledge to environmental ignorance, many Nigerians are taking after the superiority complex of the western world that lack intellectual humility. The westerners look at their own education through spurious goggles without recognizing that such education may not have proper applications to indigenous environmental problems of the black race. Against the recognition of these conflicts, Sangodapo (2011) hypothesizes that "there is no significant relationship between people's formal education and their environmental behavior".

At this time of great biospheric turbulence, when climate is changing, global warming is at work, frost is everywhere and ozone layer is thinning, there is the need to replace economies of unlimited resources with the economies of sustainability. Human society has reached a point where the value added to the economy is being outweighed by the value been removed from future generation. This had been in terms of unlivable cities, deadening jobs, deteriorating health, and rising crimes. In biological terms, humans have become parasites

devouring the host (the environment). To worsen the situation, humans are reproducing in an endemic rate that population is increasing to between ten and eleven billion people by 2050. This is a situation that depletes resources and increase wastes. However, a lot of focus had been on technological revolution to fix the problems.

As important as technology is, it is bound to have disappointing results, for they ignore the primary fact that environmental problems are primarily economic problems that must be understood in economic terms. This is because technological cleverness may not be clever enough to overcome the cumulative effects of economic exploitation. This explains that the ingenuity and resourcefulness--of humans cannot be elegant enough to fix the problems of integrated biosphere. When economy is united with ecology, then, environmental education is at work to provide economic and environmental security sustainability. In this form, economic development and environmental management would be a complementary aspect of the same agenda. In view of these reasons, environmental education as claimed by Smyth (2006) is a strategy that can ensure the maintenance of a harmonious relationship between economy and nature.

It was evident from this study that formal education alone cannot be robust enough to source for environmental education, its contribution to environmental knowledge and understanding was even relatively low when compared with sources from information, communication and indigenous knowledge system. Consequently, approaching environmental awareness through formal education alone cannot solve environmental problems. There should be integration of all sources explicated in this study. This explains the fact that there is no one learning system - formal, or informal or non-formal - that can effectively cover the range of necessary environmental education. The only issue is how to incorporate the informal and the non-formal into the formal modern and westernized national educational curricula. This is a challenge to academic researcher.

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How to cite this article: Fafioye OO, Sangodapo MO and Aluko OO (2013). Is formal education and environmental education a false dichotomy? J. Res. Environ. Sci. Toxicol. 2(8):150-153