



THE INFLUNCE OF SECONDARY SCHOOL TEACHERS ON EDUCATIONAL SUSTAINABILITY IN MUBI NIGERIA



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Abstract

The implementation of effective public awareness programs for environmental sustainability depends on certain symbolic steps that require the contribution and participation of each stakeholder. This aspect is generally believed to be to a larger extent based on the understanding of the cultural, economical, political and environmental realities of the domain under consideration. This article assesses the level of environmental sustainability awareness of some schools in Mubi, a locality in the extreme North-Eastern part of Nigeria with its unique cultures and attitudes towards the subject. The teacher and his students were targeted in the survey since this is one important institution upon which the future of societies is based. The survey conducted reveals the level of practice of environmental sustainability among this strong media of information dissemination (primary and secondary schools). Areas of concern in the result of the assessment were highlighted. Recommendations in areas of further improvements were suggested

Key Words: environmental sustainability, teacher's responses, demonstrative education, Mubi, environmental incentives

Introduction

In recent decades, global problems relating to degradation of natural resources and pollution have increased dramatically. Natural resources are depleted through excessive use. Fresh water scarcity on a global scale, deforestation, degradation of coastal and marine areas, soil depletion and loss of biodiversity, are some of the problems that have become a major concern. Air and water pollution have reached levels that pose serious health problems as well as negative impacts on the environment. This inevitably influences prospects for long-term economic growth (Krishnamacharyulu & Reddy, 2005). People need to know these things so that a solution could be sought and implemented. Environmental education is one of the solutions because this is what determines the future of each society and thus forms an essential part of every pupil's curriculum. It helps to develop awareness for the environment, leading to informed

and active concern for participation in resolving environmental problems (Gopal & Anand, 2005). Early environmental education helps him become an agent of environmental conservation promoter, prudent and rational user of the natural resources and helps him create environmentally literate citizens who can compete in global economy.

Significantly, the UN declared the period between year 2005 and 2015 as “a decade for sustainable development (SD)”. Since then, more efforts have been made to incorporate sustainable development issues into the curriculum, teaching materials and classroom practices at all educational levels to provide the best sustainable development education (Reinfried, 2009). To bring about awareness and protect the environment, each child should be seen as an agent to conserve the environment. The objective of environmental education is to increase the public awareness of the problems in this field and finding possible solutions. This humble effort yields literate citizens who can compete in global economy; with skills, knowledge and inclinations to make well informed choices concerning the environment. Individuals of all ages can participate in and build on many of the initiatives in an agenda for action through self-awareness, education, and information exchanges with friends, family, and colleagues. Success in educating others for sustainability depends greatly on individual and collectiv initiatives (Gopal & Anand, 2005).

This study is designed with the aim of finding out the awareness practices of secondary school teachers on environmental sustainability. The main problems faced when teachers are involved in any work on education and teaching sustainability in the schools is presumed to be lack of awareness and understanding of the concept of sustainable development. Furthermore, Education is believed to be a powerful instrument of change, and in particular, can introduce school children to the interdisciplinary nature of sustainability. For all these to be possible, the teachers in the first place need to be fully aware and drilled in practicing the concept.

1.0 Education for Sustainability

Environmental education means to increase the public awareness of the problems, as well as possible solutions, and to lay the foundations for a fully informed and active participation of individual in the protection of the environment coupled with prudent and rational use of the natural resources (Gopal & Anand, 2005). Environmental sustainability awareness address a broad range of environmental issues, including the use of land, water, mineral and energy resources, and aim to enhance students’ understanding of various environmental systems (Roy & Jan, 2006).

Education increases human welfare, and is a decisive factor in enabling people to become productive and responsible members of society. A fundamental prerequisite for sustainable development is an adequately financed and effective educational system at all levels, particularly the primary and secondary levels, that is accessible to all and that augments both human capacity and well being. The core themes of education for sustainability include lifelong learning, interdisciplinary education, partnerships, multicultural education and empowerment. Priority should be given to ensuring equal access to all levels of education and training for all gender. Special attention should also be paid to the training of teachers, youth leaders and other educators. Education should also be seen as a means of empowering youth and vulnerable and marginalized groups, including those in rural areas, through intergenerational partnerships and peer education. Even in countries with strong education systems, there is a need to reorient education, awareness and training so as to sustainable development (UNESCO, 2005). Nowadays, education systems in Europe through school

curricula are focused on fostering environmental literacy, attitudes and values that go beyond a mere understanding of environmental problems (Flogaiti, 2006). Under such perspective, specific knowledge is required from teachers who are involved in the design and implementation of environmental programs in schools. More specifically, environmental principles and issues are diffused in several curriculum subjects. Schools are supplied with appropriate educational material, teachers are offered the opportunity to attend in-service training programs on environmental issues and students are engaged in classroom and field work activities (Flogaiti, 2006).

While many nations around the world have embraced the need for education to build capacity to achieve sustainability, only limited progress has been made on any level in the developing countries. This lack of progress stems from many sources. In some cases, lack of vision or awareness of the role education could play in achieving sustainability have impeded a lot of progress. In others, it is a lack of policy or resources such as funding (UNESCO 2005).

As the planet is experiencing dramatic environmental changes mainly due to human intervention on the environment, education plays an essential role in the formation of pupils' positive attitudes towards the environment, both social and natural. Indeed the ultimate goal of Environmental Education is to sensitize the public towards environmental problems and lay the foundations for the citizens' active participation in the protection of the environment and the appropriate use of natural resources (Flogaiti, 2006).

1.1 Role of Teachers on Sustainability

Educators will be at the forefront in pursuing the actions outlined in the Agenda, whether acting as individuals infusing environmental perspectives into their classes or collectively fostering education for sustainability through their educational institutions, professional societies, state infrastructures, and local or national advocacy groups. As individuals, teachers are responsible for pursuing opportunities for professional training to incorporate the principles of sustainability in their courses. In addition, they can enlist the help of nongovernmental organizations to ensure that their efforts embody diverse cultural perspectives. They can initiate innovations -- or inform themselves about the efforts of others -- to bring the business sector and the community at large into the educational experience. They can participate in workshops and seminars that help teachers find appropriate uses for advanced information and communication technologies for teaching about sustainability. They can initiate or replicate successful attempts to make the classroom serve as a model of sustainability for the community. In all of these activities, teachers and faculty will find allies and willing assistance from higher education, professional societies, the business community, nongovernmental organizations, and state and federal agencies. In turn, they have the formidable responsibility of ensuring that their educational offerings on sustainability consistently meet the highest standards and serve students, parents, and the community (UNICEF, 1998).

2.0 Study area

The study adopted Questionnaires survey. The questionnaire was designed and administered to 200 teachers from 10 schools drawn from the population of teachers in Mubi, Nigeria. This was aimed to examine the awareness practices of school teachers on environmental sustainability. A 7 point "Likert" scale was used to elicit the criticality of these awareness practices on environmental sustainability.

2.1 assessments

A total of 200 questionnaire surveys were distributed among teachers. A total of 179 questionnaires were retrieved. This constitutes about 90% retrievals. The data obtained from the survey was analyzed as simple percentage presented by pie charts. This was determined by dividing the total score of each item by the total number of questionnaires retrieved multiplied by hundred.

$$\text{Percentage score} = X/Y * 100$$

Where X= Total score of each item and Y= maximum possible score.

Table 1 show the total result obtained from the respondents.

*Note that SA, A, SD, D, N Stand for strongly agree, agree, strongly disagree, disagree and neutral opinions respectively.

Table 1: Measurement of awareness practices of teachers on environmental sustainability

S/No	ITEM	SA	A	SD	D	N
1.	Environmental sustainability is very important in our society.	111 (62.0%)	46 (25.7%)	15 (8.4%)	–	7 (3.9%)
2.	We can control pollution by ourselves.	75 (41.9%)	90 (50.3%)	14 (7.8%)	–	–
3.	Planting of many trees will help in environmental sustainability.	91 (50.8%)	64 (35.8%)	16 (8.9%)	–	8 (4.5%)
4.	Everybody can help in environmental sustainability.	80 (44.7%)	79 (44.1%)	–	20 (11.2%)	–
5.	Club and lectures on sustainability is adopted to help the students to be aware of environmental sustainability.	85 (47.5%)	20 (11.2%)	57 (31.8%)	–	17 (9.5%)
6.	Teachers are involved in training students on environmental sustainability	64 (35.8%)	100 (55.9%)	–	15 (8.4%)	–
7.	Teachers are the appropriate people to spread the message on environmental sustainability in the society	75 (41.9%)	84 (47.0%)	10 (5.6%)	10 (5.65)	–
8.	Students learn about environmental sustainability from parents.	18 (10.1%)	125 (69.8%)	9 (5.0%)	18 (10.1%)	9 (5.0%)
9.	Some years to come, without environmental sustainability there will be no fresh and pure air to breath.	65 (36.3%)	55 (30.7%)	15 (8.4%)	29 (16.2%)	15 (8.4%)
10.	Teachers cannot help in changing attitude to environmental sustainability.	26 (14.5%)	37 (20.7%)	45 (25.1%)	71 (39.7%)	–
11.	School does not have a role to play towards environmental sustainability.	10 (5.6%)	24 (13.4%)	99 (55.3%)	46 (25.7%)	–
12.	Architects are the only people that can sustain our environment.	11 (6.1%)	18 (10.1%)	108 (60.3%)	42 (23.5%)	–
13.	Town planners and builders cannot help in sustaining our environment	9 (5.0%)	15 (8.4%)	64 (35.8%)	80 (44.7%)	11 (6.1%)
14.	Sanitary inspectors have a vital role to play in sustaining our environment.	99 (55.3%)	61 (34.0%)	–	13 (7.3%)	6 (3.4%)
15.	Students do not learn about environmental sustainability from teachers.	–	67 (37.4%)	45 (25.2%)	67 (37.4%)	–

3.0 Discussion

From table 1, item (1) and (4), show that teachers know the importance of sustainability and feel that its conservation is our responsibility. A considerable proportion (88%) strongly agreed that environmental sustainability is very important in our society. The survey revealed that few disagreed (8%) perhaps due to their professional background. Less than 4% were neutral because of the little awareness of the importance of environmental sustainability. In item 2, majority agreed (92%) that the control of pollution is largely our responsibility. It is observed that few (8%) still think that pollution is the responsibility of the authorities. The reason of this notion could again be due to inadequate education on the subject. It is also observed that those holding this notion do not access themselves to current issues prevailing in media, especially the international media. For planting trees, the trend is similar. Majority of the respondents (86%) consented that planting trees marks a vital role in sustaining the environment. 13% consists of those that feel this view is not sustainable. Their likely reason is because of the simple fact that there is no substitute for fuel wood if the policy says that all trees should be conserved. The first group maintains that even if we have to cut the trees, we need to plant some in places of the ones removed. Item 4 is similar to 1. Although item 5 shows that education on awareness could be vital through lectures and clubs engagements (59%), a sizeable proportions 41% feel otherwise. This means that there is a gap in information and involvement in such environmental sustainability awareness. Items 6, 7, 10 shows that teachers have major role in the crusade awareness of environmental sustainability because in years to come, the environment will be polluted a lot such that there will be a lot of health related concerns (item 9). Items 8 and 15 show that the best way to sustain environmental awareness is to educate the children through their teachers. Hence teachers themselves need adequate attention and training. In general, the survey reveals that people are conscious of the current degradation of the environment and aware of the need to sustain. Policy, commitment, education and funding are largely hindering its sustainability. The authors have suggested recommendations for further ways of improvements.

In a broader sense, the teacher is a social change agent, a role model, a moral crusader and information expert for the schooling environment and later for the society. For environmental sustainability, these attributes are channeled towards environmental awareness crusade. This role is observed to be inadequately lacking in schools in the study area in particular. A lot of factors were observed to be responsible for the problem. Some of these include (1) absence of the subject in the school curriculum particularly in primary and secondary levels. Most of the syllabi operated in schools in the country have not incorporated environmental sustainability. Most campaigns and talks on environmental sustainability are as a result of necessity; either because of the challenges posed by the practical situations on the ground (for example the outbreak of diseases in many areas in the country in 2008-2010, climate change in form of long droughts), or pressure from NGOs and the international donor nations who categorically state that the aids or grants be channeled towards environmental conservation and education, and some efforts from some higher institutions who stage some of these topics as areas of research and specializations. The ministries and departments such as ministry of environment, federal environmental protection agencies, department of natural resources in various parts of the country exist with only little impact and limited ability of doing enough to conserve the sanitary well being of the environment as well as protecting its biodiversity

habitat. Lack of well defined policy with adequate supervision and funding is another impediment. The policy in the past was that the ministry of agriculture handles the natural resources under which the forestry and natural habitats conservation are handled while erosions. Other problem observed consists of education accessibility in the area of the study. Awareness needs to be intensified for the role education in itself stands for in humans, society and development.

4.0 Recommendations for Improvements

A number of recommendations are made with the intention of helping to create an enabling environment to promote sustainability education in the area of study.

Public Awareness should be continuous and embarked upon by government through its various agencies, NGOs, Trade Unions, Institutions and the Civil Society. It is observed that most programs related to public awareness in the past mostly die of with time. This is because the government and the civil society do not continue them and as such people easily forget. A continues practice of everything make people adopt it as a culture.

Environmentally friendly programs (such as recycling, tree planting, waste reduction, and waste composting and sanitation practices) should be encouraged and promoted by the stakeholders mentioned above. Lectures and prizes should be given to excelling participants. This will encourage non active participants to actively participate as well as reward those that are hard working.

A strong relationship needs to be built between teachers, students and the public so that everyone will have a sense of responsibility and stake in the environmental health and ecosystem preservation crusade. Shared information is always easily understood and practiced.

Specific days should be made available for the students and their teaches to visit neighboring communities to demonstrate the practicability of environmental sustainability such as cleaning of duped refuse for instance, or clearing drainage around, or demonstrating to them how waste is composted, or demonstrating the need and how to plant trees around their surrounding, or source sorting and separation of household solid waste at the point of generation.

An environmentalist needs to be appointed who could be charged with the responsibility of helping to promote sustainable environment in the community. This fellow can also serve as a link between the civil society and the NGOs or environmental protection agencies including schools around who are public campaigners on environment at the same time. He can help take the inventory of areas and items that require immediate attention for sustainability attention.

Regulatory arm of the environmental conservation sector needs to be strengthened. This will enable the public and private sector to comply adequately.

Funding for the program needs to put in place such as charging a meager amount from the community, well meaning citizens and organization through the government coordination. This could be done by incorporating such charges into electricity and water bills monthly or other ways such as telephone taxes.

In-service training programs on environmental issues should be organized from time to time. This will enable the teachers and other environmentalists to update their knowledge and always deliver effectively.

5. Conclusions

Sustainability has grown out of a number of important Environmental concerns. These include on one hand: rising temperatures, health problems caused by air pollution or contaminated water, food shortages and energy scarcity, solid waste generation and related environmental burdens, deforestation and land use, , biodiversity, the sustainability of agriculture and fisheries and climate change. On the other hand, the achievements of environmental sustainability goals have drastically fallen in the recent past. This is partially due to the lack of clearly-defined environmental goals which would help to illuminate the problems we face especially in developing countries; quantification of the burdens imposed by environmental degradation; realization of policy successes; and assurance of private and public funders of the return on their investments (2010 environmental performance index). Addressing these environmental stresses can be achieved by using intelligent techniques, showing greater attention to the natural resources and a shift from non-renewal resource exploitation to self-sustaining renewal options (Brian, 2007). Sustainable development in addition to environmental aspect include poverty alleviation, justice, cooperation, attainment of peace, population stabilization, empowerment of all marginalized vulnerable groups, employment that allows for the creation of decent livelihoods, human rights observance and equitable distribution of income, equitable access to opportunities, resources and social services within societies and between nations adequately count as well. Tackling corruption, effective supervision of regulations and committed development policies, good governance, health care expansion and education improvement forms a solid base for environmental and societal sustainability (EPI 2010 report). In the current survey, teachers in Mubi seem to be aware of environmental sustainability. They agree to control of pollution, planting of many trees rather than felling them etc. some strategies they propose to use in implementing environmental sustainability ideas in the schools include Club and lectures, training students on environmental sustainability. On some certain levels, they are involved in training and spreading messages on environmental sustainability. This implies that in some years to come problems on environmental sustainability awareness will be reduced.

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