

IMPLEMENTATION OF ENVIRONMENTAL EDUCATION: A CASE STUDY OF MALAYSIAN AND NIGERIAN SECONDARY SCHOOLS.

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ABSTRACT—Environmental Education (E.E.) is an open way to environmental consciousness that promotes development and sustainability. The positive and negative transitions of development around the world are scenarios that call for stimulation and re-orientation of global implementation of environmental education in schools in order to reduce environmental abuse and degradation in our contemporary world. This paper is a review of some selected secondary schools settings in Malaysia and Nigeria to identify the methods of implementation, the problems and challenges that are militating against environmental education policies and implementation in both countries. The results reveal that Malaysian schools have a better implementation approach. There are more facilities in secondary schools with conducive environment. More than 75 % of students in Malaysian schools have better environmental education awareness as against their counterparts in Nigerian with regular community and social development programs embedded in the schools curricular activities. **Keywords**—component; formatting; style; styling; insert.

Keywords: *Likert scale, Environmental education, sustainability, policy implementation*

I. INTRODUCTION

The United Nation Conference on Human and Environment held in Stockholm in 1972 in which it endorsed Environmental Education in its recommendation 96 and in 1976 after the Tbilisi conference, the result of which led to Environmental Education (E.E.) being included in school curriculum were significant steps in redefining and re-establishment of environmental education [1]. Subsequent follow-ups which include the Rio de Janeiro Earth Summit in 1992 encouraged sustainable development and environmental protection. The objective in part, was to considerably reduce or phase out environmental problems in developing countries through the teaching of environmental education in schools [2].

Furthermore, the Agenda 21 of 1996 proclaimed the integration of environmental education. However, much is left to be desired in achieving world sustainable development with the full application or practical implementation [3].

In 1998, Danish University Consortium for Environment, Development (D.U.C.E.D.) with Industry and Urban Areas established a measure in its efforts to fight environmental problems through environmental education leading to Danish environmental aid being given to Malaysia, Thailand and South Africa in order to set up the teaching of interdisciplinary courses on environment in the respective benefiting nations. In turn, M.U.C.E.D., T.U.C.E.D. and S.A.D.U.C.E.D. were established respectively in Malaysia, Thailand and South Africa and the inclusion of environmental education in national policy agenda [4].

Although the importance of environmental education and Green strategies of the National environmental policy was mentioned for the vision 2020 in Malaysia, there has not been adequate coordination and structuring towards effective implementation in schools. So this has become a great challenge. As part of its vision 2020 agenda, Malaysia's educational policies have consistently been on track with a huge Government spending and supervisory follow-up.

However, Nigeria among many other developing countries is beginning to realize the role of environmental education in solving environmental issues. According to Adara, [5], the Nigerian Ministry of Education embarked on National Environmental Education program in schools towards sustainable development as far back as 1990 with the effort of the Nigeria Conservation Foundation (N.C.F.). The national workshop on integration of environmental education gave an *impetus* research studies with emphasis laid on the need for functional implementation of environmental education in secondary schools curriculum [6].

In spite the fact that a huge amount of money has been spent on Environmental Education awareness programme in schools, the resultant implementation has not been encouraging. The motives of the Educationist and Environmentalist are divided on what constitute Environmental Education individually in all schools rather than making it a multidisciplinary approach. It is important to note that the environment plays a vital role in the socio-

economic, political and the ecological development for sustainability. This paper analytically evaluated the formal implementation of environmental education (E.E.) in secondary schools in both Malaysia and Nigeria, based on the academic and social activities in the selected schools of study. The aim of this study, therefore, was to provide a constructive critical review of those factors that are hindering or opposing the functional implementation of holistic inculcation of environmental education in Malaysian and Nigerians secondary educational systems.

II. OBJECTIVES

The objectives therefore, were triple in nature. The first compared the content of Environmental Education programs in Malaysian and Nigerian schools, analyzing the difference and possible causes of its non-functionalities in both nations. Secondly, this research compared the tools for implementation in terms of materials, facilities and resource-persons in Malaysia and Nigeria and identified flaws in the initial policy implementation approach, thereby proffering suggested solutions. Third objective compared the elements of relationship between the student and the environmental education activities. These therefore were set to answer the following questions: 1. Are there differences between the facilities used for environmental education in both countries? 2. Is there any Environmental Education in-service training for resource-personnel in both countries? 3. Which of the schools makes provision of EE news and materials available for students as part of its academic agenda?

III. RESEARCH DESIGN AND METHODOLOGY

Data were collected by using professionally-validated questionnaire and direct interviews with secondary school Head Teachers and students from both countries of study. This research was carried out to test some information on the level of implementation of Environmental Education within the schools. The questionnaire and interviews were administered directly within the schools in Malaysia and Nigeria with permission from relevant authorities. Twenty schools were visited from both countries; ten were selected through simple random sampling. Selection of students was limited to those in Forms 3 to 5 and 20 students were sampled from each class in each school, ten teachers were selected from each school in each country. A total of 600 questionnaires were distributed but only 420 were retrieved. The represented figures of analyzed respondents were derived from the retrieved questionnaires. Data were collected from Government secondary schools in Klang valley, Selangor State, Malaysia and Lagos State in Nigeria.

Questionnaires were organized into 4 sections with sub-sections A to D:

Section A: Background information which contains teacher's gender, age, qualifications, marital status and working experience.

Section B: Teachers opinion, interest and commitment to Environmental Education programs were in question.

Section C: Students personal data which focus on their ambition, interest and participation in the school environmental education programs.

Section D: This was design for the school geography teacher. Questions were based on the school strategies and method of implementing Environmental Education.

The Likert Scale was used through the instrument of appraisal scales. The least on the scales was 1 while the highest was 4 hence a range of 1-4 scale was used with the following translations:

SCALE	TRANSLATION	ABBREVIATION
1	Strongly Disagreed	SA
2	Disagreed	D
3	Agreed	A
4	Strongly Agreed	SA

Here the statements of each hypothesis were tested. The principles behind the formulated hypothesis for this research were coined into questions to create information that reveals the respondents attitude, commitment, interest and implementation of Environmental Education in their respective schools. Data were analyzed using Data editor of SPSS version 16 software for windows as illustrated by [7]. Basic data were taken into consideration.

IV. RESULTS AND DISCUSSION

Study did show that there were more schools in Malaysia that provide EE newspaper and magazines were provided in Malaysian schools than were in Nigerian schools. More than 50% of the schools studied responded negatively in Malaysia but, about 70% of the schools studied in Nigeria has no provision for EE newspaper and magazines (Table 1). Moreover, results in Table 2 clearly shown that more than 54% of the schools researched in Malaysia have Environmental Education (EE) display rooms compared to 28 % in Nigeria. So majority of the schools studied for this research in Nigeria lacked basic EE display room. In table 3, more than 50% of the teachers from the schools of study in Malaysia have attended E.E. in-service training while in Nigeria only 40 % have attended the training. It was revealed that all the schools of study in Malaysia have necessary facilities and qualified resource-persons.

However, in Nigeria facilities and resource-persons were respectively inadequate and not considerably up-to-task as shown in Table 4. The study revealed that only 12% of the schools studied have necessary facilities in Nigeria compared to Malaysia with 100 percent. Considerable number of

teachers agreed that there were major problems in the implementation of Environmental Education. More teachers in Nigeria agreed that the concept of E.E. was difficult to teach due to lack of or inadequate facilities and conducive environment, thereby impacting its implementation negatively.

This opinion was shared by a few of their Malaysian counterparts. The results of the analyses showed that

between the adopted techniques of implementation by the schools in Malaysia and Nigeria, Malaysia teachers were more competent in teaching E.E. The techniques of implementation adopted by Malaysia schools were more effective than those of Nigeria and the level of participation in education societies and clubs of teachers in Malaysia and Nigeria differed to a considerable extent.

TABLE I. THIS TABLE SHOWS THE RESPONSE FROM STUDENTS FROM MALAYSIAN AND NIGERIAN SCHOOLS ON PROVISION OF RELATED NEWS MEDIA ON ENVIRONMENTAL EDUCATION.

Question	Variables	Respondents				Total	Total %
		Malaysia	%	Nigeria	%		
Provision of ee-related newspapers and magazines in schools	Strongly disagreed	1	0.6	2	1.3	3	1
	Disagreed	76	50.7	103	68.7	179	59.7
	Agreed	63	42	45	30	108	36
	Strongly agreed	10	6.7	-	-	10	3.3
	Total	150	100	150	100	300	100

Sources: Field work 2009.

TABLE II. THIS TABLE SUMMARIZES THE RESPONSE OF STUDENTS TO DISPLAY ROOM APPROACH IN E.E. IMPLEMENTATION.

Question	Variables	Respondents				Total	Total %
		Malaysia	%	Nigeria	%		
Presence of display room for ee implementation in school.	Strongly disagreed.	1	0.7	25	16.7	26	8.7
	Disagreed.	68	45.3	83	55.3	151	50.3
	Agreed.	81	54.0	42	28.0	123	41.0
	Strongly agreed.	-	-	-	-	-	-
	Total	150	-	150	-	300	100

Sources: Field work 2009.

TABLE III. THIS TABLE SUMMARIZES THE RESPONSE IN-SERVICE TRAINING IN RELATION TO ENVIRONMENTAL EDUCATION

Questions	Variables	Respondents				Total %
		Malaysia	%	Nigeria	%	
Ee-related in- service training for teachers.	Yes	5	50	4	40	45
	No	5	50	6	60	55
	Total	10	100	10	100	100

Sources: Field work 2009.

TABLE IV. THE TABLE SHOWS THE AVAILABILITY OF NECESSARY FACILITIES AND RESOURCE-PERSONS.

Questions	Variables	Respondents				Total %
		Malaysia	%	Nigeria	%	
Availability						

of necessary ee facilities and resource-persons	Yes	10	100	2	20	60
	No	-	-	8	80	40
	Total	10	100	10	100	100

Sources: Field work 2009.

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The study revealed that only 12% of the schools studied have necessary facilities in Nigeria compared to Malaysia with 100 percent. Considerable number of teachers agreed that there were major problems in the implementation of Environmental Education. More teachers in Nigeria agreed that the concept of E.E. was difficult to teach due to lack of or inadequate facilities and conducive environment, thereby impacting its implementation negatively. This opinion was shared by a few of their Malaysian counterparts. The results of the analyses showed that between the adopted techniques of implementation by the schools in Malaysia and Nigeria, Malaysia teachers were more competent in teaching E.E. The techniques of implementation adopted by Malaysia schools were more effective than those of their Nigerian counterparts and the level of participation in education societies and clubs of teachers in Malaysia and Nigeria differed to a considerable extent.

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