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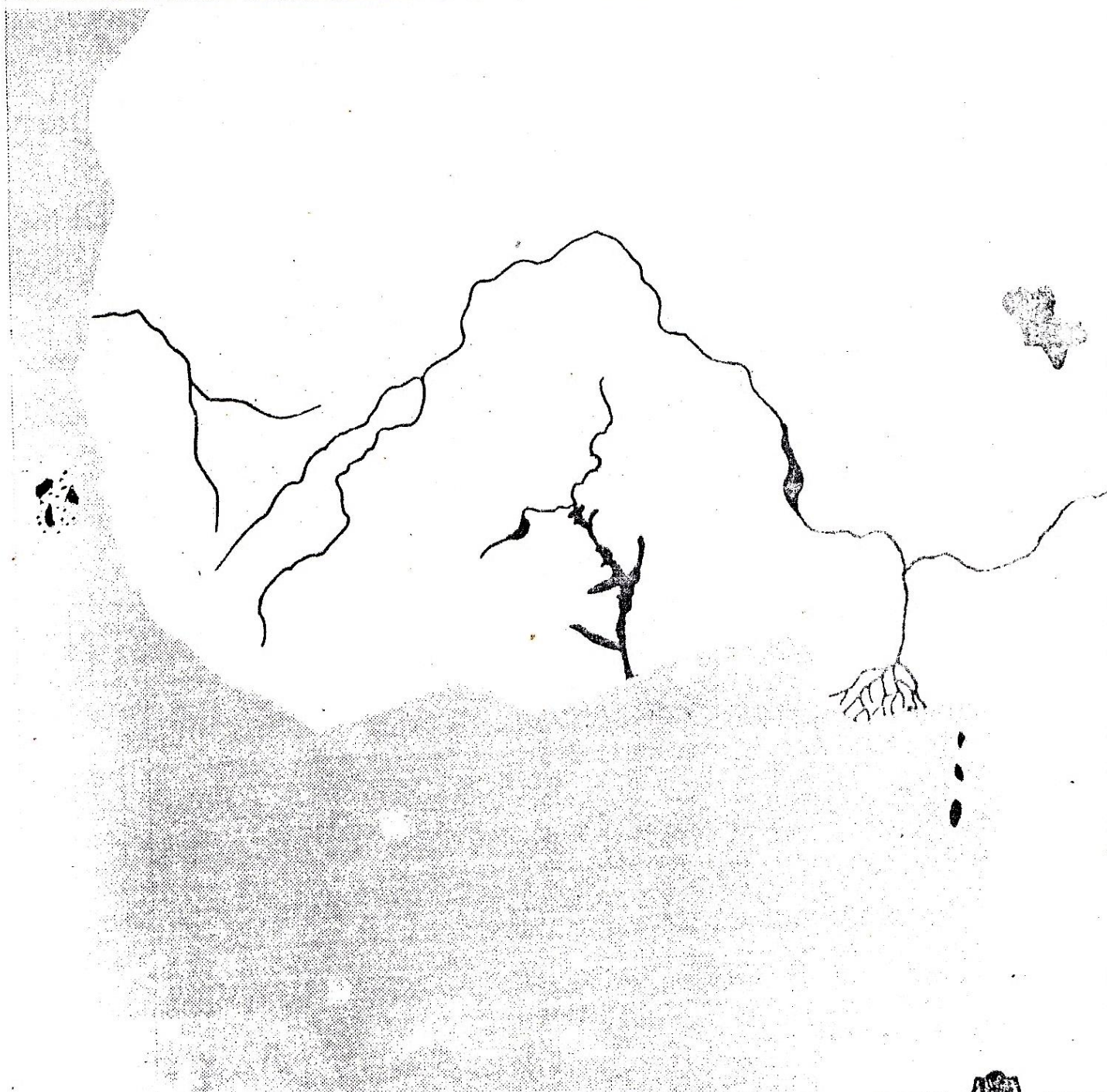
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A REVIEW OF THE NATIONAL ENVIRONMENTAL EDUCATION CURRICULA FOR NIGERIA: THEIR IMPLEMENTATION STRATEGIES AND ANTICIPATED CHALLENGES

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ABSTRACT

The paper traces the historical background of environmental education curriculum in Nigeria, starting from the global demand for it at Stockholm in 1972. It highlights the main features of the curriculum including its philosophy, themes, carrier subjects and focus. The infusion strategy, the anticipated problems and some feasible suggestions are offered.

INTRODUCTION

Between 1996 and 1998 the Nigerian Educational Research and Development Council (NERDC) assisted by the UNDP had developed and secured the approval for the national environmental education (EE) curricula for the formal and non-formal educational sectors. The curriculum process involves six mutually inclusive stages: *determination, design, development, implementation, innovation and evaluation*. Nigerian national environmental education (EE) curricula have passed through the first two and half stages. The determination and the design stages have been completed. Curriculum development, implementation, innovation and evaluation are continuous processes. At the national level the trial-tests have been completed following their development. At the local and school

levels the development aspects are yet to start. This presentation is therefore designed to provide the necessary background information, tools, skills, strategies and motivations to kick-start the environmental education (EE) curriculum in schools. But more specifically the paper is designed to:

- a) trace briefly the historical background of EE curriculum in Nigeria;
- b) highlight the main features of the EE curriculum;
- c) overview the infusion strategy to establish its practicality and problems;
- d) propose relevant instructional materials suitable for EE curriculum implementation;

- c) anticipate and identify implementation problems; and
- d) suggest feasible solutions.

with the directive by the then Minister of Education, Professor A. B. Falunwa that the EE elements be infused into all school subjects at all levels of education, starting with Citizenship Education.

HISTORICAL BACKGROUND

Recommendation 96 of the United Nations Conference on Human Environment held in Stockholm (Sweden) in 1972 urged the various UN agencies, especially the UNESCO to institute an International Environmental Education Programme (IEEP) and find new ways to improve the advanced education of specialists and technicians involved in the environmental question. Consequently in 1975 an International Workshop on Environmental Education (EE) under the auspices of the IEEP was held in Belgrade (Yugoslavia). Between 1976 and 1977 regional seminars were held in different parts of the world. Brazzaville hosted the African regional seminar. In October, 1977, an Intergovernmental Conference on EE was held at Tbilisi: the capital of Republic of Georgia. Nigeria's participation at that Tbilisi conference, originally addressed to the Federal Ministry of Education was passed over to the Federal Ministry of Housing, Urban Development and Environment (Knights, 1988). This costly mistake of mis-routed information temporarily halted the initiative to develop the EE curriculum for eleven years until the Yankari Conference of August, 1988 retraced the faulted steps and produced the first National Conservation Education Strategy (NCES) at the National Conference on Conservation Education. This conference involved a cross section of Nigerians including the federal and state ministries of education. The NCES was adopted by the National Council on Education (NCE) in 1990

The Nigerian Conservation Foundation (NCF) therefore triggered off the initial stimulus for EE curriculum in Nigeria, provided a dependable philosophical basis, a rationale and a futuristic analysis of Nigeria's environmental crises. It also suggested the following:

- ◆ Use of both formal and non-formal approaches to EE.
- ◆ The cross-curricular and infusion strategies.
- ◆ New environmental courses at the tertiary level.
- ◆ Investigative and surveys teaching methods.
- ◆ Design, production and use of relevant instructional materials for EE curricula.
- ◆ Greater emphasis on environmental awareness and eco-friendly attitude to all.

The Yankari Conference therefore marked the determination stage and the start of the design stage that ended in 1998.

The initial EE determination stimulus quickly paid off because many Non-governmental Organizations (NGOs) at the national and the international levels showed keen and overwhelming interest. They also concretely provided the necessary support. For example in 1990 with the

support of the Worldwide Fund for Nature (WWF) the NCF sponsored twelve Nigerians to the University of Strathclyde, Glasgow as the pioneer Environmental Educators in Nigeria. Thereafter many more Nigerians were trained abroad and locally. These included officers from the Universities, the Federal and State Ministries of Education and Agriculture and NGOs. The combined pioneering efforts (Inyang-Abia and Usang, 1992) of these committed environmentalists paid off handsomely because environmental education programmes soon sprang up at different points in Nigeria thus expanding the expected awareness. For example, at the University of Calabar (UNICAL), Calabar, and the College of Education, Ekadialor (Benin City) the cultivated seeds of EE curriculum germinated into various tertiary educational programmes: the Ordinary Diploma, the Postgraduate Diploma (Inyang-Abia, Oji, *et. al.* 1994) and the Bachelors Degree in EE are run at UNICAL while the College of Education, Akamkpa, an affiliate of UNICAL now runs a full-fledged NCE programme in it. All these provide the background for the success of the National EE curricula.

THE CHALLENGE

At the primary, secondary and the non-formal sectors the NERDC facilitated by the UNDP and the UNESCO boldly took up the challenge of designing and developing the National EE core curricula to reflect the major carrier subjects as well as the ecological zones of the country. It should be recalled that the NERDC is the implementing agency of the education component of the UNDP-assisted Environment and Natural Resources

Management Programme. The draft curricula that had been designed and field-tested at different points between 1990 and 1997 finally got the approval of NCE in February, 1998 thereby throwing the challenge of developing and implementing the curriculum at the classroom level to the classroom teachers and school administrators. Their main focus is therefore to:

- design and incorporate EE objectives and strategies into the teaching of the carrier subjects.
- develop learners values, skills and information base related to eco-friendliness through effective utilization of appropriate instructional materials;
- design appropriate learning experiences for the learners at every instructional encounter; and
- motivate learners to maximize the learning opportunities involving first-hand interactions.

THE MAIN FEATURES OF THE NATIONAL EE CURRICULUM

Among others, the national EE core curricula feature the following:

1. **The Philosophy:** This is derived from the National Policy on Education. It focuses on producing a citizenry who can apply skills, commitments, positive attitudes and knowledge to identify, solve and prevent environmental problems. EE is therefore seen as an intervention *about, for, from* and *in* the total environment based on *democratic values, ecocentricism,*

green philosophies, humanism and sustainability.

2. **Outcomes:** These are the expectations usually expressed as goals, aims and objectives. The ultimate goal of the EE curriculum is global sustainability through well motivated and properly informed citizenry because without the environment there can be neither humans nor development of any sort. The three major aims derived from the goals are that the citizens will:

- *acquire knowledge and understanding of and sensitivity* to the total environment, its allied problems and humanity's critically responsible presence and role in it.
- *develop skills* in investigating and evaluating ecological, political, economic, social, aesthetic and educational factors and challenges necessary for solving environmental problems; and
- *develop attitudes, values and strong feelings of concern* for the environment and the motivations for *actively participating* in its protection and improvement (NERDC/UNESCO/UNDP, 1997).

- c) Environmental change and impact
- d) Sustainable development

From each theme various concepts, contents, topics, objectives, instructional materials, methods and evaluation guidelines are then developed as shown on the curricula for the non-formal sector, the senior secondary, the Junior secondary and primary levels of education.

- 4) **The carrier subjects:** The non-formal EE curriculum was zoned to suit South-West, South-East, North-West and North-East Nigeria and to reflect emphasis on the four themes earlier specified. For the formal sector, carrier subjects were identified as the initial focus to address each theme and concept. The carrier subjects, as shown on Table 1, do not mean other subjects have no environmental dimensions. They serve only as guides.

- 5) **The infusion strategy:** To infuse means to melt two or more things together so that they blend and unite without any form of distinguishable difference. The infusion strategy is necessary because EE at the primary and secondary levels does not necessarily form a new subject. It should be built into the contents of the already established subjects. With the use of integrated instructional materials this strategy can highlight the complexity of environmental problems, gradually leading the learners to better understanding of the relationship between human life style and the quality of the environment particularly as related to:

3. **Themes:** Four interrelated themes constitute the major anchor of the EE curriculum. The themes are:

- a) Ecological foundations
- b) Human environment and development

- the maintenance of essentials ecological processes and life support systems;

Table 1: Environmental education carrier subjects

Primary		Junior Studies		Senior Secondary	
1	English	1	Social Studies	1	English
2	Mathematics	2	Home economics	2	Mathematics
3	Pry. Science	3	Business Studies	3	Biology
4	Social Studies	4	Integrated Science	4	Chemistry
5	Islamic Religious Studies	5	Introductory Technology	5	Physics
6	Christian Religious Studies	6	Agriculture	6	Home Management
				7	Economics
					8. Geography
					9. History
					10. Islamic Rel. Studies
					11. Christial Religious Studies
					12. Food and Nutrition
					13. Clothing and Textile
					14. Home Economics

Source: Adapted from National EE Curricula for Schools. (NERDC/UNDP/UNESCO, 1997)

-the preservation of genetic diversity; and

- the sustainable utilization of species and ecosystems (IUCN/UNEP/WWF, 1991).

The infusion strategy demands multi-disciplinary, integrated and cross-curricular approaches because the ultimate goal of learning is survival of the human race. It involves curriculum review and proper planning whereby the key environmental implications of the contents can be adequately emphasized at the classroom lesson plans, their objectives and evaluation. This strategy demands training and retraining of teachers and teacher-educators in areas of curriculum development, instructional materials design and use, and lesson delivery. It demands absolute teacher commitment and efficiency. For its success, teachers must be adequately motivated and facilitated.

6) *Instructional materials:* The central role played by instructional materials cannot be over-emphasized. But their effectiveness is tied up with teacher ability and creativity (Inyang-Abia, 1988). All instructional materials

used in the teaching of the various subjects on the time-table can be adapted or modified to emphasize the environmental dimensions. But teachers need the relevant skills in their design, utilization and evaluation. Workshops on the design and utilization of instructional materials for EE should therefore be of immense value to the success of the programme.

PROBLEMS AND REMEDIES:

Among the numerous problems anticipated, the following need focused attention:

Inertia and apathy: Most teachers attending the initial training and orientation through workshops are likely to fall back to their former steady state of teaching unless they are regularly monitored, evaluated, reinforced and encouraged. Thee , school superintendents should therefore be involved in regular EE orientation workshops with focus on monitoring the EE curriculum implementation. Every examination must have at least one question that focuses on the environmental component of the subject.

question that focuses on the environmental component of the subject.

Instructional materials: Most teachers are text-book dependent in their functions. A situation where innovations in the curriculum are not backed up with adequate simplified textbooks and other relevant instructional materials may not produce immediate positive results. Experts should therefore be encouraged to produce appropriate textbooks to back up the EE curriculum. The existing ones should be revised to reflect the innovations expected in the curriculum. The attempts should incorporate the design and production of visuals, audios, audiovisuals and manipulatives associated with EE curriculum. The local community rather than the four walls should be seen as the classroom for the learners because environmental knowledge cannot be confined to the four walls of the classroom. This emphasizes the need for the use of surveys, excursions, nature corners, nature ramble and field trips. The school must be prepared to encourage effectiveness in this respect.

Funding: Training programmes, equipment and materials, personnel and facilities have high cost values. At the EE curriculum implementation level serious improvisation strategies must be applied. Alternatives must be found and cost-reduction strategies must be evolved. However there are inputs which must attract funding. Batteries to operate a teacher-owned tape recorder necessary for recording and playing-back the sound of birds and animals, the cascading waterfall or the humming of the bees may be bought. Schools can make tokens available to teachers for such essential needs. Part of monies

realized from farm sales, craft sales, bob-a-job, and a percentage of the imprest (e.g 5%) can be devoted to pressing instructional materials needs. For necessary trips, parents, non-governmental organizations and associations can be approached for assistance.

Summary and Conclusion:

This presentation has briefly traced the historical background of EE curriculum in Nigeria, starting from a global declaration at Stockholm in 1972 through its local determination at Yankari which produced the National Conservation Education Strategy (NCE, 1988) to the UNDP-supported final and approved National EE Curriculum (NERDC/UNESCO/UNDP, 1997).

The main features of the EE curriculum have been highlighted. They include the philosophy, outcomes, themes, concepts, contents, topics, objectives, activities, instructional materials, evaluation guidelines and the carrier subjects.

The infusion strategy which encourages blending, dovetailing and uniting the contents of EE curriculum into whatever is taught was strongly recommended. Adaptation and the modification of existing instructional materials to meet the national EE curriculum demands were suggested. Inertia and apathy, instructional materials provision and utilization and funding problems were foreseen and appropriate suggestions offered.

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