

## POSITION PAPERS

### Towards A Vocational Curriculum for Migrant Fishermen and their Families

S.I. AKINSEINDE, Bendel State University.

#### Abstract

*This paper described a vocationally oriented curriculum designed to provide relevant education for migrant fishermen. The presentation enters into the objectives, the curricular arrangement and the method of school organisation. It seeks to give consideration to the students, the teacher and support staff, and employment/work setting.*

*Since fishing is tied to locations, 'on-site schools' were recommended to meet the needs of the migrants. This is considered in relation to the problem of interface with vocational education.*

#### Introduction

One of Nigeria's philosophical commitments is to provide educational opportunities for all so that each person may have the opportunity to reach his or her fullest potential. Of recent, many Nigerians are beginning to realize that the conventional or traditional practice of education which is provided on a rather permanent base eluded some citizens who live transitional lives imposed by the terrain and occupational choice. Such career choice affect their total life, leisure time activities, the selection of friends and even the satisfaction of needs. This is the case of the migrant fishermen and their families.

Any educational provision designed to serve the needs of Nigerians must not exclude the migrant fishermen and their families. They make their contributions to the nation's economy through the supply of fish or seafood that sustains the citizens and which can be exported when available in large quantity. Udo (1978) found that fishing is the most important economic activity in regions where there are creeks and lagoon along the coastlands.

The fishermen along the coast are mostly the Ijaws, Ilajes, Ijebus, Efiks and Ibibios. They settle in small hamlets and fishing camps and villages located in the lagoons and creeks Udo (1978). They fish in the river Niger and in the lagoons and creeks of the Coastal areas of Nigeria (See Fig. 1) The migrant fishermen engage in long and short distance migration. The long distance migration stretches across state boundaries (from the lower Niger to Kainji dam or lake Chad) while the short distance migration is within the state rivers.

This paper proposes a type of education that will be functional to migrant fishermen and their families. It highlights the objectives, content of the curriculum and modalities for organising the school. The purpose of the study is to bring to light the educational needs of the migrant fishermen. Such a knowledge will help the Government to have uniform implementation of the educational policy in different parts of the Country. The scope of this paper is limited to the design of the vocational aspect of the curriculum.

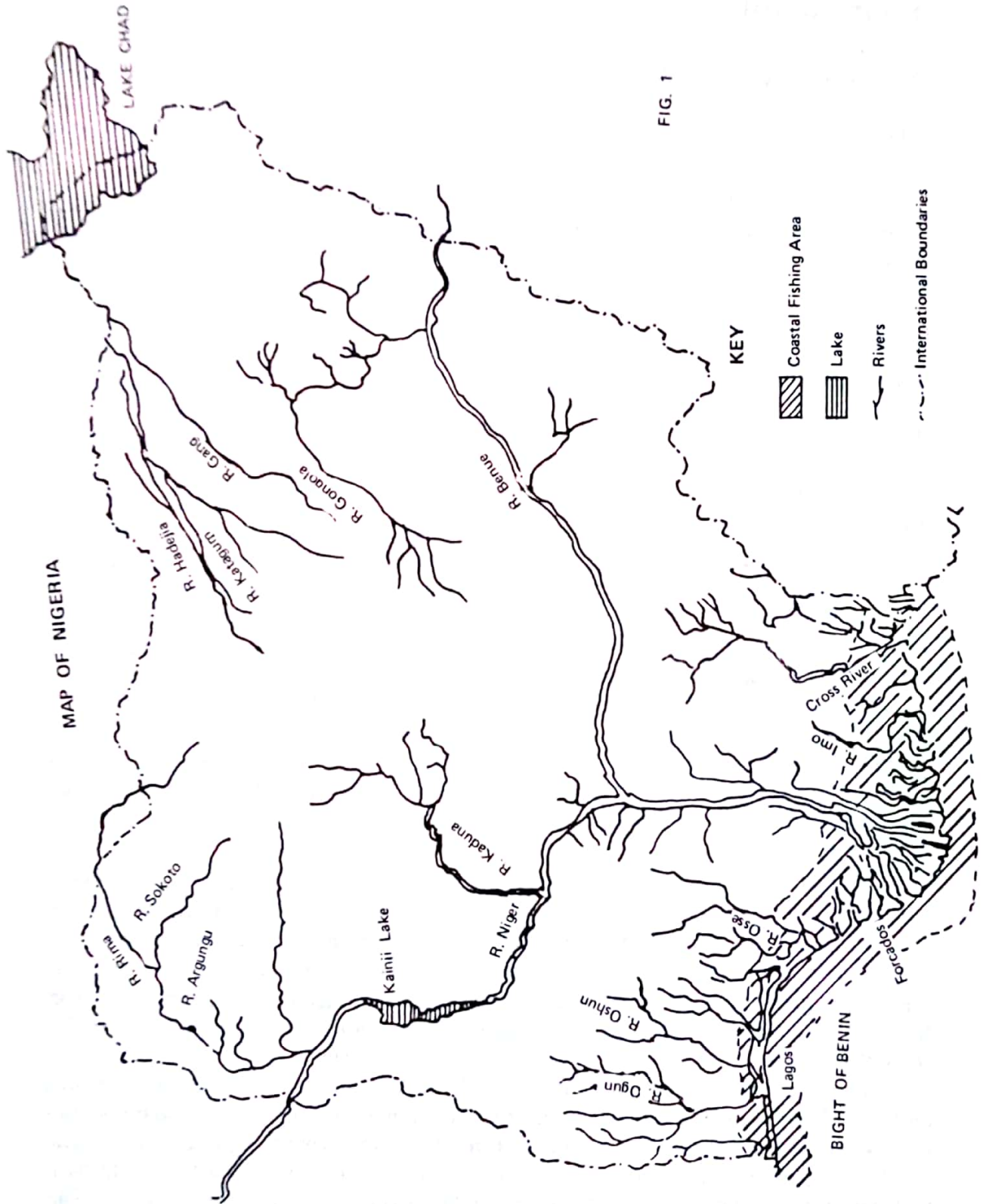


FIG. 1

**Back ground to the Problem of the study:**

The migrant fishermen do not have permanent base because of the seasonal character of the fishing industry which is as a result of fluctuations in the level of water in the creeks and lagoons. At the beginning of the flood season, they migrate to the creeks of the Niger to fish. At the height of the flood, they move back home in readiness for the dry season. When the flood has receded, they migrate to the creeks again to fish in ponds and lakes. The presumption is that the opportunity to fish at all seasons will improve their economic well being. This migratory habit makes it difficult for them to benefit from the regular school system thereby denying them of formal education.

These migrants are mostly illiterates with large families and indulge in on-shore and off-shore fishing. They lack the technical knowledge and skills to operate and maintain modern fishing equipment. The practice of artisanal fishing cannot earn them enough money to purchase out-board engines, big Canoes, storage and processing equipment. As a result, the rich fishery resources are under-utilized and greater part of the coastal water is unexploited for commercial fishing.

It is in this circumstance that this study had to address the following questions:

- (i) What are the educational needs of the migrant fishermen and their families?
- (ii) How can those needs be put together to develop an educational package that will be beneficial to this groups?
- (iii) How can their technical skills be developed to increase their proficiency and catch per unit effort (CPUE)?
- (iv) What should be the contents of the curriculum?
- (v) What strategies should be used for organising the training programme?

It is the desire to create awareness of the educational needs of the migrant fishermen and their families that this study had to be conducted in order to meet the educational policy expectation.

**Conceptual Framework for a Curriculum for Migrant Fishermen**

Any educational provision that is aimed to benefit the migrant fishermen and their families must have purpose and direction. Musa (1988 p. 81) remarked that the type of education needed should be designed to suit their migrant life-style, culture and occupation. Basically, their education should aim at achieving literacy, vocational training/proficiency and critical thinking. An appropriate curriculum should aim at creating a rich environment in which they can learn to:

- (i) effectively use verbal and written modes of communication.
- (ii) develop useful general vocational skills and attitudes.
- (iii) develop the ability to continue to learn and grow as productive human beings.
- (iv) discharge their duties as citizens in a democratic society and
- (v) think critically and logically.

While the list above is not exhaustive, it emphasizes the social role of education which Walker and Soltis (1986) described as progressive educators; aims of education. The fishermen should have command of fundamental processes of reading, writing, arithmetic and oral expression even if it is in their native language. The ability to read,

write and use numbers would enable them to learn from printed materials or books, communicate and keep records of account or events. A knowledge of political and civic education is equally essential since a good number of them are illiterates. Their education should start at the primary level with a higher proportion of vocational content. The basic education needs of the children should include instruction in Health, Moral Education and Citizenship starting from the years of elementary education. The goals of children's programme among others are to enable them:

- (i) respect law and authority
- (ii) solve problems and think for themselves and
- (ii) learn vocational skills.

The children's education will be functional if adapted to their home background and the occupations of their parents.

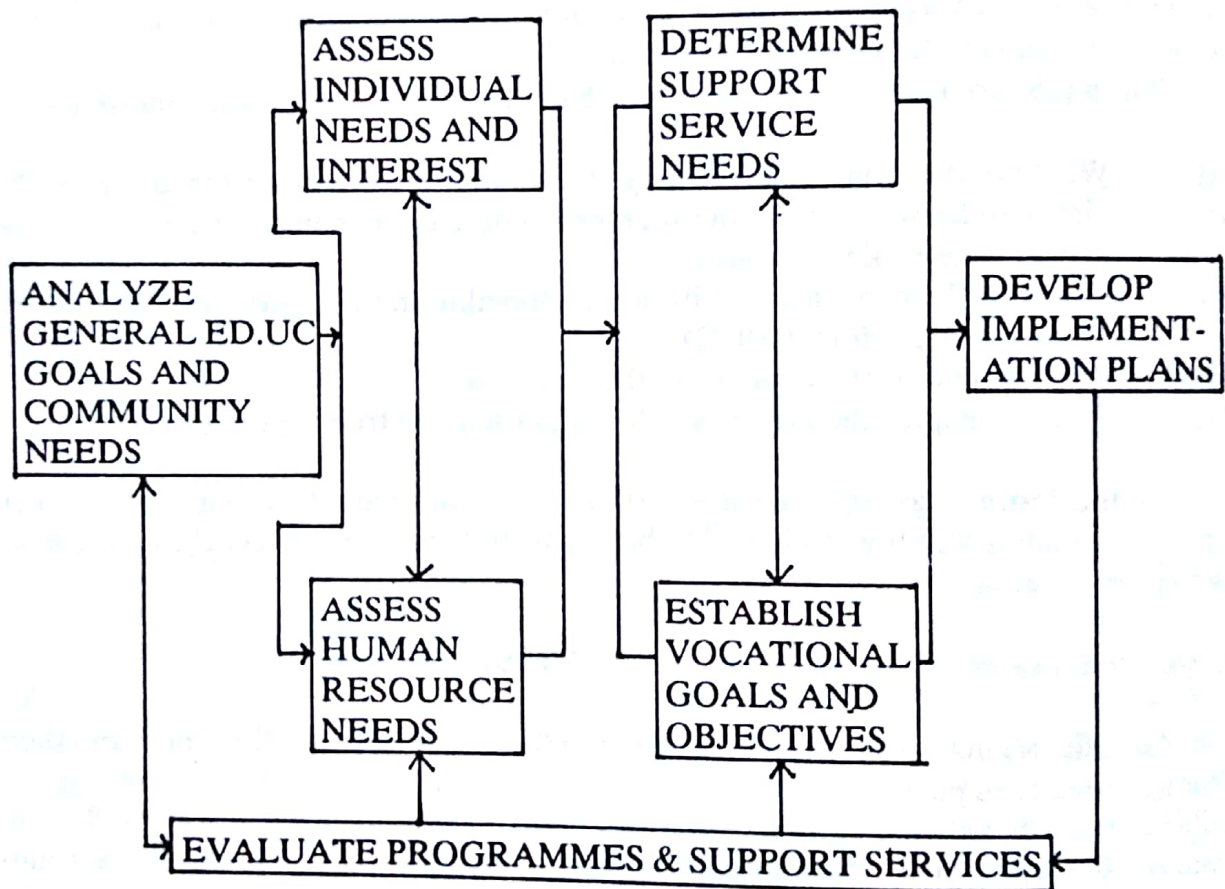


FIG. 2 Hypothetical Model for organising Vocational Curriculum.

There is the need to analyse the general education goals and community needs because vocational programme cannot operate when isolated from the community and the total education system. This will be followed by assessment of training needs and interests of the youths and adults in the area. Also the present and future human resource supply and demand in the occupation with reference to economic outlook are also assessed. (See Fig. 2). The needs and interests of the fishermen to be served by the programme is to increase their catch per unit effort (CPUE). The society's need is to have more fish for consumption and commercial purposes. The needs and interests of local business and industry is to have optimum supply of sea food. The projected needs

in fishing occupation is to develop infrastructure to reduce post-harvest spoilage and deterioration and to practise industrial fisheries (or commercial fishing). With the introduction of ocean fishing and marine exploration (using vessels), capture fisheries may be on the decline.

Specific vocational goals and objectives will be established based on previous information on support service, individual and human resource needs. The programme can be implemented when the resources in terms of personnel, equipment, facilities, travel and other miscellaneous costs have been provided. In clear terms, the implementation will involve recruitment of staff, acquisition of adequate class room and laboratory space, tools, equipment and supplies, purchase and/or development of instructional materials. Classes will begin after the recruitment, selection and enrolment of students. The evaluation of programme and support services is to provide useful data for modifying all steps of the planning process.

### **Curriculum Content.**

The content consists of the theory and practice that will enable the clientele perform according to the stated objectives. The vocational curriculum being proposed has a focus on gainful employment and success standard (i.e. ability of the programme's graduate to perform as expected in the occupation). Also, it is responsive to constant changing of the world of work as a result of technological developments. When this is applied to the fishing occupation, the courses ought to include (i) Aquaculture and (ii) Commercial fishing. Training in aquaculture will help the fishermen economically and keep them preoccupied with fish culturing during the non-fishing seasons.

#### **1. Course Outline in Aquaculture.**

##### **(a) Cognitive Domain.**

Recognition and recall of facts and specifics about fish types, stages of growth of fresh water and marine fish under aquacultural conditions. Recall of methods of culture, and routine management. Ability to use such information in a situation different from the original learning context to select and provide explanation.

##### **(b) Psychomotor Domain**

Skills to be performed include construction of cages, ponds, hatching, growing and harvesting facilities. The clientele should reproduce each skill. The skills like construction of cages, traps and nets and artificial fertilization of eggs should be performed on an individual basis.

##### **(c) Affective Domain.**

Attitudes, interest, appreciation and modes of adjustment towards modern practice. Determination of attitude towards change if favourable to the adoption of the skills and the adaptation of the methods.

##### **(d) Units.**

- (1) Marine fish culture system.**
- (2) Construction of cages and ponds.**

- Construction of ponds around oceans
  - Diversion of water
  - (3) Construction of hatching, growing and harvesting facilities.
  - (4) Methods of fertilizing and hatching eggs.
  - (5) Routine management procedures/systems
    - develop hybrids or superior strains
    - control parasitic and disease agents
    - develop systems to eliminate competing organism.
  - (6) Methods of delivery (processing and marketing).
  - (7) Site and species selection for fresh water fish culture.
  - (8) Pond construction for fresh water fish culture.
  - (9) Routine management procedures
    - Supplementary feeding
    - Breeding & hatchery
    - Disease & parasite control and management.
  - (10) Processing and marketing of fresh water fish.
- (2) **Course Outline for Commercial Fishing.**
- (a) **Cognitive Domain**  
Recall of facts about vessel and trawler operation and fish processing. Recognition of fish finding apparatus, navigation instruments and communication equipment. Description of basic concepts and explanation for certain rules associated with commercial fishing.
  - (b) **Psychomotor Domain**  
Skills to be performed are: operation of off-shore and inshore fishing vessels, repair of seine net, trap and gear. Salting, drying and canning skills should be performed on an individual bases.
  - (c) **Affective Domain.**  
Attitudes, interest, appreciation, and modes of adjustment towards the modern practices. Determination of attitude towards change if favourable to the adoption of the skills.
  - (d) **Units**
    - (1) Off-shore and inshore fishing vessel operation.
    - (2) Meteorology, navigation and communication.
    - (3) Trawler operation. .
    - (4) Fish finding systems
      - Use of echo sounder apparatus in the vessel.
    - (5) Seine net, trap and gear making and repair.
    - (6) Shipboard product sorting.
    - (7) On-shore raw fish preparation.
    - (8) Product preservation and packaging.
      - Canning, Freezing, Salting, Drying,
      - Use of kilns and pickling.
    - (9) By-products production

-Oil, meat (like tortoise, whales, crocodiles and snakes) animal food, fertilizer or shells.

- (10) Product marketing
- (11) Quality Control.

### Method

The teaching method can be approached at three different levels. The first stage will involve the use of mass media to create awareness and arouse the interest of the clientele. Use of television, news paper and radio will generate awareness and arouse interest about aquaculture and commercial fishing.

In the second stage, group contact method can be used. The fishermen will be identified and met in groups. This will provide an opportunity for the fishermen to ask questions and desire to try the innovation if convinced. The use of teaching methods like demonstration, lecture, discussion, workshops, agric shows and cultural show (such as fishing festival) will be of advantage. At this stage the extension agent or trainer may explain the details of the programme in order to motivate the fishermen towards the educational package willingly.

The third and final stage involves individual contact method. This should include home visit, fishing location visit and individual demonstration. Giving consideration for the needs and interest of the fishermen will motivate them to accept the educational package willingly.

### Evaluation

The programme may be evaluated in two phases. The first is the evaluation of the fishermen's situation at the beginning of the learning period. This is to establish a 'benchmark' against which to measure or assess progress. The Trainer should know their catch per unit effort (CPUE) at the beginning of programme and assessment of losses due to spoilage. The second phase is to test the objectives in the three broad domains (i.e. skill, knowledge and affective). At the end of the course the trainer should assess their catch per unit effort (CPUE) and losses due to deterioration. One would expect that they will catch more and lose less after going through the educational package.

The clientele should be able to identify fishes and state their characteristics. They should be able to repair damaged nets, construct fresh nets, repair gear (like traps, spears, hook and line) and craft (like canoes and raft).

### Method of School Organisation

Fishing (like mining) is tied to locations and fishing areas are clearly defined for all seasons whether rainy or dry season. Major fishing centres should have "on-site schools" to meet the educational and social needs of the fishermen. These are schools located in the fishing area. Persons to be served will enrol as part-time day and/or evening students. The non-fishing period of the day should be reserved for educational activities of adults. The training school should be centrally located based on the population of the fishermen and distances of creeks and lagoons.

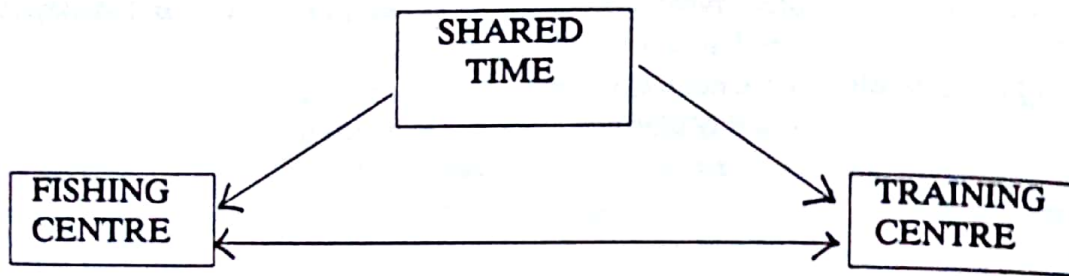


Fig. 3 Shared - Time Approach.

The work-setting will be such that fishermen will go out for fishing and return for formal educational activities or leave the training centre for fishing. (see Fig. 3)

The two categories of fishermen to be served are the adults and their children. The philosophy of the school should emphasize occupation education for those who do artisanal fishing. The adult fishermen will be in a "narrow-based" programme in which the general education courses will be 10-30 percent while the specialized courses (like Aquaculture and Commercial Fishing) will be 70 to 90 percent. Most courses will be conducted at lower cognitive levels because they are designed around specific job preparation for mostly illiterates. The workshop/laboratory courses will stress practice in the skills needed for a specific job.

The programme for the children will be a 'broad based' one in which the general education courses will be 30 to 50 percent while specialised courses will be 50 to 70 percent. For the children, most courses (occupational and general education) will start with low and move to higher cognitive level.

The physical facilities like vessels, Trawler, Seine, Vessel apparatus and Sea food processing equipment are expected to be provided by the government since the equipment required is capital intensive. The instructional staff are supposed to be competent in teaching Aquaculture and Industrial fisheries. Additional staff that will be required are clerks, storemen, vessel operators, securitymen and nurses (for the provision of medical attention).

The students to be accommodated will be 45 in a group. If there are more groups, the teaching will be done on rotation or different schedules. The local government, state and federal funds must be made available to finance the programme.

### Summary and Conclusion.

The National policy on Education (1981) emphasized the need to provide meaningful and relevant educational experiences for all citizens. Such educational opportunities should not elude the fishermen who live predominantly in the riverine states of Nigeria because of their vocation.

A framework for organising an educational programme for this group should include need analysis of individual and community needs, assessment of training needs, establishment of vocational goals and objectives, and determination of support service needs. All the activities necessary for implementation should be put together along with a schedule of 'who' is to do 'what' and 'when'.

Essential content of the curriculum must contain necessary 'ingredients' to make the fishermen progress from artisanal level to large scale fishermen in order to increase their catch per unit effort and reduce losses due to deterioration. Training in aquaculture and



commercial fishing are recommended as appropriate in meeting the fishermen's' needs economically and to reduce migratory habit.

Modalities for implementation of the programme will include establishment of 'on-site schools' and recruitment of highly motivated teachers who are interested in working with the migrant fishermen and their families. Also, the logistics associated with the implementation of a vocational programme must be taken into account.

REFERENCES.

Federal Republic of Nigeria (1981): *National Policy on Education*. Lagos: NERC Press P.8.

Finch, C.R. and Crunkilton, J.R. (1984). *Curriculum Development in Vocational and Technical Education: Planning, Content, and Implementation*. Massachusetts: Allyn and Bacon, Inc. p.13.

Musa, C.N. (1988) "The Influence of Migrant Peasantry on the Education of Children of Migrant Peasants of Northern Bendel, Nigeria," Unpublished Ph.D. Thesis. University of Nigeria, Nsukka, P. 81.

Mutkoski, S.A. and Schurer, M.L. (1981) *Meat and Fish Management*. Massachusetts: Breton Publishers. P. 129.

Olaitan, S.O. (1980) "Perplexing Problems in Curriculum Engineering for meeting the manpower Needs of Nigeria" *The Educator* 15th Issue P. 32-35.

Udo, R.K. (1978) *Geographical Regions of Nigeria*. London: Heinemann Educational Books Ltd. P. 20.

Walker, D.F. and Soltis, J.F. (1986) *Curriculum and Aims*. New York: Teachers College Press. P. 74.

Correspondence: Mr. S.I. Akinseinde, Department of Vocational and Technical Studies, Bendel State University, Abraka Campus, Abraka.