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An Overview of Soil and Plant Analysis Programme in Nigerian Tertiary Education

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INTRODUCTION

In a broad sense, soil testing is any chemical or physical measurement that is conducted on a soil. In a more precise form, soil testing is a fast chemical analysis of a soil to assess the available nutrients status of the soil. Soil analysis includes:

(i) Interpretation
(ii) Evaluation; and
(iii) Fertilizer recommendations based on the results of the chemical analysis.

Out of the 17 known chemical elements essential for crop growth, nitrogen, phosphorus and potassium are generally deficient in the soil. Soil P^H is also a common limitation to plant growth. In most cases, soil testing involves N, P and K and P^H with secondary micronutrients analysis varying widely from soil to soil (Ayuba, 2000). Soil nutrient's status is assessed in several ways. These are as follows:

(i) Field plot fertilizer trials
(ii) Green house pot experiments
(iii) Crop symptoms
(iv) Plant analysis
(v) Rapid chemical analysis of the soil
(vi) Rapid tissue or sap analysis.

Soil testing probably commence in so many forms, as soon as man is interested in how plant grows. Since the late 1940s, soil testing has been widely accepted as an essential tool in the formulation of a sound lime and fertilizer programme (Jones, 2001). Soil tests are a logical tool to determine areas where adequate or excess fertilization has taken place. It is, therefore, a programme that is divided into four phases:

1. Collecting the soil samples
2. Extracting and determining the available nutrients
3. Interpretation of the results
4. Recommendation for fertilizer, lime application etc. based on soil analysis.

(1) Field sampling (Collection of soil samples):

According to Ayuba (2000), the soil testing programme starts with the collection of a soil sample or samples from the field. The analytical results are expected to be representative for the entire field. The results must reflect the true variations within the field. Usually, soil testing programme can never be any more accurate than the accuracy of the soil samples in characterizing the field.

(2) Extraction and chemical analysis:

Once soil samples are collected and prepared, its available nutrients are determined. Many chemical methods have been suggested and are being used for the measurement of essential available plant nutrients. In designing chemical methods, the question of measuring the so-called "fixed" chemical form in the soil is frequently raised. Laboratory techniques in soil testing methods vary widely. There are many ways of chemically determining a nutrient in a soil extract, and many techniques for extracting the available nutrients from the soil. These ways and techniques will be discussed as we continue in this chapter.

(3) Correlating and interpreting the analytical results:

Analytical results obtained from chemical analysis of soils must be interpreted meaningfully. The basic principle of soil testing is that a soil test value can under most circumstances be treated and related as an independent variable to the percent yield and response obtained for a specific crop. All soil test values must be correlated with crop growth from fields of known response.

(4) Fertilizer recommendations:

In making sound fertilizer recommendation, fix criteria are used.

a. The present nutrient – status of soil
b. The crop to be grown
c. The planting pattern and rate
d. Method of fertilizer application

Soil test values usually indicate the present level of available nutrients in the soil only. To determine the level of fertilization, economic considerations are important, especially the value of the expected crop increase in relation to the cost of the fertilizer. The yield estimate will depend largely on the predetermined productive capacity of the soil. The amount of actual fertilizer needed is modified by the method of applying the fertilizer (broadcast or other method of applying fertilizer). Therefore, the final fertilizer recommendation depends on accurate soil test analysis and an interpretation of the test results bare on round research (Wild, 1993).

A good soil testing programme is essential to sound fertilizer use. The soil test value is the starting point. It can indicate how serious the deficiency is and provide an anchor on which many of the subsequent required judgments depend. There are few soils being farmed today that do not require efficient fertilizer usage and good management for profitable crop production. On many soils, inadequate and sometimes excess fertilizers are being applied. A good sound soil testing programme is the best and only way of determining adequate fertilizer use for high and efficient crop production (Havlin, 1999).

Sampling and Sample Preparation

Field sampling for soil testing: Soil test results are factual data characterizing the fertility status of the land represented by the sample. The goal of field sampling is to provide:

(i) A measure of the average soil fertility in the field

(ii) A measure of the soil fertility variability since it is neither practical nor possible to test the entire field; we must rely on samples taken from the field in order to determine the fertility status of the soil (soil sampling). The question, then, is on how to obtain the samples.

Soil Analysis:

Sample plan (sample preparation):

The general instruction for sampling field soils involve: collecting a composite sample from a given area. This is to minimize the influence of micro non-uniformity. The number of borings is usually recommended to make composite samples ranges from 5 – 25. Each boring contributes equally to the composite sample. The accuracy depends on the number of boring drawn from the composite. The area for which fertility information is desired is regarded as a **sample unit.** The first step in a sound sampling procedure is to sub-divide the area into homogenous units. With the extensive use of fertilizers and other agrochemicals today, large differences in fertility often occur within a soil type. Within fields that appear uniform, the recommendation for size of the sample unit varies; 2 to 5ha with the size increasing as the area of uniformity increases (Rowell, 1993; Singh, 1997).

About 30 borings from a uniform (visually) field of 2ha would permit the determination of P, Ca and K to within 10% of the actual field average. Generally, fewer borings are needed where little fertilizers had been used. The sampling equipment includes:-

(i) Soil tubes
(ii) Augers
(iii) Shovels
(iv) Trowels
(v) Cutlass

Generally, soils are very varied and heterogeneous in nature. The nature of variations according to Greenland (1994) is as follows:

(i) Parent material – i.e. variations in properties among soil formed from the same parent materials under similar conditions are usually very small.
(ii) Man-made variations – due to fertilizer or other activities on the land
(iii) Topography
(iv) Vegetation

Plants Analysis:

The value of a plant analysis interpretation is no better than the care taken in:

- Collecting
- Handling
- Preparation and
- Analysis of the gathered plant tissues.

Errors made in these phases can result in erroneous interpretations and recommendations which can be costly (Usman, 2010).

(i) Plant Sampling

The validity of a chemical analysis of plant tissue samples depends on an intelligent approach to the sampling. If the sample taken is not representative of the commodity from which it was obtained, all the careful work put into subsequent analysis will be wasted because the results will not be valid. Nutrient element composition of a particular plant species is not a fixed entity as the composition of plants varies from month to month, even from hour to hour on the same day, from soil type to soil type, as well as amongst different parts of the plant itself.

Frequently, no single time for sampling is suitable for all elements. Therefore, several plant parts at different stages of growth need to be taken. For example, corn plants deficient in K contains less K in their lower leaves compared to the upper leaves. Sampling is not recommended when the plant part is soil or dust covered, damaged by insect, mechanically injured, or diseased. Dead plant tissues should not be included in a collected sample.

(ii) Sample preparation: After sampling, the plant material is usually subjected to four different preparative steps before the actual chemical analysis is carried out:

a. Cleaning the material to remove surface contamination
b. Drying to stop enzymatic reactions and prepare the material for grinding.
c. Mechanical grinding to reduce the materials to fineness suitability for analysis.
d. Final drying to constant weight to obtain a standardized value on which to base the analytical figures.

Plant material is often contaminated with spray residues, whether applied for nutritional, insecticidal or fungicidal purposes. This contamination will certainly affect the analysis and it must be removed before the plant material is dried. This is usually done with a solution of 0.3% detergent before rinsing with clean water. After washing, plant materials should be dried as rapidly as possible so as to minimize chemical and biological changes. Delay in drying results in loss in dry weight due to respiration while proteins are broken down to simpler nitrogenous compounds. It is customary to grind the dried plant material before analysis, partly to ensure greater uniformity in composition. The types of laboratory mills in use include:

(i) Wiley mill
(ii) Hammer mill
(iii) Jar mill

Fineness is often considerable importance since it seems to ensure that samples are homogenous in particle size. Ground plant material should not be stored on the shelf for longer than two months before analysis.

Differences among soils in their capacity to supply nutrients at given soil-test levels:

The amount of P and K extracted from soils by soil-test solutions and by plants are affected by factors including:

(i) Amount of clay
(ii) Type of clay
(iii) Organic matter
(iv) Total soil control of P or K and fertilizer
(v) Cropping history

Use of soil grouping is essential for making recommendations based on soil-test values. It necessitates classification of soil samples when they are received in the laboratory. This can be done with acceptable accuracy by someone who is familiar with the soil types within the area. Lime recommendations based on soil tests are an integral part of the service rendered by soil testing laboratories. The need for lime and the effects of liming vary among soils, even at the same P^H. The “critical” P^H for a crop may vary by almost a P^H unit among soils. The differences could be as a result of the effects of organic matter and amounts of clay or lime needed to change soil P^H to the desired level. The results of lime requirement tests are normally interpreted to recommend lime to the nearest 0.5 ton/ha (Agbede, 1995; Hochmuth, 2011).

Analysis and Interpretation of Soil Test Results

Field Experiments:

Soil – test calibration requires extensive data from the field and laboratory. Because of the wide range in soil characteristics and the many crops for which recommendations must be made, exhaustive research under all conditions is not possible. Therefore, both soils and crops must be combined into manageable groups on data available. Short-term experiments should be conducted on soils with a wide range in fertility levels. Since such tests provide no measure of the cumulative effects of treatments on yield (build or deplete), they have limited value in determining rate of fertilizer that should be recommended for sustained productivity.

Experiments where treatments are repeated on the same plots for several years provide the best data from which to determine rates of fertilizer to be recommended. Such experiments permit measurement of the effect of treatment on build up or depletion of nutrients in the soil. Experiments where the same source and rate are used on a plot for several years give suitable data for relating soil test values to yield. Identical experiments on different soils over a period of years give the best information on which to group *soil for soil test interpretations*. After different soil levels of an element have been established in long-term rates experiments, their effects on yield can offer an excellent means of evaluating soil-test levels (Spann and Schumann, 2010).

Rating Soil-Test Values and Use of a Fertility Index

Laboratories usually adapt some kinds of rating system for evaluating soil test values. Use of descriptive terms such as “low”, “medium” and “high” in soil-test calibration has serious limitations. There exists a variety of rating systems for soil-test values. Below is a comparison of soil test rating fertility index, relative yield and recommendations based on soil-tests:-

Soil-Test Rating	Fertility Index	Relative yield without nutrient (%)	Recommendations
Very low	0 – 50	< 50	Large applications for soil building purposes
Low	60 – 70	50 – 75	Annual applications to produce maximum response and increase soil fertility.
Medium	80 – 100	75 – 100	Normal annual applications to produce maximum yields.
High	110 – 200	100	Small applications to maintain soil level. Amount suggested may be double applied in alternative years.
Very high	210 – 400	100	None until level drops back into high range. This rating permits growers without risk of loss in

			yields to benefit economically from high levels added in previous years. Where no P or K is applied, soils should be resampled in 2 years
Extremely high	410 – 990	100?	Use for P on samples from various gardens and shrubs. A warning is added that P is excessive and further addition may cause Fe or Zn deficiency.

Making the fertilizer Recommendation

A – Calibrating Field and Laboratory Data:

Determination of P and K recommendations at different soil-test levels involves the use of a diversity of data. For soil testing "very low", large amounts are recommended to increase soil fertility levels rapidly (*Refer to the table above*).

B – Fertilizer Grades and Ratios:

In making recommendations, fertilizer grades must be considered for most crops. P_2O_5 and K_2O ratios are limited to 1:1, 2:1, 1:2, 3:2, and 2:3. Most soil test situations can be met with grades in these ratios or with grades containing only one or these two elements plus the N that may be required by the crop. Crops having similar fertility requirements may be grouped to reduce the number of grades and rates recommended.

C – Yield Goals:

Many laboratories vary recommendations for different yield goals. Usually, recommendations made are based on data from experiments that include higher rates than are recommended and were conducted with best known management practices and varieties, so they may be followed. Rates of P and K recommended are sufficient to produce fields on the flat portion of yield curves and to also build fertility on soils with fertility index below 100. Long-term experiments show that where fertilization rates are adequate to produce crop yields and maintain soil test P and K at medium or high levels, there is little need for concern about amounts of P and K removed by crops. When adjustments are made for maximum yield or extremely high yield goals, soil testing laboratories have an obligation to support such adjustments by research or scientific explanation. Soils to be irrigated or which are known to respond to higher than normal rates of N can be classified in a special category. Sandy soils have consistently produced higher yields and responded to higher rates of fertilizer than other soils (Jones, 1997).

Analysis of Major Soil Nutrients/Elements

I. Soil Nitrogen:

Nitrogen is one of the most important plant nutrients. It is found mostly in the organic component of the soil. Beside soil organic nitrogen, it is also found in the mineral part of the soil. They exist in the form of nitrates, nitrites and ammonia and these represent about 2 – 3% of soil nitrogen. Almost all methods of determining total soil nitrogen are based on the principle of oxidizing organic substances, then reducing the nitrogen to ammonia. The ammonia is later distilled using a kheldhal distillation apparatus. The basic principle of determining nitrogen using the kheldhal method is based on the oxidation of organic substances in boiling concentration, H_2SO_4. The decomposition of plant ammonium to

ammonia is done through distillation into a 20% boric acid (H_3B0_4) and then titrated with 0.02N H_2S0_4. 1ml of 0.02N H_2S0_4 is equivalent to 0.28mg N.
Generally, this method excludes nitrate and nitrites N in the soil. The equation below represents the basic reaction between soil organic ammonium and concentrated tetraoxosulphate (VI) acid (H_2S0_4).

$$2CH_3CHNH_2COOH + 13H_2S0_4 \text{———} (NH_4)_2S0_4 + 6C0_2 + 16\ H_20 + 12S0_2$$

The ammonium sulphate $(NH_4)_2S0_4$ is further reacted with NaoH
Thus:-

$$(NH_4)_2S0_4 + 2Na0H \text{———} Na_2S0_4 + 2NH_40H$$

II. Soil Phosphorus:

The determination of phosphorus in the soil is usually through calorimetric method. All calorimetric and spectrometric methods of determining phosphorus is based on the formation of coloured or spectro- absorbing solution as a result of the reaction of phosphorus with molybdenic acid compound $(NH_4)_2\ Mo0_4$; Na_2Mo0_4 to form phosphoromolybdenic heteropolyacidic compound. The addition of $Sncl_2$ to the phosphoromolybdenmic heteropolyacidic compound reduces the compound to molybdenic blue whose intensity of colour is proportional to the concentration of phosphorus in the soil sample.

Possible Errors: This method is highly sensitive to change in P^H. In alkaline and highly acidic media, the compound is very mistakable. Low values are obtained whenever stale $Sncl_2$ solution is used.

Testing Soils for K, Ca and Mg

Plants usually contain more K than any other nutrient elements except nitrogen. Crops utilize from 50 – 200kg k/ha, depending on the yield and kind of crop. Supplemental K fertilizers are frequently needed since most soils cannot meet the requirements of continued cropping. Levels of Ca in crops are lower than K and the amount needed by crops usually is between 20 and 150kg Ca/ha. However, nutrient deficiencies of Ca are not common since most soils either contain high levels of Ca or have been supplied with Ca through liming. Uptake of Mg by crops is relatively low, from less than 10 to about 25kg Mg/ha. Occasional mg deficiencies have been noted, especially on sandy soils. The tests for K, Ca and Mg must be rapids and precise.
III. Soil Potassium:

Soils contain large amounts of K, but only a small part, usually a mere 1% of the total K, is in exchangeable form, and much smaller amounts are in soil solution. Therefore, most of the K in the soil is present in the nonexchangeable form. Much of this non-exchangeable K is a component of some of the primary minerals in the soil, such as K in feldspars e.t.c. Another part of the nonexchangeable soil K is found in some of the secondary day minerals such as illite, vermiculite and chlorites.

Determination of Exchangeable K, Ca and Mg

The standard method for extracting exchangeable k, Ca and mg from soils is with neutral ammonium acetate (1.0N NH_40Ac at PH 7.0). This solution is concentrated enough to affect a rapid exchange between NH_4+ in solution and the cation held in exchangeable form. Frame photometers and AAS are commonly ideal for analyzing K, Ca, Mg in soil extracts (Spann and Schumann, 2010).

Principles of Instrumentation in Soil Science

A. Spectrophotometry:

- Principle: This is based on the principle of using monochromatic rays of specific wavelength, ultraviolet, visible and infrared light wave lengths. The procedure involved the measurement, photo-metrically, the wavelength of radiant energy absorbed by a sample under analysis, i.e. visible light ultraviolet and x-ray light. Utilization of monochromatic rays of light increases the sensitivity and measure the optical density of solution with high precision. This method is based on the law of Bouguer Lambert-Beer that states that the quantity of electromagnetic radiation, absorbed by a solution is proportional to the concentration and thickness of the solution.

Let a beam of monochromatic radiation with intensity I_0 pass through a solution of concentration, C and thickness, Li then, part of the light is dispersed, the other is reflected and the rest is absorbed. As a result, the beam of light leaves the solution with a new intensity, I_1 i.e. $I_1 < I_{o.}$

The relationship between I_1 and I_0 is called the transmission, T. It usually indicates the degree of the light absorbed, dispersed and reflected. Transmission is expressed in percentage. For absolutely colourless solution T = 100% and for black solution = T = 0%.
The degree of absorption of light intensity is directly proportional to the concentration of the solution. The ability to absorb specific radiation of a certain wavelength depends on the electronic structure of the substance.

Spectrophotometer

An instrument that measures transmission or apparent reflectance of visible light as a function of wave length, permitting accurate analysis of colour or accurate comparison of luminous intensities of two sources or specific wavelengths. The basic components of spectrophotometers are:

(a) Monochromator
(b) Photometer

Monochromator disperses visible light into simple rays of same wavelength. Photometer registers the change in intensity of light rays, passing through the sample and reference sample.

Basic Characteristics of Spectrophotometric method of analysis

1. Sample preparation: In order to have a measurement with less error, it will be necessary to dilute any solution so that the reading will be within the acceptable interval for the instrument.
2. Accuracy: Systematic error in spectrophotometry can arise from the deviation from the basic law of Bonguer-Lambart-Beer, especially the unmono-chromatism of light rays and from the chemical reactants in the systems; availability of impurities which affects the absorption of light radiation. The use of good standard solutions can reduce the occurrence of systematic errors.

B. Flame Photometry:

The principles of photometric method of analyzing soil and plant sample is based on the comparison of the intensity of light spectrum emitted by elements in the sample with the intensity of light spectrum emitted by these same elements in samples (standard/solutions) with known concentration. A flame made up of an oxidizing oxygen or air mixed with a reducing gas, e.g. propane, butane, acetylene or hydrogen, burning under pressure. When the sample solution is introduced in form of aerosol (droplets), the solvent undergoes evaporation and the salts (solutes) dissociates under the influence of light and kinetic energy of the flame into atoms and ions.

The temperature of the flame is between 1500 – 2000^0C, especially with propane and butane gas and this is alright for alkali metals (Na, K, Rb, Li) and for alkali earth metal (Mg, Ca, Fr, Ba) gasses like acetylene plus air – 2300^0C and acetylene plus oxygen – 3150^0Cand sometimes hydrogen gas plus oxygen (2600^0C). The excited atoms and ions give out light energy with a specific wavelength. This light energy is re-dispersed with the help of a monochromator into definite bands. The intensity of emission depends on the nature and concentration of sample. This is registered on the photo-element which will correlate it to the galvanometer reading.

C. Atomic Absorption Spectroscopy:

The principle is based on the ability of an “excited” atom of (mostly metallic) element to absorb electromagnetic emission energy of light wavelength of the same frequency as the element. This results in the decrease of the initial signal energy and this difference is proportional to the concentration of the element in the sample.

This can be represented thus:

$A + hv$ — A^*

Atoms of each element have their own series of specific resonance wavelength and they absorb light quantum proportional to the nature of their transition from the stable state to “excited” state. The relationship between the absorption of emission to the concentration of the atoms in the sample can be represented according to the Lambert-Bonguer-Beer (LBB) equation; thus

$$l_g \left(\frac{I_0}{I_1} = k\,l\,c \right)$$

Where I_o is intensity of incidence ray emission; I_1 is intensity of ray after the atomic cloud; K – atomic coefficient of absorption.

The optical system is set up with a hollow cathode lamp for the element to interact with appropriate slit and wavelength selected for the elements. A sample solution of a known concentration (standard) is aspirated and the absorbance reading is noted. An unknown sample is also aspirated, the absorbance reading is rationed to the standard and a sample concentration is interpolated from the intensity of the readings.

Hollow cathode lamps: A source of monochromatic light for atomic absorption is a hollow cathode lamp since each lamp emits line spectra of the element composing the cathodes, a different lamp is used for each element to be analyzed. Multi-element lamps are also available.

The burner system: The functions of the burner system are varied and complex. The oxidant and the fuel are mixed in correct proportions under optimum velocities to support

combustion and produce a flame. As the liquid sample is introduced into the flame in the form of an aerosol, the temperature of the flame dissociates the sample in a cloud of neutral atoms and charged ions.
Monochromator: This amplifies the energy from the hollow cathode lamps.

Maintenance of Analytical Instruments/Operations

The Glass electrode – P^H meter
Practically all soil testing laboratories use the glass (indicator) electrode paired with calomel (Hg/Hg_2Cl_2) (reference) electrode for measuring soil P^H. The electrodes are normally plugged into a normal P^H meter. Upon standardization with buffers of known P^H, the meter indicates the P^H of the soil suspension from the millivolts of potential generated when the two electrodes are placed in the soil suspension. The glass electrode is the H^+ sensing electrode which develops changes in potential (voltage) proportional to the logarithm of changes in activity of H^+. Thus, it is called the indicator electrode.

The calomel electrode (i) contains a saturated KCl bridge which contacts the soil suspension, and (ii) has a characteristic potential (voltage) relatively independent of the H^+ acidity. Hence, it is called the reference electrode.

Maintenance of the Electrode

The Glass Electrode – Frequently, glass electrodes become sluggish in their operations as evident by slow changes in the indicated P^H when the measurement is made. Such slow response may be caused by a dried layer of clay or precipitated carbonate on the glass bulb that cannot be removed by ordinary washing with water. At times, it is caused by the aging of the glass surface of the bulb. Rejuvenation of the glass surface by immersion in a dilute solution of hydrofluoric acid for 10 – 15 seconds usually corrects the problem.

The Calomel Electrode – the most frequent source of error with this electrode is caused by stoppage of flow of electrolyte through the wick or porous ceramic. It is essential that the calomel electrode be operated with its true liquid.

Standardizing the P^H meter

Set the P^H meter at P^H 7 with a standard buffer solution of P^H 7. Check to see that the instrument reads very near P^H 4 standard P^H 4 buffer. Failure to agree reasonably well with both buffers suggests malfunction of electrode or P^H meter.

Functions of Soil Testing Laboratory

The main function is straight and direct, that is to provide test results and recommendations that lead to the wise and economical use of soils and soil amendments. The test results can be effectively used to evaluate the nutrient status of the soils, suspected nutrient deficiencies can be identified and lime and fertilizer treatments can be prescribed to produce high quality yield. Others according to Usman (2010) include:-

(a) Delivering of agricultural and environmental diagnostic services to farmers, agric-business and others. These services include the analysis of:-
  - Soil for fertility evaluation
  - Plant tissue for nutrient adequacy

(b) Provision of data from routine soil, plant, forage and manure samples for support of extension and research programming by specialist.
(c) To integrate and develop/modify new tests for routine and research application.
(d) Provision of educational and training opportunities for teachers and students.

Conclusion

Plants need 17 elements, called nutrients, to grow and complete their life cycle. Three of these nutrients come from air or water, whereas the other 14 are derived from the soil. Each of the nutrients performs a specific function or functions within the plant and the amount of each needed by the plant depends largely one function. A limitation of one nutrient can prevent the uptake of others, and ultimately, impact crop yield and quality.

However, soil and plant analysis is a programme meant to provide test results and recommendations that will lead to the wise and economical use of soils and soil amendments. The results obtained from the analysis can be effectively used to evaluate the nutrient status of the soils; suspected nutrient deficiencies can be identified and lime and fertilizer treatments can be prescribed for high crop production. A good soil testing programme is essential to sound fertilizer use.

It is the best and only way of determining adequate fertilizer use for high and efficient crop production. It is in this vein that this chapter discussed the importance of soil and plant analysis programme not only to our commercial formers but as a programme to be focused with all seriousness in our tertiary education. Unfortunately, most of these tertiary institutions where the programme is operated lack good and sound crop or soil science laboratory not to talk about the equipment. Government should provide adequate laboratory instruments for proper analysis of soil and plant materials in all our tertiary institutions operating agricultural science as a department.

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Econometric Gender Analysis of the Structure and Effects of Access to Financial Services among Rural Farmers in Anambra State, Nigeria

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ABSTRACT

Studies on econometric gender analysis of the structure and effects of access to financial services in rural villages of Anambra state of Nigeria was undertaken to review its effect on the rural community. Data collection was through the use of structured questionnaires. Descriptive statistics, probit analysis and regression models, were used to estimate the structure and effects of farmers access to financial services. Results showed varying effects of access to financial services between male and female farmers in the rural areas of Anambra State. Probit analysis indicated that educational attainment and income from farming had positive effect on probability of access to financial services for the male farmers. Comparatively, the co-efficient of educational attainment and membership of farmer's society had some positive and significant effect on probability of access to informal financial services for female farmers. However, result of the regression analysis showed that there are significant differences in the effect of access to financial services between male and female farmers with males having more access to formal financial services than females.

INTRODUCTION

The ever increasing food security in Nigeria urgently requires total mobilization and prudent utilization of all available opportunities and potentials towards corresponding development of our national agricultural production system with the purpose of achieving sustainable food security in the country. Before now, both Federal and State government have through several programmes pursued rural and agricultural development in Nigeria; the rural environment being always the target of such programme (Udoka 1997). According to CBN (2003), the rural male and female farmers should be the centre piece of increased agricultural production. The impact of rural farmers in agricultural and economic development cannot be overemphasized. Many studies acknowledged this (Areetey and Udry, 1997; Okpukpara, 2005; Ugbajah and Orji, 2006). However, the rural farmers are faced with different constraints in their course to meet food production target. Many researchers have conclusively acknowledged that access to financial services is a major constraint militating against the rural farmers' agricultural productivity (Deaton, 1997; Udry, 1990; Zeller, 1994; Idachaba, 2006).

The major problem concerning access to financial services in rural areas is that the income generation and expenditure do not occur at the same time because the type of production engaged in by the smallholder farmers is always seasonal. The failure of agriculture in developing world to move forward is one of the major factors contributing to widening the gap in the income earning capacities of the rural farmers (Holden, et al 2004). Therefore, recent economic reforms and development programmes in Nigeria have drawn greater attention to the pressing need for rural sector transformation where the bulk of agricultural products are produced. Efforts made by the rural farmers to get financial assistance are always constrained by unnecessary strings attached to the financial services, especially collaterals used for assessing the borrower's credit worthiness. Past research results have identified collateral requirements as a major determinant of the financial institutions' decision to provide financial services to farmers (Falchamps and Quisumbing, 2005; Esson, 2003).

These criteria often places unlimited limit on credit requirement for smallholder farming in developing countries including Nigeria (Areetey and Udry, 1997). The majority of formal financial institutions in developing and developed countries demand physical collateral such as land. This policy is regressive for the small – scale rural farmers who produce the bulk of food in Nigeria. On the other hand, the informal financial institutions use collateral substitutes but the credit obtained from them is not always enough to carry out a meaningful production. In spite of the strategies to increase access to formal financial institutions in rural areas, the problem still persists (CBN, 2002). However, access to financial services is affected by socio economic characteristics of the rural farmer institutional incentives and constraints that define the financial environment (Ugbajah, 2000).

Efforts should be made by the formal institutions to provide friendly customer services, such as reducing bureaucratic bottlenecks, transaction cost, and long waiting period (Okpukpara 2005). In view of this, therefore, this study was undertaken to examine the comparative econometric gender analysis of the structure and effects of access to financial services on rural farmers. Previous studies by Van Horne (1988), CBN (2002), Adeyemo and Bamire (2005), Ohaka, Arene and Mkado (2005) have pointed that emphasis is placed on micro-finance and credit which require stipulated minimum savings instead of collateral. However, none of these studies dealt with the effects and structure of access to financial services by the rural male and female farmers, the gap which the present study is designed to fill.

Materials and Methods

The study was conducted in the rural setting of Anambra State, Nigeria. The dominant criterion for selecting Anambra State is the prevalence of formal and informal financial institutions in most of the rural areas of the State. The state is comprised of four agricultural zones. Four local government areas were randomly selected from the four agricultural zones. One community was selected from each of the selected local government area while 15 male and female farmers were selected. In all, 60 male and 60 female farmers were selected; this gave a total of 120 respondents that was used for the study.

Data for the study was generated from both primary and secondary sources. Structured questionnaires and oral interview were used in collecting the primary data. The questionnaire collected information on socio-economic characteristics and institutional variables. This included, family size, level of education, asset index, and index of modern technology, amount of financial services (Credit and Savings) received; membership of saving/credit group, among others. Secondary data was collected through review of related literature and research documents. Data was analyzed using descriptive, probit and regression analysis. The model for the probit analysis is implicitly specified as:

$Fs = Fsa + b_1 FsEd + b_2 FsFs + b3 FsMf + b4FsHs + b_5FsIc + e$

$InF = Infa + b_1InFEd + b_2InFs + b_3InFmf + b_4InFHs + b_5InFIc + e$

Where Y = total amount of savings and credit in both institutions.

Fs = formal financial services (₦)

Inf = Informal financial services (₦)

PF =Pooled formal financial services (₦

PinF =Pooled informal financial services (₦)

Ed = Level of education attainment in years

Fs = farm size in hectares (ha)

Mf = Membership of farmers society (dummy)

Hs = Household size in numbers

Ic = Income (₦)

e = Error term

t – test was used to test the stability of the probit coefficient and it is given as:

$$T = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S^2_1}{n_1} + \frac{S^2_2}{n_2}}}$$

$$S2n = \frac{\sum (X_n - \bar{X})^2}{n}$$

Where $\bar{X}n$ = mean score

S_2 = variance

n = Sample size

Results and Discussion

Results of the study are presented in tables 1, 2 and 3. It was observed that the co-efficient of educational attainment and income from farming has a positive relationship with probability of access to financial services and significant at 0.05 probability level.

Table 1: Probit model Estimates of the Effects of factors Affecting probability of Access to formal financial Services by male farmers.

Variable	Coefficient	Standard Error	Coefficient / Standard error = tcal	
Ed	0.014229	0.04790	2.971	0.05
Fs	-0.025545	0.02102	-2.215	Ns
Mf	0.073326	0.4587	1.599	Ns
Hs	0.028891	0.01461	0.198	Ns
IcF	0.000003794	0.00000221	1.709	0.05
Constant	-2.9761	1.220	-2.439	

NB
NS= Not significant at 0.05 probability level.
A likelihood ratio value of – 27.85845 results to the rejection of the null hypothesis that there is no significant difference in the effect of access to financial services between male and female farmers. The result of the coefficient of educational attainment and membership of farmers' society were statistically significant, indicating positive relationship between the two variables and access to financial services

Table 2: Probit Model Estimates of Effects of Factors Affecting Probability of Access to Formal Financial Services by Female Farmers.

Variable	Coefficient	Standard Error	Coefficient / Standard error - tcal	
Ed	0.031883	0.009302	3.427	0.05
Fs	-0.05355	0.03952	-1.355	Ns
Mf	0.16121	0.08766	1.839	0.05
Hs	0.0013770	0.341	0.045	Ns
Icf	0.0000062598	0.000004071	1.537	Ns
Constant	-0.16121	0.2324	0.694	

Ns = Not significant at 0.05 probability level.

A livelihood ratio value of –27.85845 is significant and results to the rejection of the null hypothesis that there is no significant difference in the effect of access to financial services between male and female farmers. The result of the multiple regression analysis revealed that the coefficient of multiple determinations of 78% and 63%, 84% and 71%, and 73% and 81% was obtained for the male, female and pooled analysis respectively. This implies that the three explanatory variables explained 78% and 63%; 84% and 71%; and 73% and 81% of Y (total amount of savings and credit in the formal and informal financial institutions) for male, female and pooled data respectively. The model has a good fit for the test.
Table3 A and B: The Empirical Regression line for male female and pooled regression for formal and informal financial.
Table 3a: The empirical Regression line for male, female and pooled regression analysis formal and informal financial services.

Dependent Variable = Total Amount of savings and credit in formal financial institutions

	Male farmer formal financial services	Female farmer formal financial services	Male farmer informal financial services	Female farmer informal financial services	Pooled formal financial services	Pooled informal financial services
Constant term	2.9010 (0.1545)	10.759 (4.596)	7.7190 (2.2274)	5.4765 (2.552)	10.243 (3.8140)	6.1013 (1.9242)
Hs	4.823 (-1.709)	16.707 (-6.5177)	13.2335 (-6.5177)	3.2846 (-0.519)	6.0376 (1.0335)	10.684 (1.9184)
Ed	3.6167 (1.2846)	21.277 (9.447)	15.794 (6.2206)	8.1627 (4.0577)	4.4301 (2.1151)	10.489 (1.1621)
Fs	4.0519 (1.9483)	18.882 (7.141)	5.5123 (2.0531)	6.1510 (2.6403)	1.7351 (0.3743)	16.805 (3.8809)
R^2	0.78044	0.83662	0.633857	0.712584	0.7254081	0.80891
R^2	0.73714	0.77354	0.58717	0.74228	0.71900	0.84341

. ( ) standard error coefficient

Table 3:b The empirical Regression line for male, female and pooled regression analysis formal and informal financial services.
Dependent Variable = Total Amount of savings and credit in formal financial institutions

	Male farmer formal financial services	Female farmer formal financial services	Male farmer informal financial services	Female farmer informal financial services	Pooled formal financial services	Pooled informal financial services
Constant term	2.9010 (0.1545)	10.759 (4.596)	7.7190 (2.2274)	5.4765 (2.552)	10.243 (3.8140)	6.1013 (1.9242)
Hs	4.823 (-1.709)	16.707 (-6.5177)	13.2335 (-6.5177)	3.2846 (-0.519)	6.0376 (1.0335)	10.684 (1.9184)
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R^2	0.78044	0.83662	0.633857	0.712584	0.7254081	0.80891
R^2	0.73714	0.77354	0.58717	0.74228	0.71900	0.84341

. ( ) standard error coefficient
The result of the analysis revealed that the coefficient of multiple determinations of 78% and 63%, 84% and 71% and 73% and 81% was obtained for the male, female and pooled analysis respectively. This implies that the three explanatory variables explained 78% and 63%, 84% and 71%, and 81% of Y (total amount of savings and credit in the formal and informal financial institutions) for the male, female and the pooled data respectively. The chow test was significant with 1.64714 formal and 1.8464 informal male, 1.63809 formal and 1.8171 informal female and 1.7854 formal and 1.5333 informal financial services for the pooled regression analysis.

The chow test result for the formal and informal financial services was less than the chow test result from the pooled data in the access to financial services between male and female farmers.

Therefore, this implies that the null hypothesis which stated that there is equal access between male and female farmers in both formal and informal financial institutions is rejected. It also confirms earlier results that male and female respondents have unequal access to formal financial services. It also means that the regression equation based on the pooled data set is not statically significant and that male and female access to formal financial services cannot be reasonably explained by a single equation. In the same vein, the chow test for pooled model based on access to informal financial services shows the pooling of data for male and female access to informal financial services is not significant. This means that the regression equation for male access to informal financial is significantly different from the regression equation for female access to informal financial services.

The Implications of the Study for Sustainable Financial Services and Food Security:

The result of study revealed that access to financial services in both formal and informal financial institutions have significant effect on the rural male and female farmers' agricultural productivity. The role of rural farmers' access to both formal and informal financial services in agricultural development, such as increasing investment possibilities, resource allocation, and enabling rural farmers to adopt modern and more efficient agricultural technologies for production, processing and storage, among others, cannot be over emphasized. The study also revealed that the male farmers' access to formal financial services is higher than the female farmer's access to formal financial services. On the other hand, female farmers' access to informal financial services was significantly higher than male farmers' access to informal financial services. The major problems encountered by the rural male-female farmers were collateral assets required by the formal financial institutions which were more peculiar for the female farmers than the male farmers. Moreover, there were problems of filling up of detailed, lengthy and hardly understood forms by the farmers, and traveling long distances to get to the financial institutions. It also takes the financial institutions very long period before the financial services are provided to the farmers.

The government should be involved in the provision of financial services to the rural male and female farmers bearing in mind the socio-economic factors when providing financial services to them. Informal financial institutions should be encouraged by providing occasional grants to enhance their performance in terms of amount of credit they give to rural farmers, as well as expand their institutional base. This is because they control larger segment of rural farmers. Formation of informal saving financial groups should be encouraged because distance is among the factors responsible for low access to formal financial services. In addition, the government should promulgate and effectively implement laws that could enforce corporate banks to establish certain percentages of their branches in the rural areas.

Conclusion and Recommendations

The Nigerian governments have made continuous effort through various programmes and projects to improve access to financial services by the rural farmers. However, results have been disappointing in some quarters. Particularly, rural farmer's access to formal financial institutions is constrained by a number of factors, such as accessibility, bureaucratic bottlenecks and long waiting periods and financial service processes.

Several findings emerged from the probit analysis result, but the important issue to note is that effects of access to formal financial services among the male farmers is significantly greater/higher than that of the female farmers. While the effects of access to informal financial services is greater for the female farmers; the informal financial institutions should be well equipped by providing them with occasional grants to enhance their performance in terms of amount of financial services they give to rural farmers. This will help to expand their institutional base since they have the largest control of the rural female farmers.

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Assessing the Agricultural Literacy Level of Senior Secondary School Students in Gombe State, Nigeria

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ABSTRACT

This study assesses the Agricultural Literacy Level of Senior Secondary School Students in Gombe State. The study adopted a survey design. The population of the study was 4,820 students; a sample size of 400 was determined using Taro Yamane's formula for finite population and was drawn using Multi stage random sampling technique. Four research questions were raised for the study. Data was collected using a structured questionnaire titled Senior Secondary/School Students'

Agricultural Literacy Questionnaire (SSSSALQ). The data collected were marked and scored based on the marking scheme designed for the study. Findings revealed that most of the respondents have low agricultural literacy level, 20 per cent of the respondents have moderate while only 9 per cent high agricultural literacy level. It was recommended that Agricultural Literacy should be made a compulsory subject in the secondary school curriculum just like Mathematics and English to enhance inter-generational transfer of agricultural knowledge.

Keywords: Literacy, Agriculture, Agricultural literacy, Senior Secondary School Students

INTRODUCTION

The concept of *literacy* needs to be examined in this study before measuring the agricultural literacy level of a particular segment of a society. In the past, literacy usually referred to some minimum level of reading and writing skills. More recently, the ability to read packages, traffic signs, and a bus schedule have been included in the modern definition of the concept of literacy. Traditionally, literacy is considered the ability to use written language actively and passively, some definitions of literacy consider it the ability to "read, write, spell, listen, and speak". However, since the 1980s, some have argued that literacy is ideological, which means that literacy always exists in a context, in tandem with the values associated with that context (Moats, 2000) but prior work viewed literacy as existing autonomously (Street, 1984).

Furthermore, literacy has been described as the ability to read for knowledge, write coherently and think critically about the written word. Literacy can also include the ability to understand all forms of communication, be it body language, pictures, video or sound (reading, speaking, listening and viewing). Evolving definitions of literacy often include all the symbol systems relevant to a particular community. Literacy encompasses a complex set of abilities to understand and use the dominant symbol systems of a culture for personal and community development (Wikipedia, 2012). It is pertinent to note that in a technological society, the concept of literacy is expanding to include the media and electronic text, in addition to alphabetic and number systems (Selber, 2004). These abilities vary in different social and cultural contexts according to need and demand.

According to Kress (2003) literacy represents the lifelong, intellectual process of gaining meaning from print. Kress further stressed that the key to all literacy is reading development, which involves a progression of skills that begins with the ability to understand spoken words and decode written words, and culminates in the deep understanding of text. Reading development involves a range of complex language underpinnings including awareness of speech sounds (phonology), spelling patterns (orthography), word meaning (semantics), grammar (syntax) and patterns of word formation (morphology), all of which provide a necessary platform for reading fluency and comprehension. Once these skills are acquired, the reader can attain full language literacy, which includes the abilities to approach printed material with critical analysis, inference and synthesis; to write with accuracy and coherence; and to use information and insights from text as the basis for informed decisions and creative thought.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) (2004) defines literacy as the "ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society".

Many policy analysts consider literacy rates as a crucial measure to enhance a region's human capital (UNESCO, 2004). This claim is made on the grounds that literate people can be trained less expensively than illiterate people, generally have a higher socio-economic status and enjoy better health and employment prospects. Policy makers also argue that literacy increases job opportunities and access to higher education; and world's illiteracy halved between 1970 and 2005. The argument here is that the definition of literacy should be expanded. For example, in the United States, the National Council of Teachers of English and the International Reading Association have added "visually representing" to the traditional list of competencies. Similarly, in Scotland, literacy has been defined as: "The ability to read, write and use numeric, to handle information, to express ideas and opinions, to make decisions and solve problems, as family members, workers, citizens and lifelong learners" (Wikipedia, 2012).

A basic literacy standard in many societies is the ability to read the newspaper. Increasingly, communication in commerce or society in general requires the ability to use computers and other digital technologies. Since the 1990s, when the Internet came into wide use, some have asserted that the definition of literacy should include the ability to use tools such as web browsers, word processing programmes, and text messages. Similar expanded skill sets have been called multimedia literacy, computer literacy, information literacy, and technological literacy (Kress, 2003). Some scholars propose the idea multi-literacy which includes Functional Literacy, Critical Literacy, and Rhetorical Literacy (Selber, 2004). The level of skill (knowledge) needed to be literate is a relative measure without absolute standard.

Functional agricultural literacy does not imply a perfect level of understanding about agriculture, but rather a minimum level. The first step in improving the agricultural literacy level of any population is to determine its current literacy level. If educational initiatives designed to improve student's agricultural literacy are to succeed, a benchmark that verifies the level of agricultural knowledge and perception should be determined. To date, published research report specifically regarding the agricultural literacy level of secondary schools students in Gombe State is unknown. Thus, what is the current agricultural literacy level of senior secondary school students in Gombe State? This is the focus of the present study.

Literature Review

Most secondary school students know very little about agriculture, its social and economic significance in Nigeria, and particularly, its links to human health and environmental quality. Few systematic educational efforts are made to teach or otherwise develop agricultural literacy in students of any age. Although children are taught something about agriculture, the material tends to be fragmented, frequently out-dated, usually only farm oriented, and often negative or condescending in tone. Elementary school children interpret agriculture as the farmer, the cow, the tractor, the rancher, and many other stereotypes (DeWerff, 1989).

The failure of our secondary schools and liberal arts colleges to teach even rudimentary courses on agriculture means that an enormous majority, even among well-educated Nigerians, are totally ignorant of an area of knowledge basic to their daily style of life; to their family economics, and indeed to their survival. Little (1987) stressed the importance of making agricultural courses mandatory for students at the high school and college levels. The author believed Agriculture, like Mathematics, English, Economics and Biology, was worthy of scientific study for its own sake.

According to Anderson, Thompson and Velez (2010*)* agricultural literacy can be defined as possessing knowledge and understanding of our food and fibre system. An agriculturally literate person should know its history and current economic, social, and environmental significance to himself and all other peoples; have knowledge of food and fibre production, processing, and domestic and international marketing. An individual possessing such knowledge would be able to synthesize, analyze, and communicate basic information about agriculture which includes: the production of plant and animal products, its economic impact, its societal significance, agriculture's important relationship with natural resources and the environment, the processing of agricultural products, marketing of agricultural products, public agricultural policies, the global significance of agriculture, and the distribution of agricultural products.

David, David and Cary (2008) reported that agricultural literacy is important because the earlier in life information about agriculture is presented to children. The more receptive they are to accepting and applying wholesome concepts about the topic, the better for the rest of their lives. Agricultural literacy entails knowledge and understanding of agriculturally related scientific and technologically-based concepts and processes required for personal decision making, participation in civic and cultural affairs, and economic productivity. At least, if a person is literate about agriculture, food, fibre, and natural resource systems, he or she would be able to:

1. engage in social conversation,
2. evaluate the validity of media,
3. identify local, national, and international issues; and
4. pose and evaluate arguments based on scientific evidence.

David, *et al* (2008) further reported that because agriculture is a unique culture, an understanding of beliefs and values inherent in agriculture should also be included in a definition of agricultural literacy so people can become engaged in the system. Students should come to appreciate that the species providing our food and fibre are part of a vast web of life that functions as an integrated whole. Every species of plant and animal depends not only on its physical environment but on the biological component of the environment as well. All living creatures are part of the same cycles of matter and energy. Thus, education will be incomplete unless students learn what is essential for the lives of our crops, animals, and plants (Meischen and Trexler, 2003).

Agricultural Literacy Subject Areas

According to Frick, Kahler, and Miller (1991), Agricultural Literacy Subject Areas are:

Behavioural Area

a. An Understanding of Agriculture
b. Knowledge of Agriculture
c. Appreciation of Agriculture
d. Awareness of Agriculture
e. Educated about and in Agriculture.

Conceptual Area Text

- Ability to interpret Societal significance of agriculture; Production of plant and animal products; Food and fibre system; Economic impact of agriculture; Natural resources and the environment; Marketing; Processing; Public agricultural policies; Global significance; Distribution; Communication skills; The science of agriculture; The history of agriculture; Nutrition and Health; Biology; Agricultural Management; Careers and Occupations; Soil/land use; Technology; Outdoor environments; Food supply; Chemical use; Sustainable agriculture; Horticulture; Research of agriculture.

Water/groundwater use

- Retailing; Financing; Mechanics/engineering; Animal physiology; Farming; Forestry; Pleasure animals; Art of farming; Aesthetics of agriculture; Standard of living; Marine animals; Rural development; Risks of farming; Biotechnologies; Conservation Practices

Agricultural Literacy Contents

The subject areas identified above led to the generation of eleven agricultural literacy concepts and knowledge areas listed below:

1. Agriculture's important relationship with the environment
2. The processing of agricultural products
3. Public agricultural policies
4. Agriculture's important relationship with natural resources
5. Production of animal products
6. Societal significance of agriculture
7. Production of plant products
8. Economic impact of agriculture
9. The marketing of agricultural products
10. The distribution of agricultural products
11. The global significance of agriculture

According to David, *et al* (2008) agricultural literacy should be viewed as a driving force in the curriculum, monitored and fostered through a formal agricultural literacy framework with its own multi-disciplinary curriculum, values, and agenda. The primary goal of this approach is to meet the standards of an agricultural literacy framework through infusion with academic content, thematically weaving agricultural materials through academic courses, to establish agricultural literacy as a content area within the curriculum without a designated "agriculture" class. David, *et al,* reported further that agricultural literacy results from integrating interdisciplinary academic and process skills in context while focusing on an agricultural issue. Emergent agricultural literacy is an outgrowth of the simultaneous development of generalized academic skills and the specific contextual learning inherent in the agricultural problem to be solved. The integration of academic skills and their application to an agricultural problem relies in actual practice on the ability to “justify” curriculum decisions in lesson plans through correlation to academic frameworks. Agricultural contexts serve as vehicles to promote academic performance and agricultural literacy “emerges” as an end-product.

Therefore, agricultural literacy revolves around the ability to think critically and make value judgments about the impact of agriculture as an economic and environmental activity and the concurrent societal and political pressures that result from those judgments. An agriculturally literate person is one who can be able to analyze and evaluate “trade-offs” to individuals and to society resulting from agricultural enterprises. The nature of the decisions and value judgments drive the agricultural content. Understanding of agriculture is demonstrated by the ability to enter into discourse about and make decisions in response to choices facing society.

Men and women of all ages and ethnic groups have a vested interest in agriculture. Consumers as well as policy makers need to be "agriculturally literate" in order to respond appropriately as issues arise. Many would agree with the need for a basic understanding of agriculture, the agricultural industry, and its importance to our country and citizens. Martin, Robert, Harrison and Krissanna (1995) noted that by "...educating citizens in the wise management of food supplies and related renewable resources, we can anticipate more knowledgeable decision-making about agriculture in the future."

Empirical studies by Meischen and Trexler (2003) showed that students’ agricultural knowledge in Kansas State of 2,000 elementary, junior and senior high school students is low; they reported that fewer than 30% gave correct answers. In another study in Virginia of 244 fourth-grade students Meischen and Trexler’s (2003) study showed that only a rudimentary concept of where food and fibre originates were taught to students and they “almost never” ask questions about agriculture. They suggested incorporating the following aspects of agriculture into existing curriculum, teaching of genetics in biology, plant pathology (diseases and insect transmission), and in Social Science – production, trade, distribution and marketing of agricultural products.

According to Case (1993), urban black youth lacked agriculture and natural resources background to enable them to make an immediate commitment to a career. Based on these studies, there appears to be a need to assess and compare how these two groups differ in their knowledge and perception of agriculture. In another descriptive study, Leatherberry and Wellman (1988) reported black students knew little about the skills needed by a wide range of natural resource professionals, the jobs available, and the wages earned in those careers. Horn and Vining (1986) found that less than thirty per cent of a sample (n = 600) of Kansas high school students, primarily of European descent, could give correct answers to basic agriculture questions. Washington and Rodney's (1984) study suggested that parents tended to steer students away from agricultural and natural resources careers. In addition, they noted that there seemed to be a lack of information about agriculture and natural resources at the secondary school level.

Objectives of the Study

The study assesses the agricultural literacy level (ALL) of senior secondary school students (SSSS) in Gombe State. The specific objective is to assess the ALL of SSSS in crop production, animal production and soil science aspects of Agricultural Science.

Research Questions

1. What is the ALL of SSSS in Gombe State in crop production aspect of Agricultural Science?
2. What is the ALL of SSSS in Gombe State in animal production aspect of Agricultural Science?
3. What is the ALL of SSSS in Gombe State in soil science aspect of Agricultural Science?
4. How many students score low, moderate or high per cent among the sampled students?

Methodology

The study is a survey of Agricultural Literacy Level (ALL) of Senior Secondary School Students (SSSS) in Gombe State. A questionnaire titled *Senior Secondary School Students' Agricultural Literacy Questionnaire* (SSSSALQ) was designed by the researcher and used to collect data for the study. The questionnaire consists of fifteen Agricultural terms each in crop production, animal production and soil science aspects of general agriculture offered by students in the Senior Secondary School to be matched against their meaning(s) as defined in the questionnaire and understood by the Students selected to participate in the study. The questionnaire was face validated by two experts in Agricultural Education.

The population of the study was 4,820 SSSS, a sample size of 400 was determined using the Taro Yamane's formula for finite population. The multi-stage random sampling technique was used to choose ten senior secondary schools in Gombe State. In each selected school, the Agricultural Science Teacher was given forty copies of the SSSSALQ to administer to students in his/her School. The questionnaires were administered to twenty students offering Agriculture as a choice subject (Group A) and to twenty students not offering Agriculture as a choice course (Group B). All the questionnaires administered were filled and returned but two hundred and ninety-two (73%) of the administered questionnaires were appropriately filled correctly (146 for each group), these formed the data for this study.

The data collected were marked and scored based on the marking scheme designed for the study viz:

1. Grade A ≥ 70 per cent – High Agricultural Literacy Level
2. Grade B 50 – 69 per cent – Moderate Agricultural Literacy Level
3. Grade C ≤ 49 per cent – Low Agricultural Literacy Level

The mean score by each group was calculated and used as the basis for discrepancy in Agricultural Literacy Level (ALL) of senior secondary school students (SSSS).

Results

What is the ALL of SSSS in Gombe State in crop production aspect of Agricultural Science?

Table 1: Agricultural Literacy Level of Senior Secondary School Students in Crop Production

Group	Mean Score (%)	Grade	Discrepancy	Remark
A	40	C		Low

			8	
B	32	C		Low

What is the ALL of SSSS in Gombe State in animal production aspect of Agricultural Science?

Table 2: Agricultural Literacy Level of Senior Secondary School Students in Animal Production

Group	Mean Score	Grade	Discrepancy	Remark
A	37	C		Low
			9	
B	28	C		Low

What is the ALL of SSSS in Gombe State in soil science aspect of Agricultural Science?

Table 3: Agricultural Literacy Level of Senior Secondary School Students in Soil Science

Group	Mean Score (%)	Grade	Discrepancy	Remark
A	45	C		Low
			10	
B	35	C		Low

How many students score low, moderate or high ALL per cent among the sampled students?

Table 4: Grades of Students' score in SSSSALQ

Group	Grade A(High ALL)	Grade B (Moderate ALL)	Grade C (low ALL)
A	13	28	105
B	0	16	130

Findings
The result of this study showed that;

1. Senior secondary school students in Gombe State have low level of agricultural literacy in crop production, animal production and soil science aspects of agricultural science.
2. Only fourteen per cent of the respondents scored 49 per cent and above, that is, only forty-two of the respondents have moderate to high agricultural literacy level.

Discussion
The finding that senior secondary school students in Gombe State have low level of agricultural literacy in crop production, animal production and soil science aspects of agricultural science is not peculiar to the students in this study alone. Meischen and Trexler (2003) showed that students' agricultural knowledge in elementary, junior and

senior high school was low. Horn and Vining (1986) found that less than thirty per cent of a sample (n = 600) of high school students, primarily of European descent, could give correct answers to basic agriculture questions.

These reports corroborate the fact that low level of agricultural literacy is not associated with race or development of a country. This implies that other factors may contribute to this low level of agricultural literacy like non-compulsion of the subject for students, teacher's teaching methods, lack of facilities, and association of agriculture with drudge or low intelligent quotient and so on. All these need to be looked in to and corrected to make agriculture attractive and a compulsory school subject.

Recommendation

Based on the findings of the study, it was recommended that:

A. Agricultural literacy should be made a compulsory subject in senior secondary school curriculum for all students to ensure inter-generational transfer of agricultural knowledge; since agricultural development and sustainability is not possible without agricultural knowledge. This will also assist students to adequately manage the food and fibre web on which they live!
B. The curriculum of education about agriculture and education in agriculture should be broadened to include the 11 broad agricultural subject areas identified by Frick, *et al* (1991) to increase the familiarity of educators with the use of agricultural applications based on various disciplines. Instructional materials developed should reflect the breadth and scope of the agricultural discipline.
C. The 11 broad agricultural subject areas and their concepts should be used by secondary agricultural education programs attempting to reform their curricula. The 11 agricultural subject areas identified will provide the framework for expanding agricultural education's curriculum. The sub-areas identified will provide further structure which can be used to develop modules about specific agricultural topics that can be integrated into the senior secondary school curriculum.

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Constraints in Institutional Financing of Small-Scale Fishing Enterprises in Old Rivers State Nigeria

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ABSTRACT

This study is aimed at determining the constraints affecting institutional financing of small scale fishing enterprises in old Rivers State. Data for this study were generated through the aid of two sets of structured questionnaire that were administered to eight financial institutions, agricultural credit agencies and 80 small scale fishermen who have benefited from institutional loans. The data were analyzed using statistical tools such as percentages, averages and regression

analysis model for accuracy and depended results. The study revealed that there are five major sources of institutional financing for small scale fishing enterprises operating in the old Rivers State, namely - the State Ministry of Agriculture, Rivers State Cooperative Financing Agency, Nigerian Agricultural and Cooperative Bank, International Funds for Agricultural Development and Commercial Banks. The study also shows that Commercial banks based their lending policies on the guidelines of the Agriculture Credit Quarter Scheme Fund. The incidence of loans default, high administrative cost of servicing loan, inadequate number of credit officers, insufficient loanable fund and the inability of fishermen to provide collaterals and other valuable documents, constitute some of the identified constraints affecting institutional financing of small scale fishing enterprises in the state. Recommendations include the need for upward review of the loan amount; prompt processing of loan application and disbursement to the applicants; formation of cooperatives societies, development of infrastructures and implementation of government policies aimed at improving the quality of life of the rural fishermen.
Keywords: Fishing small scale, Enterprises, institutional financing socio-economic characteristic.

INTRODUCTION

Fish and fishery production are vital sources of protein which contributes well over 65-75% of total protein intake in Nigeria (Adekoya and Miller, 2004; Nwachukwu and Onuegbu, 2007). Aside from fish being nutritious and widely accepted as food, there is little or no religious taboo against its consumption worldwide. Anibeze (1995) disclosed that fish remains one of the cheapest and most valued sources of animal protein, especially among rural dwellers. Fish flesh is also readily digestible and immediately utilizable by the human body and complementary for regions of the world (like Africa) with high carbohydrate diet (FAO, 2005a). It is pertinent to note that the protein intake in Nigeria fall-short of the recommendations of the Food and Agriculture Organization (FAO) of 35kg per annum, but the level of consumption in Nigeria is estimated to be 4.4kg per annum (Anibeze, 1995). This fall, according to FAO (2006); Sahib, Aliyu and Baskshi (1997) is due to a high supply-demand gap for fish and fishery products in Nigeria.

The supply-demand gap was created due to the use of crude fishing gears and equipment, poor handling, processing and preservation, lack of infrastructures, difficulties in obtaining credit or aids from development programmes, depletion of stock due to devastating water pollution from industries. Other inherent characteristics also compounds the problems of small-scale fishermen, which cause them to exist below marginal living standards in the fishing settlements as compared to those engaged in other sectors of the national economy.

The fishery industry is crucial to the nation and world economy. According to FAO (1996) small-scale or articulate fishermen contribute over 90% of domestic production; and the contribution of the fishery subsector to gross fishing is generally capital intensive. Capital is required for the purchase of modern fishing guards and equipment, construct and facilitate marketing of fish, and to satisfy other consumption needs. Aside from other myriads of problems, the fisherman have to grapple with the devastating effects of environmental pollutions, oil spillages and the adoption of hazardous fishing methods that have caused serious depletion of fish and fishery products. When the survival of wildlife is seriously threatened, they also develop instincts and adaptive behaviour to avoid total extermination and extinction. This makes it more difficult for small-scale fishermen who use crude and worn out fishing gear and equipment to catch them. For this reason, the fishermen also require more sophisticated equipment, the adoption of modern fisher techniques, and adherence to fisher regulations for conservation.

Despite all efforts by government and other international organizations, the fisherman exists below margined living standards and could not meet the capital requirements of production. According to Olaitan (2006) there exist some positive relationships between agricultural development and availability of credit facilities to farmers. Similarly, Diagne and Zeller (2001) asserted that improved access to credit is a way of helping poor rural farmers engage in more productive and income generating activates both on and off the farm and to their standard of living.

It is in the light of the above assertions that this research is conducted to conduct an in-depth study of the constraints of institutional financing assist in the reduction of difficulties encountered by small-scale fishermen in accessing credit, and solve problems that beset them. Therefore, this study is primarily aimed at examining the constraints in institutional financing of small-scale fishing enterprise in old Rivers State.

Statement of the Problem

Fisheries development implies increase in fishing effort which naturally calls for increased capital investment in procurement of adequate quantity and quality of fishing inputs. However, low incomes accruing to small fishermen is a well-recognized constraint that affect their investment potentials; thus, fishermen who do not have alternative source of financing resort to borrowing in the form of credit. Despite the important role credit plays in agriculture and fisheries development, and the fact that government guaranteed 75% repayment in case of default to small-scale fishing enterprises, financing institutions have continued to be reluctant in advancing credit facilities to small-scale fishermen and farmers (Nto and Mbanasor, 2008; Olaitan, 2005; Okorie, 1998). The problem here lies on the constraints affecting institutional financing of the small-scale fishing enterprises.

Methods and Materials

The study adopted survey design, and was carried out in Old Rivers State. The area of the study comprised of seven riverine local government areas (LGAs) namely; Bonny, Brass, Bugama, Degema, Ogbia, Sagbama and Yenagoa; while the population comprised of 80 small-scale fishermen, 10 financial institutions and Agricultural credit agencies in the State. Eighty (80) fishermen who were the beneficiaries of the loan were randomly selected. Four of the eight lending institutions; Union Bank, First Bank, United Bank for Africa and Afri Bank were purposively selected because they accounted for 65 per cent of the total value of loans granted which covered the State in their lending activity. Other commercial banks such as Rivers State Cooperative Financing Agency (RCFA), Nigeria Agricultural Credit and Rural Development Bank (NACRDB), International Fund for Agricultural Development (IFAD) and the Ministry of Agriculture and Natural Resources (MANR) were randomly selected and used for the study. Two sets of validated structured questionnaires were developed and administered to two groups; *loan beneficiaries* and the *lending institutions*. One officer in each of the lending institutions was also interviewed.

The data collected were analyzed using descriptive statistics, such as, averages, percentages and multiple regression analysis. Descriptive statistics was used to analyze the percentage distribution of fishermen according to institutional source of credit and the factors affecting institutional financing, while multiple regression analysis was used to determine the constraints in institutional financing.

The statistical model is expressed as:

$YL = f(X_1, X_2, X_3, X_4, X_5, X_6, e)$

Where:

XL = Amount of loan repaid (N)

X_1 = Educational status (Years in School)

X_2 = Years of Fishing (Experience)

X_3 = Income from non-fishing employment (N)

X_4 = Income from fishing (N)

X_5 = (Technology adoption) yes = 1 No = 0

X_6 = Occurrence of natural disaster

E = Error term.

Three functional forms were used in order to determine the best fit:

Linear Function: $YL = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_n X_n$

Semi-log Function: $Yb = 1n\ a + b1nX_1 + b1_2\ nX_2\ b1\ nX_3$ _______ $bn\ X_n$

Double-log function:

$In\ YL = 1n\ a + b_o\ 1n\ X_1 + b_2 lnX_2 + b_3\ 1n\ X_3$ ……….. $bn\ 1n\ Xn$

The equations which give the best fit was choose and F- test was used to determine the extent to which the explanatory variables (X_1s) explained the relationship with YL which is the amount of loan repaid (Adegbite, et-al, 2007. Mejeha, et-al 2007)

Results and Discussion

Table 1: Percentage distribution of respondents according to institutional sources of credit.

Sources	Frequency	Percentage
Commercial Bank	12	15
NACRDB	22	27.5
MANR	32	40.0
RCFA & IFAD	14	17.5
Total	80	100

Source: Field Survey, 1991.
Commercial Banks: The low percentage from the stringent loan conditions practiced by the banks.

Result in table 1-shows that majority (40%) of small-scale fishermen studied in the area obtained their credit from the state Ministry of Agriculture and Natural Resource (MANK) followed by the Nigeria Agricultural Cooperative and Rural Development Bank (NACRDB) (27.5%). The high patronage with these banks could be attributed to factors such as, non-requirement of heavy collaterals; favourable repayment or amortization plan and low interest rate changes, etc., while the remaining (32.5%) of the respondents sourced their credit from the Rivers State Cooperative Financing Agency and the commercial banks which includes First Bank of Nigeria PLC, Union Bank of Nigeria PLC. The low patronage of small-scale fishing enterprises with commercial banks could be due to stringent loan conditions and policies by the banks which made it cumbersome on the part of the fishermen.

Table 2: Factors affecting institutional financial of small scale fishing enterprises in old Rivers State.

Constraints	Frequency	Percentage
Government Policies	8	80
Administrative cost of loan disbursement	10	100
Inability of Fishermen to provide revised collateral and other valuable documents	6	60
Inadequacy of credit officers	5	50
Insufficient loanable fund	6	60
Incidence of loan default	10	100

Table 2: On the constraints affecting institutional financing of small scale fishing enterprise, the study identified six main factors. Incidence of loan default and administrative cost were the main constraints (100% each). This result corroborates the findings of Mbanasar and Maanman, 2000; Saliu and Inelo, 2005 and Anzaku, 2009).

Other factors identified were Government policies (80%), inadequacy of credit officers and inabilities of fishermen to provide the required collaterals and other valuable documents (60%) each respectively.

Table 3: The Regression Analysis for the three functional models.

Variables	Models		
	Linear	Semi-log	Double-log
X_1	-25.4508	-112,8864	0.0541
	(46,6838)`	(249,0226)	(0.0466)
X_2	-41.5017*	-838.6769*	0.0451**
	(24.6463)	(451.7528)	(0.847)

X_3	0.6639**	171.2619**	0.041**
	(0.1535)	(57.9159)	(0.0108)
X_4	1.5976**	3444.4709**	0.7557**
	(0.1395)	(564.3846)	(0.0108)
X_5	-729.140*	-457.8171*	-0.1077*
	(402,727)	(203.5940)	(0.0432)
X_6	318.2561	139.8391	-0.0563
	(393.2611)	(227.3939)	(0.0426)
b_0	-1250.3744	-2.2472	1.4262
R^2	0.68	0.38	0.47
F	26115**	7.64**	10.94**
**	Significant at 5%		

Table 3: The table shows the result of relationship between loan repayment and socio economic characteristics of fishermen.

The linear functional form of the molded gave the best estimate of the variable in the equation for further analysis. The F ratio is significant at 5% level of significant R^2 = O.68 which implies that the variable in the model were able to explain 68% of the variability in loan repayment. For of the total variables used in the model were significant used in the model were significant at 5% level of significant. The variables are years of fishing experience technology adoption, income from non-fishing employment and occurrence of natural disasters were not significant at the level of probability. Years of fishing experience was significant at 5% of level of probability and negatively related to the amount of loan repaid. The implication is on the inconsistent prior expectations that the amount of loan repaid should increase with years of fishing experience. What matters is the understanding of the borrowed loan and its implications. Fishermen, therefore, should be enlightened in the respect.

Income from non-fishing employment was significant at 5% level of probability and positively related to the amount of loan repaid. The positive relationship is consistent with the expectation that loan repayment will be made via additional income sources opened to fishermen. It is hereby suggested that additional sources of income opportunities be created among fishing communities to improve their standard of living and general welfare. Furthermore, as income from fishing increases the amount of loan repaid interlaces. This means that as the rate of adoption of technological innovation increases the amount of loans repaid decrease, etc. From the discussion above, years of fishing expertise, income from non-fishing employment, income from fishing and technology adoption are economic characteristics of fishermen which attest to opportunities to loan repayment. It is suggested that government policies aimed at improving the lives of rural dwellers, especially fishing communities should incorporate policies that would create additional employment opportunities for the rural populace.

Results

A. The result **s**hows that there are five main sources of institutional financing for small-scale fishing enterprises in the old Rivers state. These sources include;
   1. Ministry of Agriculture & Natural Resources (MANR)
   2. Rivers State Cooperative Financing Agency (RCFA)
   3. Nigerian Agricultural and Cooperative Bank
   4. International Fund for Agricultural Development (IFAD) and
   5. Commercial Banks

B. Six main identified constraints affecting institutional financing of small-scale fishing enterprises in the study include;
   1. Incidence of loan default
   2. High administrative cost of loan
   3. Government policies
   4. Inadequacy of credit officers
   5. Inability of fishermen to provide required collaterals and other valuable documents.

C. Years of fishing experience, technology adoption, income from non-fishing employment and income from fishing have significant impact on loan repayment of small-scale fishing enterprises operating in the study area.

Conclusion and Recommendation

The flow of credit between fishermen and financial institutions in the old Rivers state is affected by a number of constraints traceable to the activities of the lending institutions and borrowers. The effects of these constraints can be reduced if the following are considered:

1. Banks should ensure prompt processing of loan applications and disbursement be made to successful applicants without delay.
2. Government should enact laws for loan defaulters; enact fishers' rules and give tax exemptions to the fishing communities.
3. There should be considerations on subsidy scheme for fishermen to stimulate increased fishing production.
4. There should be improved access to credit facilities with an organized fishermen cooperative society.

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Social Problems Associated with the Excessive Use of Information and Communication Technology (ICT) Tools among Undergraduate Students of Nigerian Universities

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ABSTRACT

Technology has been perceived generally as the development of equipment and tools, including the application of human mental abilities in all facets of human endeavour. In all fields of human endeavour-the military, medicine, and engineering; including education, advances in technology have continued to play significant roles. The development of technology has lessened the stress involved in human interactions, as well as assisted to bridge the communication gap across the globe. Unfortunately, humans abuse the use of technology to their detriment, including the environment and society. Specifically, undergraduate students of Nigerian universities are among the users of technology/information and communication technology (ICT) which affects their social behaviours and influences their economic and academic activities on and off campus. This study focused on the social problems of the use of ICT among undergraduate students in Ebonyi State University, Abakiliki. One research question guided the study while data collected was analysed using the mean and standard deviation. A bench mark of 3.00 was used to accept or reject the responses of the subjects on the items. The study identified several social problems which adversely affect the addicted use of ICT tools among undergraduate students of Nigerian universities. Recommendations were made to assist in reducing the effects of addicted use of ICT tools among students.

INTRODUCTION

Technology can refer to material objects used by humanity such as machines, hardware, software, even utensils and tools. It can also encompass broader themes including, systems, methods or techniques. The term can either be applied generally or to specific areas, example includes (ICT) information communication "technology" (Macek, 2001). ICT, therefore, refers to the various communication gadgets developed through human's mental effort and which are today used to facilitate the creation, retention, reception and dissemination of information. Today, people live in an increasingly wireless world, courtesy of the advances in ICT which includes the use of the *Internet*. Many people cannot leave home today without their portable hand-held cell phones. Aside from the phone technology, other communication technologies like the *Computer* become more powerful, more versatile and less expensive. Thus, the present flood of different technology brands in the market may only intensify the use, create the challenge and risk of addiction among the users of ICT gadgets.

Nonetheless, the development and expansion of information and communication technology has lessened barriers to human interactions and as a result, has helped spawn new subcultures. Essentially, the rise of cyber culture has, at its basis, the development of the internet and the computer systems. The use of ICT (the phones and the internet for instance) have lessened physical barriers to commerce and allowed humans to interact freely on a global scale. Borgman (2000) noted that over the years, businesses have become dependent on ICT, so much so that if one was to take away information technology, virtually all business transactions and operations around the globe would come to a halt.

These days, through ICT, it is possible to reach or connect business partners within their locations across the globe. With just a GSM or website pin code, contact is made to transact business in any corner of the world (Merriam, 2000).

In the field of education, ICT has made teaching and learning much easier. Educational technologies like the projectors can now be used in conjunction with special software packages to make instruction and learning much easier. Students now undertake special courses under ICT to equip them appropriately for the work skills and meet the employers' soft skill requirements in the labour market. In this direction, soft skills in ICT, therefore, become an essential element and challenge among university undergraduates. According to Osagie (2009), ICT gadgets like the computers, spare us tedious tasks, enable us to buy and bank conveniently online, and help us keep in touch with others by e-mail, voice mail, or video links. Granted that information communication technology, can save time, the internet for example, can equally speed up research, banking and shopping operations, but it can steal time if one spends hours aimlessly surfing the web.

Most ICT users especially students abuse the use of the ICT gadgets to the detriment of their health and future career. Some are led astray by the cosmetic materials viewed online via the internet, the television and videos while others seem to be addicted to the use of branded phones. Thus, some are bent on changing their cell phones periodically to be in tune with the latest brands. They no longer apply wisdom to analyze their motives and needs before spending their hard earned money. Most of their leisure, private and academic hours are spent on ICT centers browsing the web, playing computer games or even watching home video entertainment. Such behaviours gradually become an addiction. Another potential disaster for student addiction on ICT gadgets is multi-tasking on frivolous activities rather than focusing on their studies. In this context, multi-tasking explains a situation where a student pretends to be reading and at the same time working on a computer, watching television and talking on the phone. Osagie (2009) noted that it is almost impossible to gain a depth of knowledge, of any of the tasks one does while one is multitasking. Simply, students while studying cannot focus on a number of activities involving the use of ICT equipment at the same time.

S/n	**Items**	**SA**	**A**	**D**	**SD**	**Weight**				**FX**	**N**	**X**	**SD**	**Decision**
						4	**3**	**2**	**1**					
1	Enables student to learn and adopt foreign culture	210	181	28	12	840	543	56	12	1451	431	3.37	0.73	Accepted
2	Leads to positive moral development	133	258	30	10	532	774	60	10	1376	431	3.19	0.66	Accepted
3	Enable students to perfect rape plans	150	163	50	68	600	489	150	68	1307	431	3.03	1.05	Accepted
4	Enables students to	185	136	49	61	740	408	98	61	1307	431	3.03	1.05	Accepted

	become lazy												
5	Exposes students to pornographic films	116	218	54	45	464	654	108	45	1271	431	2.95	0.89	Rejected
6	Enables students to become drug addicts	196	193	19	23	784	579	38	23	1424	431	3.30	0.79	Accepted
7	Enables students to trail their enemies	186	193	30	22	744	579	60	22	1405	431	3.26	0.80	Accepted
8	Prevents students from developing nefarious behaviours	31	44	198	158	124	132	396	158	810	431	1.88	0.86	Rejected
9	Enable students to scandalize their teachers	186	151	53	41	744	453	106	41	1344	431	3.12	0.65	Accepted
10	Enables students to learn how to perfect robbery plans	221	148	41	21	884	444	82	21	1431	431	3.32	0.84	Accepted
11	Exposes students to strategies for divorce	185	117	68	61	740	351	136	61	1288	431	2.98	1.07	Rejected

12	Leads to fatigue and drowsiness	198	210	16	07	792	630	32	07	1461	431	3.39	0.64	Accepted
13	Spurs students to develop unreceptive behaviour	179	188	34	30	716	564	68	30	1378	431	3.20	0.85	Accepted
14	Enables students to negatively change behaviour	160	183	45	43	640	549	90	43	1322	431	3.07	0.93	Accepted
15	Can spur students to imbibe cultism	185	136	49	61	740	408	98	61	1307	431	3.03	1.05	Accepted
16	Encourages student membership of foreign clubs	210	181	28	12	840	543	56	12	1451	431	3.37	0.73	Accepted
17	Discourages student group clashes in their club/cult groups	41	53	151	186	164	59	302	186	811	431	1.88	0.96	Rejected

Statement of Problem

Through the latest technology on hand-held phones, digital computers and the cable television, the information communication technology (ICT) has found its way into every corner of the world, even crossing the divide between the rich and the poor. It has essentially become part of life for many (Frankline, 2000). Distractions and interruptions are perhaps the most recognized problems associated with the addicted use of the ICT gadgets or media technology. Apparently, motorists who talk on either hand held or hands-free communication technology devices are as impaired as drunk drivers. Texting with cell phones while driving for instance can be lethal. This habit has continued to cause fatal accident among motorists. On the other hand, for students, excessive exposure to TV entertainment, computer games and cell phones can foster disinterest in studies or academics. To some students, it can trigger off confusion between reality and fantasy.

It is on the basis of these observations that this study tends to investigate the social problems associated with the addicted use of ICT tools among undergraduate students of Nigerian universities? Specifically, the study seeks to identify the social problems associated with the addicted use of information communication technology tools among undergraduate students at Ebonyi State University, Abakaliki.

Research Question: What are the social problems associated with students addicted to the use of ICT gadgets in Ebonyi State University?

Significance of the Study

The study will help to sensitize both the teachers and students on the social problems of the excessive use of information communication technology among undergraduate students of Nigerian universities. Essentially, the study will help to expose the students to the awareness that abuse of the use of ICT is detrimental to their social lives and education. On the other hand, it will assist teachers to guide students appropriately in their social lives as they engage in their academic programme in the university. This study was delimited to the responses of Ebonyi State University undergraduate students only.

Method

The survey design was adopted for this study. The survey design is considered appropriate for eliciting the responses of students on the social problems of the addicted use of ICT among students of Ebonyi State University, Abakaliki. The instrument for data collection in this study is a structured questionnaire developed by the researchers. The questionnaire contained 17 items to elicit information from the students (respondents) on the social problems associated with addicted use of information communication technology. A total of 660 copies of the questionnaire were distributed. Out of these, 431 were found to be properly completed, and used for analysis.

A cut-off of 3.00 was used as a bench mark for acceptance or rejection of each of the items of the questionnaire. Thus, items of the questionnaire that rated 3.00 points and above was accepted as constituting one of the social problems associated with the addicted use of ICT gadgets. On the other hand, items that rated below 3.00 points were rejected and considered as not constituting part of the social problems associated with the addicted use of ICT, among undergraduate students of Nigerian universities.

Results and Discussion of Findings

Table 1: Data on Social Problems Associated with Students addicted use of ICT Gadgets

The table above shows the responses of students on the items describing the social problems associated with the excessive or addicted use of information and communication technology among students in Nigerian universities. Specifically, the table presents the responses of the students to the respective items in the instrument. Using a bench mark of 3.00 for acceptance or rejection of each of the items, result therefore showed that the use of ICT among Nigeria students can enable them to learn and adopt foreign cultures. This opinion achieved a mean score of 3.37 to substantiate the acceptance. In line with this opinion, Fish (2000) noted that students learn and develop new social cultures and behaviours through their internet interactions. It is precisely real, that most of the social outfits, fashions and designs, including social costumes, music patterns, especially among Nigerian undergraduates are behaviours learnt and adopted from excessive use of electronic gadgets like the computer, internet and home video entertainment. Students' moral conduct as well, has much bearing on their ICT interactions.

Results indicated with a mean of 3.03, students' addicted use of ICT gadgets enable students to perfect rape plans, enable students to be lazy. Through such online entertainment they learn several spinning and sexual styles, pinch actions and grow up to practice such behaviours in the society. In line with the acceptance and to underscore the erratic behaviours gained from the addicted use of ICT gadgets, Josh (2001) earlier noted that the degree of the cases of rape and moral decay is high in almost all societies. This is as a result of youth restiveness gained from the addicted use of information and communication technology.

This addiction in the use of ICT among high school graduates and the baccalaureates all have degenerated into such nefarious behaviours, like drug addiction, laziness, robbery, gambling, examination malpractice, etc. Thus, today in many societies, there are cases of drug addiction, assassination, rape, laziness and robbery, among the youths and including university undergraduates. Essentially, the ICT (internet and home video entertainment actions) are the sources and the home tutor from where the youths learn these nefarious behaviours (Wood, 2002).

The study also revealed that addicted use of the ICT leads to fatigue and drowsiness among university undergraduates. This opinion achieved a mean response of 3.39. The study further showed with a mean response of 3.12, that the addicted use of ICT among undergraduates enables them to scandalize their teachers. This indication agrees with the view that ICT addiction spurs the students to put their teachers in the fore of internet social scandal. In this direction, Wood (2000) stressed that fatigue and drowsiness are most common sicknesses among excessive users of the ICT gadgets. The author further expressed that undergraduates have gone astray to twist the relevance of the ICT gadgets. Today, they use such gadgets like the mobile phones, internet and web nets to trail their enemies, mentors and tutors for public consumption.

Fish (2000) noted that through the ICT, addicted students develop unreceptive behaviours. To further substantiate this opinion, the study showed with a mean score of 3.07 that the addicted use of the ICT enable students to negatively change their attitudes. Through the use of the home videos, the youth especially the undergraduates learn unreceptive and restive behaviours which are transferred to their cult groups. The author stressed further that most horror films teach young people dirty practices, like cultism, divorce, assassination, rape and robbery. Unfortunately, the society further commercializes these dirty social behaviours through films. It is equally painful that the entertainment shows are presented publicly and youths spend their hard earned money to attend clubs or sit by the cable television to watch such corrupt films (Wood, 2002). This study indicated with a mean of 3.03 that the addicted use of ICT can spur students to imbibe cultism. It also revealed that it encourages students to mimic and to get initiated into membership of foreign clubs. This indication gained a mean of 3.37 to underscore its acceptance.

On the contrary, the study rejected the fact that it discourages students' group clashes in their clubs and cult groups. In this regard, Adenuga (2001) stressed that users of electronic gadgets have shifted its good relevance to learning gangsterism and cultism through the media. It is common today that European, Spanish or English Football clubs exist in Nigeria almost in the form of fraternity, gangsterism and cultism among university undergraduates. As Europe and Spain entertain the world with classic football, Nigerian youths including university undergraduates now queue up in their groups as gangs to support their choice teams and to turn their fate and taste into aggression against opposing club admirers.

Conclusion

Information communication technology appears to be the strength of most human endeavours. It is unfortunate that most Nigerian graduates tend to opt to destroy their careers as a result of the addicted use of these gadgets. Many undergraduates ended their academic career as dropouts just as a result of their addiction to the use of ICT. With all advances in ICT to aid life processes and human endeavour in particular, addiction always maintain poor and negative effects. Excesses and abuse in all human involvement and interaction does not earn positive dividends. For example, drug and alcohol addiction helps to ruin the life of the youths. In the same vein, the addicted use of information and communication technology among Nigerian undergraduates does not in any way enhance their performance in academics. Rather than improving their performance, it helps to lower their performance and to destroy their psycho-social relevance in the society.

Recommendations

The development of ICT is clearly accepted today as part of man in his endeavour. It enables our interactions and has helped to bridge the distance existing among men and between places. Against the addicted use of the gadgets, it is pertinent to recommend, thus:

1. Students should learn to apply wisdom in their use of the ICT tools to ensure that its use does not affect their valuable times in order to be committed to their studies. Those aspects of IT usage that should uplift their academic pursuit and well-being should pre-occupy their time.
2. Guidance counseling services should be strengthened in the universities. Counseling experts who should be ICT literate should be employed to guide the students on the right usage of ICT facilities and resources. They should be in a position to monitor the students' general behaviours especially those that are connected with the ICT gadgets.

3. The universities should institute dress codes for the students to ensure that they (the students) do not take to the senseless dress patterns often promoted through the internet and wireless networks. Sagging and psychotic dressings should be discouraged among students especially within the university and public premises.

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Micro-Financing: A Strategy for Poverty Alleviation in Nigeria

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ABSTRACT

The development of appropriate policies and strategies for poverty alleviation and improving the livelihoods of the people, especially the poor, requires good understanding of the different dimensions of poverty. Access to financial services has been proven to be a powerful tool to help fight poverty especially when people have access to a broad range of financial services with which they can invest in income generating activities, and to meet basic needs like health, education, and nutrition. This paper, therefore, presents micro finance as a, strategy for poverty alleviation. It discussed the concepts and categories of poverty, use of micro-finance in alleviating poverty, among others. Among the recommendations include, the need

for the government to promote the development of micro–finance sector through effective policies; establishment of credit Bureau to disseminate credit information awareness and liaison, among others.

INTRODUCTION

Poverty is a widespread social phenomenon affecting 2.8 billion people while more than half of the population of the people in developing countries still lives on less than $2 a day (World Bank, 2004). The international community's commitment to the reduction of poverty led to the declaration of Millennium Development Goals (MDGs) in year 2000 in order to cut poverty to half by 2015. The MDGs focuses on reducing by halve the proportion of people living on less than $1 a day and those who suffer from hunger. In absolute pain, the number of poor people has risen in Africa, Latin America, the Caribbean, and Central Asia. In sub-Saharan Africa alone, the number of people in extreme poverty rose to almost 320 billion, a quarter of the global total (World Bank, 2005). The challenge, therefore, is immense for the global community in general and Nigeria in particular.

According to Alegieuno and Attah (2005), one of the means for poverty reduction that has however, assumed universal acceptance and adoption in most countries is the provision of micro-finance services, particularly for the economically active poor. This is based on the belief that such category of the population only needs financial empowerment to realize their dreams and unleash their potentials. In the same vein, Eluhaiwe (2005) noted that access to financial services has been proven to be a powerful tool to help fight poverty. The impact is greatest especially for the poor people when they have access to a broad range of financial services (such as savings, credit, insurance and remittances) with which they can invest in income generating and asset building activities, and meet basic needs such as health, education, and nutrition. The ability to manage assets helps poor people to gain control of their own future, and make greater contributions to development.

Interest in micro-finance has soared in the recent decade and the instrument is now seen as one of the most promising tools to tackle poverty in the developed world. The fascination with micro finance is derived from the fact that the provision of financial services can contribute to poverty reduction and pass the test of sustainability at the same time (Ukeje, 2005).

Conceptual Framework

Poverty

Poverty has been defined in many ways by different authors. Alegieuno and Attah (2005) defined poverty as a multidimensional phenomenon that transcends just lack of money or material resources. It encompasses issues such as lack of access to economic, social, political, and religious opportunities. In specific terms, it involves sub-optional utilization of basic needs such as good food, education, health care, jobs, political power, etc., owing to some inhibitive economic and social forces.

Simply put, poverty is a state of deprivation. CBN (1999) defined poverty as a state where an individual is not able to cater adequately for his/her basic needs of food, clothing, and shelter; is unable to meet social and economic obligations, lacks gainful employment, skills, assets and self-esteem, and has limited access to social and economic infrastructure such as education, health, portable water, sanitation, and consequently, has limited chance of advancing his/her welfare to the limit of his/her capabilities. Poverty, in other words, can be defined as a human condition characterized by sustained or chronic deprivation of the resources, capabilities, choices, security, and power necessary for enjoyment of an adequate standard of living and other civil, cultural, economic, political, and social rights.

Poverty Alleviation

Poverty alleviation is any process which seeks to reduce the level of poverty in a community or amongst a group of people or countries. It may be targeted at economic or non-economic poverty. Poverty alleviation efforts may also be aimed at removing social and legal barriers to income growth among the poor. In other words, poverty alleviation will generally be used to refer to the substantive reduction of any of the negative aspects and have no assets like land, livestock, fishpond or productive skills. Often, they survive on uncertain wage labour. Therefore, building assets has to be the major goal of any poverty alleviation effort.

Micro-Finance

Micro-finance involves the provision of credit, savings, repositories and other financial services to low income earners or poor households to create or expand their economic activities to improve their standard of living (Olaitan, 2001). Micro-finance services according to the Canadian International Development Agency (2005) include "the provision of very small loans for micro-enterprise, agriculture, educational and consumption purposes as well as saving facilities and other financial products such as, insurance services, housing, and pension funds". More so, Ehiagiomusoe (2000) defined micro-finance as the attempt by donor agencies and governments in developing countries to enhance income earning of the small scale farmers and artisans. This is because the productivity of the poor was constrained by limited access to credit facilities. Rural finance was dominated by money lenders and local shop owners, hence the establishment of credit schemes.

Categories of Poverty

Poverty can be categorized in the following ways:

1. Income Poverty:

Most people think of poverty in a narrow context, equating it with absolute lack of income (as in the World Bank concept of living below $1 a day) or relative income (as in identifying statistics of people living with a relatively low income or without sufficient means to purchase common goods). Critics of such measures have advocated that quantitative studies should disaggregate income figures since they fail to take account of individual circumstances and who has access to income that may be generated in the household. Income derived from the male head of household, for example, may not materialize into income for other members, nor does the bald figure of income indicate how many households or people that particular income caters for (Bailey, et al., 2003). Nonetheless, income poverty is the lack of income and productive resources sufficient to ensure sustainable livelihoods.

2. Capability Poverty:

The deprivation in the range of things people can do, the knowledge and skills needed to act independently for productivity or personal welfare consumption is referred to as capability poverty (Sen, 1999). For example, poor education and knowledge about how to challenge inequitable system perpetuates exclusion and isolation. This capability "un-freedom" creates a dependency role for people who are then locked into a vicious cycle of low skills that prevent better paid employment; thus, perpetuating the cycle of need for the next generation. The absence of sufficient training or skills updating for certain sectors of the population exacerbates capability poverty when individuals find themselves with unequal stakes in the labour market. It is commonly identified, for example that low paid workers receive fewer training opportunities than senior or middle management (Field, 2002).

3. Participatory Poverty:

Participatory poverty refers to deprivation in the range of things people can be, including participation in social life and inclusion in decision making processes (UNDP, 2002). This form of poverty can be interpreted as both an internalization process and an externally imposed status. For instance, women's work is often not recorded, and they are often excluded from decisions that could affect their ability to participate in development priorities resulting in a reduced sense of agency. More so, disability is equally an under-researched experience for participatory poverty that affects identities and contribution to public life. Fifty percent of disability problems are perceived as linked to poverty (Sweetman, 2002).

4. Consequential Poverty:

Consequential poverty is the result of deliberate human and political interventions and the natural or social environment whose harmful effects are felt in an indirect or sometimes delayed way. The most common structures and systems that create poverty are exploitation of resources, including labour, national debts, war and conflict, and environmental degradation caused by capitalist greed or political reluctance to recognize appropriate measures to address large scale natural disaster or health warnings. Equally, gender discrimination laws result in patriarchal exclusions of women's human rights to live in peace and without violence, sexual control or harassment. Other issues include unequal markets, migration, poor health, poor governance and leadership. Many of these forms of consequential poverty manifest themselves most acutely in countries where democracies or equality laws are weak, leaving the already vulnerable most susceptible to their impact.

The Role of Micro-Finance in Poverty Alleviation

Access to micro-finance is very important because it enables the poor to create, own, and accumulate assets and smooth consumption (Rutherland, 2000). Sustainable access to micro-finance helps to alleviate poverty by generating income, creating jobs, allowing children to go to school, enabling families to obtain health care, and empowering people to make choices that best serve their needs. It is assumed that poor people know what to do, and with some elementary skills, and that they remain poor because they operate from a slim economic base. This base can be strengthened by funds borrowed on affordable conditions.

Micro-finance has been successful in opening economic opportunities for the poor, increasing access to resources and contributing to their confidence and well-being (Khandker, 1998). Micro-finance is unique among development interventions because it can deliver benefits to the poor on a large scale and permanent. Micro-finance institutions that are well managed will provide financial services to the poor on a sustainable way with or without donor support. In addition, micro-finance allows the poor to protect, diversity, and increase their sources of income, the essential path out of poverty and hunger. The ability to borrow a small amount of money to take advantage of business opportunities, to pay school fees or to bridge cash-flow gap can be a first step in breaking the cycle of poverty (Littlefield, Modruch, & Hashemi, 2003).

Furthermore, micro-finance has been proven to be effective in fighting poverty by providing entrepreneurs with the necessary capital to start and expand their entrepreneurial activities. It is also associated with a positive impact on social and human development. For example, impact assessments have found positive changes in micro-enterprise output, assets, employment, and income. In addition, to these effects on the entrepreneurial activities of the poor, micro-finance is being attributed with positive effects on issues such as household income, savings, children's education, health and nutrition, and women's empowerment (Sebstad & Gregory, 1996).

Conclusion and Recommendations

From the foregoing, it can be concluded that poverty is a multidimensional phenomenon that transcends the lack of money and material resources. It encompasses issues such as lack of access to economic, social, political, and other aspects of life opportunities. Therefore, one of the means of alleviating poverty which has assumed universal recognition for this work is using micro-finance as a strategy. Micro-finance will help the poor households to create or expand their economic activities to improve their standard of living that will engender sustainable development.

In the light of the above issues, the government should promote the development of micro-finance sector through prerequisite policies, provision of inducements and institutional framework that fosters linkages; establish a credit bureau to embark on credit information storage and dissemination to curb sharp practices by fraudulent clients; equally mount campaign on the need for micro-financing. This will ginger individuals and groups especially those in co-operatives to obtain loan so as to boast their production and investment capacity.

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Public Debt, External Competiveness and Fiscal Discipline in Nigeria Economic Development: A Survey of Literature

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ABSTRACT

What direction can one ascribe to the relationship between the volume of public debt, external competitiveness, fiscal discipline and economic prosperity of Nigeria? It has generally been agreed that the rationale for public debt procurement, enhancement of external competitiveness and prudent fiscal management has been to accelerate economic development. Unfortunately, fiscal indiscipline and the loans borrowed by Nigerian governments over the years have not been put into any productive use; most is the crowding out effect on the private sector borrowing to the detriment of economic development in Nigeria. This paper, therefore, discussed the issue of public debt, external competitiveness and fiscal discipline on the Nigerian economy. One of the findings of this study is that government's investment

in infrastructure projects in the last five years do not seem to justify the over ₦9.0 trillion in outstanding of the public debt. Among the recommendations include the need for the Nigerian government to promote a budget investment policy that mandates the application of borrowed funds into investment in infrastructures which will also support stabilizing the financial market and growing the economy.
Keyword: Public debt, External Competitiveness and Fiscal discipline, Nigeria.

INTRODUCTION

The current trends and concerns of Nigeria's public debt profile has been much of debates among economists and public sector managers. Nigeria's Minister of Finance and Economy Coordinator, Dr. Ngozi Okonjo-Iweala, recently expressed concerns over Nigeria's rising debt profile (BGL Research and Intelligence, n.d). The knowledge that the current uncertainty in global economic and financial markets rests on the disproportionately large and rising public debt in many advanced economies provides a sound basis for fiscal caution.

The performance of the Nigeria external sector has remained uncertain as the economy faces the challenges of high import content, rise in external debt stock and declining agricultural prices in the international market. Despite these challenges, the external reserves exceeded the international benchmark of 6.0 months of imports and the bureau de-change (BDC) premium was lower than the 5.0 percent international threshold. These outcomes are suggestive of the need to reinvigorate the economy for increased domestic production through tackling infrastructural challenges and other factors inhibiting increased domestic production.

In Nigeria, fiscal relations hinges on the fundamental question of who gets what of the national cake, when and how? This is fundamentally given that Nigeria is an oil dependent economy with over 80 percent of her revenue from crude oil. The provision of the constitution is the disbursement of the accrued revenue to the three tiers of the government. It also explains the formula for the revenue allocation. The challenges of intergovernmental fiscal relationship in Nigeria hinge on the equity of the expenditure assignment and revenue-raising functions amongst the three tiers of government.

The policy/institutional approach for redressing the mismatch has been on the increase over the years, the recent being the revenue Mobilization Allocation and Fiscal Commission as provided by the 1999 constitution, under the third schedule. In Nigeria, as in other less developed countries (LDCs), there have been a large number of theoretical and empirical studies on public debt and fiscal federalism and these papers have extended to econometric modeling of public debt. This paper provides a theoretical framework with which to analyze public debt and fiscal federalism in Nigeria. It, then, addresses some of the methodological issues underlying public debt, fiscal federalism, and review of the theory and empirical evidence on the subject.

Theoretical Issues

This section attempts to discuss the theoretical underpinnings of public debts and fiscal federalism. The issues of theoretical underpinnings of public debt and fiscal federalism theories are derived from the publications of Modigliani-Miller (1958); Oates (1972) and

Tanzi (1995). However there are two flanks to the theoretical and empirical bases for a structural explanation to public debt vis-à-vis external debt problems. One is to look at the whole country's investment capital structure, that is external debt versus foreign direct investment and equity flows and the other is to look at the various structural dimensions of external debt (Dinneya, 2009). The Modigliani-Miller Theorem states that "in a perfect market, the value of a firm is independent of its capital structure. The contention is that, under certain conditions, the capital structure in terms of debt versus equity, as well as their maturity structures and comparative risk management are irrelevant. Stiglitz (1969) in an attempt to demonstrate the Modigliani-Miller thesis argued that even if a risky debt was created in altering the capital structure in favor of debt, in an imperfect market, a new security can be created or old security destroyed. The Stiglitz analysis reiterates that the structure of capital flows and external assets and liabilities does not really matter, even under imperfect market.

Rajan and Zingales (1995) in their work on corporate finance directly attacked the Modigliani-Miller thesis and provided a point for analyzing alternative sources of external finance, with respect to the relative balance between debt, foreign direct investment and portfolio equity. According to them, the existence of asymmetric information and agency problems affects the choice between equity finances and debt financing. The analytical approach here is to move from corporate finance to sovereign capital structure theories.

Three primary structural dimensions are quite useful in explaining the debt portfolio of an economy. The first is to look at structure in terms of the currency composition of indebtedness with respect to domestic vs. foreign currency denomination. Second, is the condition under which new debt commitments are made in terms of length of maturity, grace periods, interest rate regimes, access to government guarantees and grant element which defines the level of concessions of the loan. The third combines some elements of the term structure (short and long-term debts) with creditor and debtor sources of a country's total indebtedness to the rest of the world.

Original sin and C*urrency mismatch* are two concepts that are thematic in analyzing currency composition of a country's external debt. A country's indebtedness to non-residents can be denominated in both domestic and foreign currencies.

According to Barry, Eichengreen and Ricardo (1999) original sin of international finance is described as an inherent and fundamental inability of a country to borrow abroad in its own currency. Different attempts have been made to identify the sources of original sin. Renowned finance expert Olivier Jeane's work has provided a fundamental reason why the domestic currency cannot be used to borrow abroad or even domestically. Jeane posits that moral hazard created by bailout guarantees, lack of developed domestic financial institutions and failures in other areas other than domestic monetary policy accounts for the sources of original sin. In his summary, "original sin can be attributed to a single cause: the lack of monetary credibility. Monetary credibility problem arises when there is concern that a borrowing country may be tempted to inflate away debts denominated in its own currency by simply manipulating the value of the domestic currency.

Currency mismatch is a consequence of original sin. A country's level of currency mismatch is the differences in value of the foreign currency denominated assets and liabilities on the balance sheet of households, firms and the government. This means that there will be an aggregate currency mismatch when there is a net debt to foreigners denominated in foreign currency. If a country has the capacity to borrow from foreigners in domestic currency only, then that country would not incur a currency mismatch.

The *neoclassical convergence growth theory* postulates that the direction of capital flows should be from capital-rich to relative capital-poor countries. One of the failures of the theory is the experience of capital-poor countries in using their capital account to smoothen consumption arises from their inability to borrow abroad in their own currencies.

The government is made up of three tiers, federal, state and local government. Based on fiscal arrangement, each level of government has an area of where its influence predominates (Oates, 1972; Tanzi, 1905). Local Governments are nearer to the people of their areas and therefore, are in a better position to know their basic developmental needs. *Resources endowment* and the means to harness these resources for development are cardinal to any basis of argument on how to move a locality forward. In consonance with this view, Hirschman (1958) classified regions of development into two; those with high resource endowments and those without. They believe that differences exist in development among regions because of this imbalance in resource endowment, which inevitably creates a disparity in financial resources available to development purposes. Theoretically, at equilibrium, resources available to an area should match the functions that particular area is expected to perform. Mbanefoh (1993) argues that in practice, it may not be possible to satisfactorily balance the financial resources of a segment of a federation with the function which it is expected to perform.

This imbalance should not be regarded as a result of federalism, but as a result of the disturbance of the natural equilibrium which ordinarily would allow the segments of the federation to carry out development programmes that could be undertaken with the available internal resources. It is the opinion of Anyanwu (1997) as cited in Okeke (2004) that this imbalance in resource availability and responsibility is a result of the concentration of the major revenue sources in the hands of the federal government to the neglect of the states and local governments.

Overview of Nigeria Public Debt, External Sector Performance and Fiscal Federation

Composition of Nigeria's Public Debt

Countries ordinarily borrow to fund critical infrastructure projects, to accelerate economic growth especially when domestic financial resources are scare and need to be augmented. Governments may also borrow to run expansionary fiscal policies with the goal of stimulating economic activities and sparring economic development.

Conventional economic theory proposes that reasonable levels of borrowing promote economic growth through factor accumulation and productivity growth under certain circumstances. Government borrowing can also stimulate the economy during a downturn or fund long-term investment projects that increase economic output in the future. Government's investment in infrastructure projects in the last five years do not seem to justify the over ₦5.6 trillion in outstanding domestic debt. Using a straight line approach, which ignores settlements of maturing bills and bonds where an estimated ₦3.3 trillion, was raised in domestic debt between January 2009 and December 2011. However, the current government pattern suggests that the larger proportion of government debt is being deployed to funding recurrent expenditure. Over the last fourteen years (1999-

2013), recurrent expenditure as a proportion of total government spending has averaged over 68.4%. There is, therefore, little to show for the increased borrowing in terms of capital investments which contrast with the *Golden Rule* globally *(Golden Rule specifies that borrowing must be applied to investment such that the economic impact of the spending on government revenue should balance the budget over the full economic cycle).* Beyond the *Sustainable Investment Rule* which states that public sector net debt as a proportion of GDP must be held at a stable and prudent level over the economic cycle.

According to the Debt Management Office (DMO, 2012), Nigeria's sovereign debt stock as at June 30th, 2012, was ₦7.09 trillion ($45.49 billion), comprising ₦6.15 trillion ($39.46 billion) domestic debt and ₦941.20 billion ($6.04 billion) external debt. Details of the external debt stock showed that Multilateral Financial Institutions account for 82.02 percent of the country's total debt profile with the International Development Association (IDA), a member of the World Bank Group, accounting for $4.33 million. Another member of the World Bank Group, the International Fund for Agriculture Development (IFAD), is owed $77.58 million. The external debts also consist of $41.40 million owed the African Development Bank (ADB), while the African Development fund (ADF) is owed $385.57 million. The country also owes the European Development Fund (EDF) $102.24 million while $14.52 million is owed the Islamic Development Bank (IDB). Nigeria also owes the Arab Bank for Economic Development in Africa (ABEDA) $1.02 million. Non-Paris Club debt represents 9.69 percent of the external debt stock, comprising bilateral loans of $507.76 million, and commercial loans totaling $77.24 million. Nigeria's $500 million Eurobond from the International Capital Market accounts for 8.28 percent of the external debt stock. Furthermore, according to the DMO, the Federal Government of Nigeria (FGN) bonds stood at ₦3.71 trillion (60.37 percent of domestic debt) as at June 30, 2012. Nigerian Treasury Bills is valued at ₦2.08 trillion or 33.88 percent, while Treasury bond account for ₦353.73 billion or 5.75 percent. The country's budget deficit and the need to fund the budget have necessitated issuance of domestic debt instruments with attendant huge debt serving obligation as shown in table 1.

Table 1: Nigeria's Domestic Debt Stock by Instrument as at 31st March, 2012(Amounts in Naira)

Instrument	Amount (₦)	%
Federal Government Bond	3,714,553,859,000.00	60.37
Nigerian Treasury Bills	2,054,590,382,000.00	33.88
Treasury Bonds	353,730,500,000.00	5.75
Total	6,152,874,741,000.00	100.00

Source: Debt Management Office (DMO)

The combined external debt profiles of the 36 states and the Federal Capital Territory (FCT) as at June 30th, 2012 were $2.21 billion, representing 36.70 percent of the country's external debt. Lagos ranks top as the most indebted state with $517.68 million representing 8.58 percent of the country's external debt. The states of Kaduna and Cross River ranked second and third with $197.16 million (3.27 percent) and $109.36 million (1.81%) respectively while Ogun and Oyo States completed the top five most indebted States with $96.29 million (1.60 percent) and $78.88 million (1.31 percent) respectively. Borno state is the least indebted state in the country with $12.73 million representing 0.21

percent of the country's external debt. Delta and Plateau states are the second and third least indebted states with $15.78 million (0.26 percent) and $20.19 million (0.33 percent) respectively.

Table 2a: Shows Nigeria's public debt stock as at 30 June, 2012

Debt Category	Amount Outstanding in US Dollar	Amount Outstanding in NGNaira
External debt stock	6,035.66	941,200.82
Domestic debt stock	39,456.68	6,152,874.74
Total	45,492.34	7,094,075.56

Source: Debt Management Office (DMO)

From table 2b below, it is pertinent to underscore the reasons for the upward trend in the domestic stock within the reviewing period. While the over ₦1.8 trillion domestic debt stocks may seem a large amount, its size largely reflects the cumulative effects of financing Nigeria's budget deficits in the past, including public sector capital expenditure needs. The increases in the domestic debt portfolio over these years are accounted for by different sets of factors, reflecting a shift towards market-based funding of government deficits, as well as productive uses of domestic borrowing. For example, in 2005 the domestic debt stock increased by ₦155.6 billion bringing the total to ₦1, 525.9 billion. This increase was accounted for by the issuance of 2nd FGN Bonds to fund capital expenditure of ₦108.3 billion, and 2005 budget deficit of ₦70 billion. In the same period, there was a decline in NTBS, ₦0.27 billion in development stock, and ₦5 billion in treasury bonds due to maturity and redemption of these instruments.

In 2006, the domestic debt stock increased to ₦1,753,259 million mainly due to the issuance of ₦45 billion under the 3rd FGN Bonds to finance budget deficit, ₦15 billion as Agency Bonds to support 3 development finance institutions, namely: the Bank of Industry, the Federal Mortgage Bank, as well as the Nigerian Agricultural and Rural Development Bank and ₦75 billion and ₦91.6 billion as special Bonds to settle the lingering Pension Arrears and Local contractors' debts, respectively, after thorough verification exercise by the National Pensions Commission (NPC) and the Budget Office of the Federation (BOF).

The ₦110.5 billion increase recorded as at end-March 2007 is directly attributed to the ₦80 billion part funding of the budget deficit for the years; the ₦25 billion Nigerian Treasury Bills (NTBs) in FGN's support to the TINAPA project, which the Cross-River State Government (CRSG) is repaying according to an operating schedule, as well as ₦5 billion new NTBs issued by CBN for Open Market Operation (OMO). From the foregoing, it could be safely deduced from the analysis that the increase in the level of the domestic debt stock between the reviewing periods was largely due to financing of budget deficit, capital projects and bonds meant for supporting development finance institutions, as well as final settlement of local contractors' debts and pension arrears.

Table 2b: Yearly Analysis of Change in FGN Domestic Debt Portfolio 2005-End March, 2007.

Year of Issue	Amount of Debt Stock	Change in Debt stock	Type of instrument	Purpose of Change in Stock

	(₦'bn)	(₦'bn)		
2005	1,525,906	155,581	FGN Bonds and NTBs	*2nd FGN Bonds Of ₦178.27 bn broken down as: *Funding Of ₦108.27bn capital expenditure. *₦70bn For 2005 budget deficit. *OMO of CBN NTBs (₦16m), Dev.st (₦0.27bn), T-Bonds (₦5bn).
2006	1,753,259	227,353	FGN Bonds and NTBs	*₦45bn to part finance budget deficit *Agency Bonds for 3 DFI's (N15bn) * Local contractors (₦91.6bn) and pension Arrears (₦75bn)
2007 (end March)	1,863,768	110,509	FGN Bonds and NTBS	*Part financing FGN budget deficit (₦80bn) *Tinapa Bonds (₦25bn) in TBS * OMO CBN (₦5bn)

Source: Debt Management Office (DMO cited in Zenith Economic Quarterly, 2008 pp.15)

Comparison of Government Debt Market in Generating Economic Growth and Development

Domestic debt plays an important role in the development of both advanced and emerging market economics, such as Nigeria (Zenith Economic Quarterly, 2008:18). Domestic borrowing is desirable as long as it is targeted at developing the productive base of the economy and is within sustainable levels. When compared to its peers in the emerging market of South East Asia, Nigeria's domestic market lags behind.

Table 3 below analyzes in detail the level of total indebtedness (both domestic and external) as a percentage of GDP, for countries of similar credit standing as Nigeria, as well as the developed countries in the world. It is worthy of note that Nigeria in the ranking is second to Russia from the bottom of the list at a very low level of indebtedness. With Nigeria's infrastructure needs and high level of unemployment, huge unexploited natural resources, the future funding of projects using the domestic debt market can be justified. It is on record that advanced economies, United States as example, have used domestic debt to stimulate their economies out of severe downturns. In such economies, funding of capital goods in public is made possible not only through tax revenue investment but by borrowing domestically to augment the already affected available resources.

Table 3: Total Public Debt as % of GDP

Country	%	S and P Rating
Lebanon	2090	BB-
Japan	179.2	AA
Jordan	72.2	BB-
Nigeria	70.9	BB
Morocco	66.8	AAA
Germany	64.7	AAA
France	64.7	BA3
Turkey	64.7	AAA

US	61.0	B-
Argentina	52.8	BB+
India	50.0	BB-
Russia	47.5	BA3
Brazil	42.2	AAA
Vietnam	32.9	BB+
UK	31.9	A2
South Korea	22.1	A-
Korea	21.4	BBB-
China	10.4	BB-
Romania	8.0	BB-

Source: The Word Fact Book, 2007 cited in Zenith Economic Quarterly, 2008 pp.18
(S and P stands for Standard and Poor Rating Agency).

The country's rising debt profile, notwithstanding, the Debt management office (DMO) has persistently insisted that the nation's public debt is still within the sustainability threshold and that Nigeria is one of the least indebted countries among the comparative economics. Accordingly, key indicators of fiscal sustainability in Nigeria are positive as the debt to GDP ratio of 17.8% is substantially below the global benchmark of 60%. While the debt service payment to federal government revenue ratio which is 19%, is well below the informal global benchmark of 30%. The nation's fiscal deficit has also remained below 3%, in consonance with the provision of the Fiscal Responsibility Act of 2007, except in 2009 and 2010 when the federal revenue declined precipitously as a result of the global economic meltdown.

On the external front, as the indicators of integration shown in table 4 revealed, the degree of openness, measured by the share of Nigeria's total external trade to gross domestic products (GDP) was 67.0 percent in 2011 compared to 71.0 percent as recorded in the preceding quarter. Other indicators such as total trade, imports, total foreign exchange flows and net foreign exchange flows as percentages of GDP also reduced from 70.9, 30.2, 71.9 and 24.6 percent, respectively in (Quarters 3) 2011 to 66.6, 35.5, 64.8 and 17.6 percent. The decline of major indicators of integration are indicative of the need to strengthen the domestic production base through tackling the infrastructural challenges and other factors inhibiting increased domestic production, as well as competitiveness of locally produced goods.

Table 4: Indicators of Integration

	4th Qtr. 2010	3rd Qtr. 2011/1	4th Qtr. 2011/1
Degree of openness	0.59	0.71	0.67
Total trade as % of GDP	58.9	70.9	66.6
Trade balance as % of GDP	14.4	7.5	13.5
Imports as %of GDP	21.3	30.2	25.5
Export as % of GDP	37.6	40.7	41.1
Total forex flows as % of GDP	73.6	71.9	64.8
Net flows as % of GDP	36.6	24.6	17.6

Source: BOPSO, Statistics Dept. CBN

Available statistics as contained in Table 5 indicated that foreign exchange inflows to the Nigeria economy in 2011, stood at US $25, 344.42 million compared with US $29,638.22 million and US $29,047.57 million recorded in Quarter 3 2011 and quarter 4 2010. Also, total outflows into the Nigeria economy within the period amounted to US $14,533.69 million compared with US $14,454.36 recorded in Quarter 3 2011, showing marginal increase of 0.3 percent from the level of the preceding quarter. Consequently, a net-inflow of US $10,810.77 million was recorded in Quarter 4 2011 compared with the US $15,153.86 million in quarter 3 2011.

Table 5: Inflow and Outflow of Foreign Exchange Pass through the Economy (US $Million)

Category	4th Qtr. 2010/2 (1)	3rd Qtr. 2011/2 (2)	4th Qtr. 2011/1 (3)	% Change (1) & (3)	% Change (2) & (3)
Inflow	29,047.57	29,638.22	25,344.42	-12.75	-14.49
Inflow (CBN)	7,310.03	14,327.74	13,303.65	81.99	-7.15
Inflow (AFEM)	21,737.55	15,310.48	12,040.77	-44.61	-21.36
Outflow	9,734.43	14,484.36	14,533.65	49.30	0.36
Outflow (AFEM)	9,466.67	14,147.25	14,095.38	48.89	-0.34
Outflow (CBN) Net flow (CBN)	267.76	3371.11	438.27	63.68	30.01
Net flow	19,313.14	15,153.86	10,810.77	-44.02	-28.66

Source: Trade & Exchange and Reserve Management Dept, CBN

The average Wholesale Dutch Auction System (WDAS) rate in Q4 2011 depreciated by 1.6 per cent, as the naira exchanged at N155.77 against N153.31 to the US $ in Q3 2011. As table 6 shows, the Bureau-de- change (BDC) segment of the market recorded a marginal appreciation of the naira, as the naira traded for N161.64 to one dollar as against N161.698 IN Qtr. 3 of 2011. Consequently, the BDC premium narrowed to 3.8 per cent during Q4 of 2011.

The average inter-bank exchange rate in Qtr. 4 of 2011 stood at N160.27/US $ against N154.32 and N151.65 in Qtr. 3 of 2011 and Qtr. 4 of 2010 respectively. The movement in the interbank rate was not in consonance with the anticipated movement in the exchange rate considering the band between the official and inter-bank rates.

Table 6: Average Exchange Rates Movements within some selected Quarters

Category	4th Qtr. 2010/2 (1)	3rd Qtr. 2011/2 (2)	4th Qtr,2011	Appreciation/Depreciation
WDAS Rate	150.67	153.31	155.7	-1.6
Inter-Bank rate	151.65	154.32	160.27	-3.9
Bureau de change Rate	153. 89	161.98	161.64	0.2

Premium	2.1	5.7	3.8	-

Source: Financial Market Department, CBN

In the table 6 above, the index of nominal effective exchange rate (NEER) of the naira depreciated to 99.9 in Q_4 of 2011, from 101.2 in Q_3 of 2011, indicating that the Naira was slightly weaker than the currencies of its trading partners within the period. Also, the Real Effective Exchange Rate (REER) stood at 85.3 as against 88.5 in the preceding quarter, showing an improvement in external competitiveness of the Nigerian economy.

Table 7: NEER and REER Indices (November, 2009= 100)

	4th Qtr., 2010	3rd Qtr., 2011	4th Qtr., 2011
NEER	97.54	101.17	99.90
REER	92.05	88.50	85.30

Source: External Sector Indicator Statistic Office, Statistic Dept. CBN

On the public sector external debt analysis, the external debt sustainability index, computed as the ratio of external debt to nominal GDP remained of 0.1 in Q_4 2011, just as it was in the preceding quarter. Ultimately, the public sector external debt rose from US $5.63 billion in Q3 2011 to US $ 5.67 within the reviewing period. The public sector debt service payment decreased from US $ 103. 80 million to US $71.36 million in Q3 and Q4 of 2011while the private sector external debt stood at US $ 441. 72 million compared to US $ 354. 59 million and US $357. 54 million in Q4 of 2010, and Q3 of 2011.

On issues relating to fiscal discipline in Nigeria it is of note that overall fiscal deficits have fallen significantly and stabilized at less than 3% of GDP and is expected to be sustained. A more prudent public sector spending behavior is emerging, highlighting the more robust macroeconomic management. The positive development in public finances derive mainly from: a more disciplined fiscal stance especially at the federal level and some of the states, higher world oil prices, increased domestic oil production and government revenues, and the privatization of public enterprise which used to worsen public borrowing and fiscal deficit. However, the issue concerning corruption associated with public spending in Nigeria is a major problem confronting Nigeria's fiscal discipline. Enormous revenues have and continue to accrue to the three tiers of government from the exploitation of oil and gas, which are non-renewable natural resources (Iwayemi, 2012).

Governments have the responsibility of using the vast resources base in not only growing and diversifying the economy but also for reducing poverty and economic inequality among Nigerians. Corruption associated with public spending is largely devoid of accountability and public information has played an essential role in the dismal fiscal discipline narrative. The World Bank in their assessment of investment climate in Nigeria in 2011 concludes that corruption is among the top obstacles on doing business in Nigeria.

The clear paradox emanating from Table 8 below indicates that states in Nigeria from oil-rich areas seem to perform worse in terms of service delivery than the other states. States in the South and South East zones benefit from mineral derivation and yet their performance on the welfare indicators is relatively poor.

Table 8: Selected Welfare Indicators

Welfare Indicator	North-East	North-West	North-central	North-East	South-West	South-South
Access to welfare	87.4	92.6	80.5	63.6	93.6	78.5
Safe water source	30.4	50.2	48.5	40.3	73.1	45.5
Access of electricity	29.5	36.9	43.9	63.9	78.1	61.2
Access to primary school	70.2	74. 7	78.8	59.8	87.5	70.3
Access to secondary school	35.3	42.5	46.8	31.8	68.6	47.1
Health access	47.3	54.3	60.1	36.1	72.3	44.6

Source: Eboh and Igbokwe, (2006)

The analysis, thus, far indicates that relative to the objectives of public debt management, external competitiveness and prudent fiscal discipline, the conceptual and implementation flaws in development polices and strategies, ineffectiveness of social spending and related public polices, in addition to the culture of corruption with impunity have produced undesirable economic outcomes in the Nigerian economy.

The conclusion from these analytical findings is that fiscal management models have not been effective in predicting economic development targets and the outcomes of macroeconomic variables in Nigeria. However, caution must be exercised in interpreting and forecasting the result, since fiscal model alone cannot be used to explain the performance of an economy over a period of time. The result may be due to number of reasons, such as high cost of finance, high cost of governance, weak productive structure with low productivity, high inflationary pressures and faulty macroeconomic policies.

Review of Existing Empirical Studies on Public Debt, External Sector Competitiveness and Fiscal Discipline

The earlier theoretical discussions have given rise to several definitional, conceptual and methodological issues which have been the bone of contention of the empirical literature. In Developed Countries (DCs), many studies on Public Debt have been carried out. For a summary of such studies for DCs, the works of Guidotti and Kamar (1991); Pattillo, et al (2002) and Wijeweera, et al (2005) are quite essential in this research. For instance, Guidotti and Kamar (1991) used the case of 15 emerging market economies, stating that the increase in domestic debt was mainly due to the new borrowing, and that of external debt was due to accumulation of arrears. This view is, however, said to be consistent with the one put forward by Borensztein, Cowan, Eichengreen and Panzza (1977) which found out that crisis played a key role in the development of the domestic bond market.

On the other hand, studies relating to Less Developed Countries (LDCs) have yielded further useful evidence on the effects of public debt on the development process. Countries with an underdeveloped fiscal management may observe that the rate at which they borrow, and the sustainable level of the borrowing depends on the links among foreign and domestic savings, investment and economic growth. Further, the general findings from the studies carried on the LDCs is that a country should borrow abroad as long as the capital acquired produces a rate of return that is higher than the cost of the foreign borrowing. Only the relevant aspects of the results on LDCs are discussed here, the details have been covered in several studies such as Seetanah et al. (2007), Hameed, et al. (2008).

The empirical evidence on the methodology adopted over time reflects applied econometrics. Previous studies on public debt started from a conventional single equation with possible adjustment for equilibrium in the short-run. Modern studies that focus on co-integration/error correction and erogeneity testing are direct outcomes of such new methodology. Co-integration/error – correction models capture both the static long-run theory of public debt, and permit a more flexible approach of fiscal balances. Clearly, the co-integration technique is a new and interesting way to get rid of specious regression.
In Nigeria, the theoretical and empirical studies on public debt have given rise to the following major questions:

1. What is the true portfolio and characteristics of Nigeria's public debt?
2. Is the domestic debt instrument contributory to economic growth, development and poverty reduction?
3. What are the efforts of DMO (Debt Management Office) towards addressing the inherent historical defects of the domestic debt portfolio?
4. What is the role and uses of government borrowing for generating growth and development in the economy?
5. Does it make any difference whether the government pays for its expenditure by raising taxes or by issuing debts?
6. Is debt really a burden and under what conditions does it become unmanageable and unsustainable?

In tables 9 – 11, the researchers present the summaries of the empirical studies on Public Debt as they relate to Nigeria.

Table 9:
Presentation of Some Empirical Studies on Public Debit in Nigeria since the 1990s:

Author	**Coverage /Method**	**Objectives/Comments**	**Result**
Fajana (1993)	Ordinary Least Square(OLS)	(a) Debt crisis emanates from mismanagement of such funds. (b) Borrowing is desirable and also unavoidable because external borrowing is a first order condition for bridging the domestic gap.	For external debt to serve as an engine of growth it has to be properly managed and the resources it makes provides need to be prudently and efficiently utilized.

		(c) The second order condition is that such funds should be invested in viable projects.	
Ogwuma (1996)	OLS	a) Debts arises from loans and credit procured by the residents of a country from the rest of the world that is meant for bridging the gap between saving and investment. b) When these resources are productively deployed and utilized, the do not constitute any drain on the future resources.	To ensure sustainability of debt servicing, borrowing countries like Nigeria need to adopt efficient external debt management strategies, which entail carefully planned schedules of external debt acquisition, deployment.
Ajayi & Iyoha (1998)	OLS	(a) Exclusive stock of debt retards growth and hamper the socio-economic development of sub-Saharan African Countries. (b) The large debt stock and crushing debt service burden have now introduced a vicious circle to the analysis of the development problem of developing countries	Debt servicing in the face of inadequate foreign earning leads to severe import strangulation and import strangulation hold back export growth; thus, perpetuating import shortages.
Onah (1994)	OLS	a) Identified two channels through	High debt burden dampens the incentive to invest. This is the debt overhang hypothesis.

		which external burden can depress investment, and hence, economic growth. b) Illiquidity effect arises from the fact that the economy has limited resources to spend on consumption, investment and settlement of debt service obligations. c) Disincentive effect captures the fact that when debts are accumulated investors expect that high taxes on returns to capital will be imposed in the future to service the debt.	
Uniamikogbo (1994)	OLS	(a) Argues that the external debt management strategies adopted have yielded certain positive results, temporary relief from debt rescheduling and the investment of the proceeds from the debt conversion programme in the productive sectors of the economy may reduce the flow of	To achieve debt reduction and sustained economic recovery, the government should gear her efforts to such activities as debt rescheduling on highly concessionary terms, outright debt cancellation, reduction of debt service ratio, and maximization of Nigeria's access to concessionary assistance from the multilateral institutions.

		credit to country considerably.	

Comments on the Empirical Studies Report

The empirical reports presented by different authors in *Table 9* can generally be interpreted to show that in the 1990s; most of the studies focused on the relationship between public debt and economic growth on the one hand and between external debt or domestic debt and growth on the other hand; as well as failed to examine the causality between these variables. This is important because causality enable us to have a comprehensive view of whether it is public debt that is enhancing growth or growth enhancing public debt. Other studies within the 1990s identified the role of volatile interest and exchange rates in exacerbating the external debt. From the studies of the 1990s, it shows that proper debt management is important for investment promotion and rapid economic recovery in developing countries, Nigeria, in particular.

Table 10:
Empirical Studies on Public Debt in Nigeria in the 2000s

Author	Coverage /Method	Objective/Comments	Result
Udeaja & Okeke (2005)	(1970 – 2001) Co-integration and Error Correction Model (ECM)	a) External debt profile, debt management and their effect on economic performance in Nigeria. b) Nigerian past debt management strategies, which tend to emphasize debt rescheduling and limitations on new loans, have failed to reduce the external debt burden of the country, rather it has worsen it by demanding more resources to settle the interest payment on the rescheduled debts.	The long-run dynamics between the co-integrating series is correctly signed (negative) and statistically, significant. The coefficient indicates a speed of adjustment of 54% from actual growth in the previous year to equilibrium rate of economic growth.
Amassoma (2011)	(1970-2009) Vector Autoregressive (VAR) and Vector Error Correction (VEC)	(a) Citing Nwankwo (2011) this author concludes that Nigerian domestic debt has attained 86.71% of the total debt as at 2011 (b) Most of the internal debt was incurred through federal government bonds with maturity ranging from 3-20 years issued by DMO on a daily basis.	The co-integration result indicated the absence of co-integration between domestic debt and economic growth. However, based on the t-value of the ECT_{t-1} at 1% significance level, there exists a unidirectional causality from economic growth to external debt.

		(c) Thus, in line with the vision 2020 objectives, it is important to investigate the effect of public economic growth in Nigeria.	
Jakob (2005)	(1980-2000) Cross-Sectional Survey	a) Low income countries like Nigeria have a tradition of borrowing to finance huge capital projects. b) There exist significant difference among the size, lost and maturity structure of domestic debt market in heavily indebted poor countries	Domestic interest rate payment present a significant burden to their budget despite much smaller domestic debt than foreign debt which in turn affects private investment and growth at large.
Asogwa (2005)	A More Comprehensive Technique	Domestic debt in Nigeria has continued to suffer confidence crises as market participants have consistently shown greater unwillingness to hold longer maturities	Government has only been able to issue more of short-term debt instruments.

Table 10 shows that empirical studies in the 2000s found that there exists a bi-directional causality between internal debt and economic growth, implying that both internal debt and economic growth leads to one another. The causality between external debt and economic growth shows a unidirectional causality from economic growth to external debt and not vice versa, this implies that it is economic growths that lead to external debt and not external debt leading to economic growth.

Table 11:
Empirical Studies on Public Debt across the Nigeria Border

Author	**Coverage/Method**	**Objective/ Comments**	**Result**
Pattillo, et al. (2002)	Co-integration and Error Correction Methodology	To determine both long and short-run effect of the variable used	There exists a negative but insignificant impact of debt servicing on growth. It also shows that high debt appears to reduce growth mainly by lowering the efficiency of investment rather than its volume.
Wijewerra, et al. (2005)	As above	As above	As above
Seetanah,	Vector Error	To	Debt servicing burden has a negative effect on

et al. (2007)	Correction Model and Production Function	investigate the link between public debt and economic growth	productivity of labor and capital which negatively affects economic growth in both Mauritius and Pakistan respectively.
Hameed, et al. (2008)	As above	As above	As above

Implication of the findings

The strain of debt service payment is usually the worst enemy to a country's balance of payments (BOPs) bearing in mind that debt service payments are generally required in convertible currencies and these become a fixed charge on export earnings. The growth in the debt obligations among other things have been negatively affecting the GDP (Gross Domestic Product) and BOP over the years. However, Familoni (1997) as cited in Ayodele, (2012) is of the opinion that debt procurement is based on the assumption of economic growth and development. However, the contracting or increment of debt is not a bad policy per se as it could bridges the gap between domestic savings and investment, thereby accelerating the pace of economic growth but debt problem arises because the developing countries cannot manage their debts due to the fact that they are not in full control of their economies. According to the author, a country like Nigeria cannot manage what it cannot control since Nigeria's exports are determined exogenously. The external debt burden which reduced in the early 1997 has resuscitated in the form of domestic debt. This is mainly to the fact that a high proportion of domestic borrowing has gone into the servicing of external debt obligations, interests and capital repayments.

Conclusion

This paper has provided an essential survey of public debt, external competitiveness and fiscal discipline in Nigeria. The analytical arguments reviewed have policy implications if there are to be any policy gains from these studies. The conclusion that can be drawn is that, for public debt to serve as an engine of growth, it has to be properly managed and the resources it makes provides the need to be prudently and efficiently utilized; as well as adoption of public debt management strategies which involves careful planning of debt acquisition, employment and retirement. Other important factors of consideration is that to achieve debt reduction and sustained economic recovery, the government should formulate and implement with utmost debt policies aimed at debt rescheduling on highly concessionary terms, outright debt cancellation and maximization of Nigeria's access to concessionary assistance from the multilateral institutions, the Paris Club of creditors, the London Club (Par Bonds and Promissory notes) and others. The co-integration/error-correction models confirmed the importance of variables thought to be significant in conventional studies, the existence of a long-run relationship and causality in public debt function.

The estimation of conventional functions which incorporates a partial adjustment mechanism and utilize the co-integration/error-correction approach will continue to

remain a prominent research area in Nigeria. Research on the conditions in which public debt becomes unmanageable and unsustainable is important and needs attention.
More research to validate government's mode of financing expenditure whether by raising taxes or issuing debt will remain an active research area. The risks of domestic debt to an economy that issues its own currency lies in the fiscal sustainability risks which could be addressed by printing money. This however has its own risk, particularly with regards to inflation. For a developing economy that is far below its internal equilibrium as a result of structural inefficiencies, these risks are intensified when the proceeds of bond issues are not applied to expanding the economy's production.

The Nigerian government should promote a budget investment policy that mandates the application of borrowed funds into investment in infrastructure with punitive measures for defaulters. Through this approach, government can tap the full benefits of the domestic public debt with reduced fear of fiscal sustainability working with the monetary authorities. The process would also support deepening the financial market and growing the economy.

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Using ICT in Teaching Vocabulary Development in Primary Schools in Nigeria

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ABSTRACT

This study investigated how ICT facilitates teaching of vocabulary, the ways teachers use ICT in teaching vocabulary and problems that hinder teachers from using ICT in teaching vocabulary development. The design of the study was survey; the area of the study was Awka town with 1250 primary teachers selected as the sample for the study from a population of 3754.

Three research questions guided the study with a 24-item questionnaire used to collect data for the study. Mean scores were used to analyse the data. The findings revealed that teachers supported the use of ICT to teach vocabulary development; teachers do not use ICT in teaching vocabulary and they identified some problems which hinder their use of ICT in classroom instruction. These problems include poor finances to procure computer, slow and frustrating network connectivity, epileptic power supply, no access to computer facility and lack of computer skills by the teachers and pupils. Based on these findings, some recommendations were made.

INTRODUCTION

Vocabulary development is the act of acquiring words to equip oneself for effective communication, either orally or in writing (Wise, 1992). It is an aspect of language learning which prepares an individual especially a growing learner for language use. During the primary years, children acquire word knowledge in a fundamentally aural way from the language that surrounds them. Through listening to and talking about life experiences and stories, children develop a rich vocabulary. As they have opportunities to talk about and to categorise their everyday experiences, children begin to make sense of their world and to use language to negotiate and describe it. According to Johnston (2000) vocabulary instruction focuses on learners expanding the breadth and depth of vocabulary knowledge. Reading specialists like Johnston (1998); Johnston (2003); Juel and Minden-Cupp (2000) believe that vocabulary could be oral or reading. According to the specialists, oral vocabulary refers to the words one knows in speech while reading vocabulary refers to words one knows in print. Beginning readers use their oral vocabulary to make sense of the words they see in print, and thereby extend their reading vocabulary. As they begin to read, they learn the new words that are not part of their oral vocabulary through direct instruction, using dictionaries, and through the use of the content in which they read the words. The world is advancing technologically at an increasingly fast rate, such that learners at all levels of education especially at the base are trained to be part of the advancement. Jones, Torgessen, and Sexton (1987) in their study comparing direct instruction and software application in teaching vocabulary found out that children, who work with software application specially focused on vocabulary development, acquired better strategies for identifying new words that do not appear in the programme. This is an indication that these programmes help children acquire word learning strategies not just the meaning of the specific words taught. Use of electronic applications and texts provided by the computer has been found to have positive impact on children's vocabulary development (Jones, et al, 1987).

Vocabulary instruction in Nigeria for many decades has been through direct instruction (Okoh, 2008). In their studies, Reinking and Rickmann (1990); Kasiena and Koboh, (2001) have pointed out the limitations of using direct instruction to teach vocabulary in primary education. Such limitations range from having a narrow scope which concerns only new words encountered in classwork and being highly dependent on teacher's prescription concerning only those new words in recommended texts. Bear (2008) observes that many vocabulary programmes are characterised by explicit skill instruction, a systematic scope and sequence, and repeated practice. However, much of the repeated practice consists of rote drill, so that children have little opportunity to manipulate word or apply critical thinking skills. The implication lies on the fact that at the rate at which children acquire vocabulary is slow and the volume of vocabulary within their access is low. The effect of this on their communication competencies either orally or writing is negatively adverse. Becoming fully literate is absolutely dependent on fast accurate recognition of words and their meanings in texts, and fast, accurate production of words in writing so that readers and writers can focus their attention on making meaning (Bear, 2008). It is, therefore, very crucial to expose children to use software application in vocabulary development in order to equip them for literacy development. The purpose of this study, therefore, is to find out how ICT can facilitate vocabulary development instruction, the ways in which teachers use ICT in teaching vocabulary development and problems that hinder the teaching with ICT.

Research Questions

The following research questions guided the study:

1. How can ICT be used in teaching vocabulary development in the primary school?
2. In what ways do teachers use ICT in teaching vocabulary development in the primary school?
3. What problems hinder teachers from using ICT in teaching vocabulary development in the primary school?

Research Methodology

This study employed a descriptive survey design which took place in Awka urban. A total of 25 primary schools with a population of 3754 teachers were studied. Random sampling technique was used to select 1250 teachers out of the total population while three research questions guided the study. A 24-item research instrument (questionnaire) was developed, validated and used for data collection. The instrument was structured on a four-point rating scale of Strongly Agree (SA, 4 points), Agree (A, 3 points) Strongly Disagree (SD, 2 points) and Disagree (D, 1 point) for research questions 1 and 3 while research question 2 was structured on four point rating scale of Always (A, 4 points) Almost Always (AA, 3 points), Rarely (R, 2 points) and Never (N, 1 point). The instrument had four parts. Part A sought demographic data, part B sought how ICT could be used in teaching vocabulary development in primary school, part C sought the ways in which teachers use ICT in teaching vocabulary while D sought to find out the problems which hinder teachers from using ICT in teaching vocabulary. Mean scores were used to analyse the research questions. Mean scores 2.50 and above were accepted while below 2.50 were rejected.

Result

The results were presented according to the research questions.

Research question one

Table 1: Teachers mean responses on how ICT could be used in teaching vocabulary development in primary schools.

S/N	Item	x	Decision

1.	Children should be introduced to software that deal with word study	3.01	accepted
2.	Teach children to manipulate words online	3.01	Accepted
3.	Provide opportunities for access to word games online	2.86	Accepted
4.	Provide online interactive vocabulary lessons	2.74	Accepted
5.	Provide online dictionaries, thesauri, encyclopaedia, etc.	2.69	Accepted
6.	Provide online texts with hyperlinks that gives learners definition of words	2.70	Accepted
7.	Provide web logs	2.61	Accepted
8.	Provide websites	2.66	Accepted

Table 1, all the items scored above 2.50 which show that teachers accepted all the items on how ICT could be used in teaching vocabulary development in the primary school.

Research Question 2

Table 2: Teachers mean responses on the ways in which they use ICT to teach vocabulary development in primary school.

S/N	Item	x	Decision
1.	I provide online interactive vocabulary lessons	2.46	Rejected
2.	I encourage learners to access online dictionaries, thesauri and encyclopaedia	2.31	Rejected
3.	I encourage learners to access online texts with hyperlinks that give learners definitions of words	1.96	Rejected
4.	I provide online manipulative words	2.30	Rejected
5.	I provide web logs	1.21	Rejected
6.	I provide websites	1.64	rejected
7.	I introduce children to software that deal with word study.	1.59	Rejected
8.	I provide opportunities for children to access online word games	1.44	rejected

Table 2, all the items scored below 2.50 which shows that teachers do not use ICT to teach vocabulary development.

Research question 3

Table 3: Teachers mean responses on the problems that hinder using ICT in teaching vocabulary development in primary school.

S/N	Item	x	Decision
1.	Lack of access to computer	2.68	Accepted
2.	Lack of knowledge of use of computer	2.77	Accepted
3.	Poor finances for procurement of computer	2.61	Accepted
4.	Poor energy supply	3.02	Accepted
5.	Children are untrained to operate computer	3.11	Accepted
6.	It is time consuming	2.50	Accepted
7.	Access to computer is expensive	2.52	Accepted
8.	Connectivity could be frustrating	3.41	Accepted

Table 3 above shows that all the items scored 2.50 and above. The result, therefore, indicates that teachers accepted that there are problems hindering them from using ICT in teaching vocabulary in primary schools.

Discussion

Results of the research question one showed that teachers accepted that ICT could be used to teach vocabulary. This finding corroborated the findings of Anderson-Inman and Honey (1998); Reinking and Rickman (1990) who found out that children show marked improvement in vocabulary acquisition and comprehension when they use electronic texts in place of traditional print-based text because they engage learners in active reading to enrich vocabulary. Use of ICT in vocabulary development provides good opportunities for learners to develop critical thinking. This is so because ICT provides many instructional packages which facilitate learning. The result of research question two showed that teachers do not use ICT in teaching vocabulary development. According to Kesiena and Okoboh (2010) ICT is yet to be integrated in the curriculum of all levels of education in some part of Nigeria. ICT provides learners with additional opportunities to extend their vocabularies by increasing the amount of reading and writing they do through the use of online materials and exchanges. Learners need hands-on opportunities to manipulate word features in a way that allows them to generalise beyond isolated individual examples to entire group or words that are spelled the same way (Juel and Miden-Cupp, 2000).

The result of research question three showed that there are problems which hinder the use of ICT in teaching vocabulary development. These problems range from lack of access to computer, lack of knowledge of operation of computer, poor finances to procure computers, poor power supply, children lacking knowledge of how to operate computer, ICT being time consuming, access to ICT being expensive to connectivity being frustrating. The need to use ICT in teaching vocabulary development cannot be over-emphasised, considering the fact that, using ICT to design a word study programme that explicitly teaches learners necessary skills and about how words work is a vital aspect of literacy development.

Conclusion

Vocabulary development as a vital aspect of literacy development is critical and should be handled with utmost concern by educators. Without adequate vocabularies, the child cannot communicate effectively either in speech, reading or writing. Use of ICT in vocabulary development is therefore crucial to equip the child adequately for literacy development.

Recommendations

1. The government should provide primary schools with computers and integrate computer education in the primary education curriculum. This would provide opportunities for pupils to be trained in computer operations. Accessibility to computer would also provide opportunities for pupils to explore the software on word study. Children are adventurous; as such they would be enabled to navigate the Net in search of websites for acquisition of effective strategies for word study.
2. Primary school teachers should be trained by government on the use of computer. This would equip them to teach using ICT. Knowledge of use of computer would enable teachers to identify websites that offer vocabulary study packages either in form of games, exercises, animations or hyperlinks.
3. Proficiency in computer usage should be a requirement for recruitment of teachers in primary schools by government.

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Using Labour Market Information to Improve Vocational Education and Training (TVET) Programmes in Nigerian Colleges of Education.

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INTRODUCTION

For a little over two decades, Nigerian labour market has been showing deep concern over the quality and number of employable graduates from its Technical Vocational Education and Training (TVET) programmes (Abelega, 1996). The trust of the concern is that the labour market perceives fresh graduates as not possessing the requisite knowledge and skills for employment in their areas of training and holds pre-service training responsible. Specifically, employers of TVET graduates from Nigerian institutions of higher learning (just like their counterparts at the lower levels of education) report that available graduates do not have adequate skills and hands-on exposure in what is required by the labour market in their chosen vocations (Eze, 1990).

There is also another worry by the labour market which relates to graduates of TVET produced in Nigerian educational institutions not demonstrating sufficient entrepreneurship spirit required for success in their trades, let alone self-employment! This absence of entrepreneurial skills among school graduates is blamed on the inability of the Nigerian educational system to fathom and include entrepreneurial skills and knowledge in the school curricula (Abelega, 1996). This situation has not only reduced the efficiency of the school system to produce the needed generation of workers for the country's industries but has also reduced Nigeria's ability to generate employment, create wealth and reduce poverty.

The Nigerian National Policy on Education (NPE, 2004) posited that the goals of wealth creation, employment generation, poverty reduction, and value re-orientation can be effectively pursued, attained, and sustained through an efficient, relevant and functional education system that has TVET in its proper place and shape. However, the delivery of TVET in Nigeria has suffered from many years of neglect, especially under the military rule. This is compounded by the inadequate attention paid to sustainable policy that will futuristically match manpower production to the emerging needs of the Nigerian economy. As a result, emphasis in education programmes and training was placed on theoretical knowledge at the expense of technical, vocational and entrepreneurial education.

The Nigerian government, having realised this obvious flaw, has commenced working on ways to improve the productive capacity of Nigerian graduates through skills acquisition, entrepreneurship development, establishment of career and innovation centres and knowledge based enterprises development. The objectives are to foster an increasing entrepreneurial culture that helps students and teachers understand the fundamentals and feasibility of forming enterprises, to educate, encourage and support Nigerian graduates in their quest to establish and manage sustainable business ventures, including but not restricted to those arising from research. Even with the current shift in emphasis, very little is down to match TVET to labour needs of society. There is, therefore, a lacuna in the placement of graduates into well-paying jobs that offer opportunity for continued employment and growth.

Labour market information (LMI) is one of the essential ingredients ensuring that TVET programmes are targeting viable occupations. Labour market information is about the data, statistics and research about the world of work and the job market: It tells one about the following:

1. where the jobs are - places, industries and occupations;
2. what types of jobs are available - full or part-time, permanent, temporary or seasonal;
3. the skills and qualifications people need to do these jobs;
4. the number of people looking for work;
5. how the job market is likely to change in the next few years; and
6. the skills and qualifications that people will need to get and keep a job in the future.

Labour market information summarizes employment supply and demand, wage data, education and training requirements, and other career-related information. Data such as these are valuable for analysing the economy of a geographical area, determining future workforce needs, designing effective programs of study and providing career guidance to students and job seekers. LMI is often the starting point for more detailed occupational analysis and standards development, which in turn are the basis for developing curricula and corresponding assessments.

Despite the obvious role that LMI can and do perform, there is little evidence to demonstrate the use of strategic labour market information in the planning and curriculum development of TVET programs in the country. This situation is true not only for TVET skill development programs but also TVET teacher pre-service production programmes in colleges of education.

It is pertinent to note that the National Commission for Colleges of Education (NCCE) has the mandate to develop curricula, lay standards, and accredit TVET programmes that produce teachers for basic education. Since learners at the basic education level require more of the knowledge, skills and competencies that can reduce poverty among the majority of the country's populace, NCCE should be first in catalysing the process of change that puts LMI in the forefront of curriculum development for TVET programs. Unfortunately, that is not the case for now. Therefore, it is the focus of this paper to demonstrate how using labour market information, the NCCE can improve TVET programs offered in the colleges of education.

Current Procedure for LMI Generation and Utilization in the NCCE

The traditional mandate of the NCCE is to lay down standards and accredit educational programmes leading to the award of the Nigeria Certificate in Education (NCE) which is the minimum qualification to enter into and progress in the teaching profession. For now, these standards to be met by NCE graduates are encapsulated in a document called NCCE Minimum Standards. Since inception of the commission in 1989, there have been four editions of the standards published by NCCE in addition to the current edition in press.

Generally, the procedure for curriculum review is the same for all programmes offered in the Colleges of education. It consists of a call circular to all NCE awarding institutions, employers of labour, professional associations and ministries of education to submit observed lapses in the existing NCE curricula. Once the datelines expire, relevant programme officers synthesize the salient issues in the received submissions to produce highlights of matters requiring attention in the curriculum to be reviewed. The documents so produced become the working paper for critique workshops that follow. The challenge here is that the quality of the working paper is dependent on the quality of the submissions received and the program officer that synthesized the submissions to the commission. Of course, one cannot compare the outcome of such a procedure of curriculum development with one that is anchored on research that revealed the existing LMI.

At the workshops held in each of the six geo-political zones, experts, employers of labour and the academia thoroughly examine the issues before resolving on the mode and items of review in the existing curricula. Irrespective of the decisions reached, the outcome of the first series of critique workshops is subjected to further critique made up of experts from universities, colleges of education, polytechnics and captains of industry. The problem with this approach is that the quality of the outcome from the workshop depends on the quality of the attendees, LMI available to them and their experiences on the job. For now, too few industries exist with some major of success in technical vocational education in the country. This means that the amount of relevant world-class hand-on skills is also limited. The effect of the ugly situation on the TVET programmes offered in the Colleges of education is that, employers of labour perceive that, there is low depth in the variety and value of practical skills in TVET programmes currently run in the Nigerian colleges of education.

Current Strategies for Generating LMI Used in Colleges of Education Curricula

The major challenge facing Nigeria as a nation has been getting quality teachers (Afe, 2001). Furthermore, of all the educational challenges that beset the nation, none is as compelling as the one relating to the training of competent TVET teachers who directly or indirectly influence the quality and quantity of services provided to industries. As we all know, poor teachers tend to produce their own kind (Fafunwa, 1991).

Since its establishment, the NCCE has been doing all within her capacity to see that the nation gets the best quality of teachers she deserves (generally in all fields of education and particularly in TVET). In carrying out this noble mandate, the commission has been in the forefront in the promotion of teacher education at the sub-degree level in the country. In the matters of admission policy, for example, the commission structured her policy on admission into colleges of education in favour TVET, science and technology. In addition to the statutory roles of NCCE, the commission holds tenaciously to the philosophy that the strength of any durable system lies in solid and firm foundation in teacher education. The philosophy motivates the commission to prepare academic programmes that ensure a smooth transition from basic education to post – basic education in teacher education. The commission perceives post – basic education as a means to improving the quality, quantity and equitable access to TVET, science and technology education as a means to enhancing the country's competitiveness in the emerging global economy. The commission's perception underlying the post-basic education is to support the emergence of teachers who are capable of producing graduates in TVET, Science and technology that can competently work to ensure science and technology – driven economic growth that is sustainable through quality TVET.

To achieve this orientation in TVET teacher education, several strategies for generating LMI are adopted by the commission to engender sustainable quality TVET in colleges of education across the nation. These strategies include:

1. *Collaborative efforts in laying down and Reviewing Minimum Standards for all Colleges of Education.*

   For purposes of laying down minimum standards, the commission adopts a collaborative approach for the generating of LMI whereby universities which make varying scholastic demands on the NCE programme are involved. Similarly, due recognition is also given to academic and professional expertise that exists in the colleges of Education, polytechnics and other NCE awarding institutions. Experts from these institutions, industries that utilize TVET graduates and other stakeholders form the majority of the participants that serve in the panels that draws up the draft documents as well as those who participate in the NCCE minimum standards workshops that are hosted in different colleges across the country by the commission.

   The evolution of NCCE Minimum Standards in TVET programmes begins with a call by the National Commission for Colleges of Education to stakeholders to submit proposals in the areas requiring change or deficiencies in the existing NCE - TVET curriculum. These submissions are then collated by the academic programmes department and used as working papers for NCCE Minimum Standards Review workshops at different levels. At first level, the outcome of the workshop produces drafts minimum standards document from subject panels. These drafts are subjected to a critique in a second stage review workshop attended by resource persons from industries, the universities, polytechnics and Colleges of Education.

   Deliberations at the workshop could result in a modification of the draft NCCE Minimum Standards in terms of contents and course description. At this workshop also, attention of participants could be drawn to the aspects of teacher education which need urgent evaluation. From these efforts, it is possible to evolve a curriculum that will not only guarantee parity among colleges of education but also meet the yearnings and aspirations of the wider Nigeria society. Additionally, the approach is a veritable strategy in assisting NCE graduates in transiting into B.Ed. degree programmes in the university without problems

2 *Accreditation of Academic Programs in the College Of Education.*

   As intended for all tertiary institutions in Nigeria, accreditation of NCE - TVET programmes in the Colleges of education by the NCCE is for quality improvement and to ensure that there is parity in all NCE programmes in accordance with the set standards. As a LMI strategy, the focus of accreditation is to:

a. guarantee that the specific NCCE Minimum Standards for the award of NCE TVET is not only attained but it is enhanced and sustained by all NCE awarding institutions;
b. validate the quality of NCE graduates with respect to their areas of specialization as perceived by experts and captains of industries; and
c. Certify to the employer and community that TVET programs in the Colleges of education are of desirable standards and their graduates are adequate for employment and further studies.

3. *Monitoring of Academic of Programs and Infrastructure*

This is a strategy by the commission to ensure that the guidelines specified in the NCCE Minimum Standards documents are closely followed. During the monitoring exercise, the commission determines whether and how the educational objectives of the institution are achieved in line with the published NCCE guidelines. At site visit by programme officers, judgment is made about the objectives of the programme, admission requirement and their implementation, physical facilities, personnel, mode of teaching as well as the application of graduation requirements in the institution. Decisions about the above parameters inform the commission on the desirable academic status in between the accreditation exercise of the institution.

4. *Ranking of the NCE Awarding Institution on the Aggregate Quality of TVET Programme*

Another strategy introduced by the commission to bring about quality assurance in NCE Teacher Education and encourage healthy competition among the colleges is the ranking of Colleges of Education on the basis of aggregate quality of their TVET programs. Following this strategy, a total of aggregate scores of TVET programmes offered by each NCE awarding institution is compiled and computed as the sum of the individual scores in each of the assessed programme. The product of this computation yields mean quality index score which provides a conglomerate quality measure of the general strength of the NCE - TVET programmes offered by the institution. The result of this analysis and standing of each NCE awarding institution is then publicized.

As expected, this approach to quality assurance has introduced the spirit of competition that has encouraged the colleges to compete for enviable positions in the ranking which is not only necessary for quality improvement but it is also a balm for quality assurance to the Nigerian public. At least for now, parents, students, proprietors and other stakeholders have a ready document to consult for their quality assurance needs in NCE TVET Teacher Programmes in the country.

5 *External Moderation System*

A major consideration in any quality assurance process in education, the world over, is the issue of parity. Parity in educational programmes is essential because stakeholders in the educational enterprise wish to be assured that a given level of education under one setting is the same as that which is undertaken in another setting provided it is the same level of education.

One way the commission is able to achieve this in the colleges of education system is to institute a veritable External Examination system. Under the arrangement, experienced and professionally qualified senior academic staff is made to moderate examination of all NCE awarding institutions across the nation. Thereafter, reports on the moderated papers are sent to the commission (and the respective institutions) which guides decisions about quality and the certification of the affected schools.

6. *Guidelines for Establishment and Mounting New Programmes*

Another strategy for generating LMI by the commission is lying down of guidelines for establishing new institutions and mounting new TVET programmes. Under normal situations, consideration of a new programme comes after an accreditation exercise. In order to obtain approval for new programme or to establish a new institution, the institution must be able to:

(a) Provide a justification for the new programme in line with the National Policy on Education (NPE, 2004);
(b) Indicate sources and projection of students' intakes;
(c) Provide the curriculum (if the program is not in the minimum standards);
(d) Show evidence that it possess the teaching personnel for the programme; and
(e) Provide the requisite facilities for the programme
(f) Show how the college has taken into account existing labour market information in conceptualizing and developing the programme.

Until these conditions are examined and found to exist in an institution, no new programme or institution is approved to run an NCE - TVET programme.

How to Use Labour Market Information as a strategy to improve Vocational Education and Training:

Labour market information can be overwhelming and confusing (Alberta, 2009). Learning what it is and how to use it can help the trainer educate for existing jobs in society. Labour market information tells one about:

1. What jobs and skills employers are looking for?
2. Which industries are hiring?
3. Where to find employers who are hiring?
4. What working conditions are like for specific industries?
5. What education and training are needed for specific jobs?
6. What factors can stop prospective employees from getting a job?
7. Which job areas are growing in the future?

Worthwhile strategies for LMI would require that a training regulatory agency like NCCE would:

a) Establish systems to formulate, co-ordinate monitor and evaluate employment
b) Policies being implemented in TVET;
c) Establish Labour Market Information and Statistics System;
d) Promotion capacity building in employment and development policy making and implementation for top officials; and
e) Introduce data bases on job vacancies.

Harvesting Labour market information for improved TVET in colleges of education should, therefore, cover the principal elements of the labour market and its operations. The principal elements are the demand for labour and the supply of labour. Demand means the number of jobs available while supply tells one the number of people who are able to work. This information should be organized by time periods, sector, industries, geographic areas, etc.

In computing the figures for labour force, one should take cognisance of the number of people available to work. These numbers should be broken down by, age, gender, ethnic background, education level and skills, etc. Unemployment happens when there are more people (who want to work) than jobs. It is, therefore, desirable for NCCE to base TVET training programmes in the colleges of education on available and potential areas of need in the foreseeable future.

Generally in using LMI, NCCE should ask questions that clarify the direction of TVET skill needs in society. Asking question will often lead to other questions which would move one closer to desired objective. For example, if the LMI available in TVET discusses themes in a general way, ask questions like:

a. How will this general trend impact the local economy?
b. What opportunities might be created as a result?

If TVET skill need in an occupational area is going to be based on a prediction by an author, ask yourself:

1. What are these authors basing their prediction on?
2. Have they missed important information that would have changed their prediction?
3. Is it clear how they moved from the present to the future?
4. Are their predictions believable?
5. Are there known interest that might have biased the prediction?

Look for facts in the cloud of LMI. Choose your sources carefully for up-to-date answers. Check the date for information and be sure it is very current. Consult many labour market information sources. Some sources may provide very general pieces of information; therefore you need to seek clarifications elsewhere. Generally, there are many LMI sources. They fit into three broad categories: verbal or networking, print and electronic including internet. While several sources of LMI are available for a functional TVET programme, curriculum experts agree that the ease with which a source opens itself to information gathering process, types of LMI required preference of the user, ease of understanding of LMI generated and reliability of the source of LMI play major roles in choosing the source of LMI to use.

Conclusion

The paper examines how NCCE uses labour market information to improve TVET in the colleges of education. It contends that despite the obvious role that LMI can and do perform, there is little evidence to demonstrate the use of strategic labour market information outside the traditional approach of inviting TVET experts and stakeholders to a curriculum review conference for the purpose of curriculum development of TVET programs in the Nigerian colleges of education. This situation is true not only for TVET skill development programmes but also TVET teacher pre-service production programs in colleges of education. The paper believes that such an approach should be complemented with empirical data on skill gaps in industries that employ TVET graduates and provides strategies for utilizing LMI in the colleges of education. It recommends that NCCE should develop the skills needed to recognize and use LMI in TVET programmes, and use demographic data and labour market trends to make decisions about TVET program improvement in the colleges of education.

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Challenges of Global Financial Crisis and Opportunities for Growth through Entrepreneurial Skill Development in Anambra and Ekiti States, Nigeria.

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ABSTRACT

The purpose of this study was to determine the traits, characteristics and entrepreneurial climate required by job seekers and industrialists for the development of entrepreneurial skills required in industries to combat the influence of global financial crises in Nigeria with particular reference to Ekiti and Anambra states. A survey research design was adopted for the study. A total of 100 industrialists and 200 job seekers from the two states were selected for the study through Purposive sampling technique. The instrument used for data collection was a 44-item researcher designed questionnaire which was content validated and there after pre-tested; yielding reliability co-efficient of 0.87. Frequency counts, percentage scores and ranking order were used for the data analysis. The study among others, identified 20 traits that were adjudged to be needed, the 10 characteristics and 12 factors required to promote entrepreneurship opportunities in various industries. Based on the findings it was recommended, among others, that rebranded and effective entrepreneurial schemes developed between the schools and industries should be evolved and sustained in Nigeria.

Keywords: Entrepreneurs, Entrepreneurial studies, Job seekers, Intrapreneurs, Economic dysfunctions, Financial crisis, Skill development.

INTRODUCTION

The concept of economic crisis can be conceptualized as the difficult moment for the economy of a country or the whole world, when there is less trade and industrial activities than the usual; whereby more people are jobless or unemployed. Wikipedia (2009) defined global economic meltdown as an economic scenario where the economies of countries all over the world have critical issues; when the Gross Domestic Products (GDP) of countries goes down in the negative zone. The economic meltdown started in the United States in late 2008. The crisis slowed down economic activates around the world. It also affected productivity, business operations and investments by way of reducing domestic and international demand for goods and services. It pushed up unemployment, because many industries and organizations laid off their workers. Lewis (2009) noted that the economic meltdown affected global oil price, exchange and interest rates, economic activities and national budgets. As stated in the Wikipedia Encyclopedia (2009), all economic activities were slowed down, and characterized by unemployment and decline in investments.

However, Akinbami (2011) opined that one way of tackling economic depression is to reduce unemployment and increase the GDP of concerned countries because the end product of economic depression is increase in poverty level, most especially in the developing countries. It has been observed that the developing countries' economies are the worst hit by the global economic crisis by trying to model their economies along the "Casino Capitalism" without solid productive base which the big economies already have. Akinbami (2011) remarked that the developing countries, like Nigeria, risk being torn asunder if the current situation persists without creating a productive solid base whereby Nigerians could be exposed to entrepreneurial schemes so as to be able to own business enterprises and being able to afford to live above poverty line.

Fadakinni and Famiwole (2001) defined an entrepreneur as an individual who initiates, owns and runs a business successfully. He/she is someone who can organize human, financial and material resources for the production of goods and services to maximize profit. They are capable of affecting a positive change in the business activities of their environment no matter how small it maybe. They can be described persons who organizes, manages a business undertaking and assume risk for the sake of maximizing profit. According to Awe (2002) an entrepreneur is an individual who perceive needs, conceives goods and services to satisfy the needs and manages the factors of production to achieve predetermined set goals. Awe noted that the role an entrepreneur performs is called the entrepreneurial function, while the process is called entrepreneurship.

The traits an entrepreneur should cultivate to develop a good entrepreneurial mind set involve flexibility, positive interest with the zeal to acquiring most of the desired skills to perform effectively. According to Aderogba (2011) the concept of entrepreneurship revolves around activities including identification of enterprises, combination and allocation of resources, planning and controlling business management, mobilization and utilization of local materials, risk bearing, marketing, innovation and the creation of employment opportunities. According to him, entrepreneurship foster economic growth, increases productivity and creates new technologies, products and services required for economic growth and development of a country. Entrepreneurship is a multidimensional concept. It is the willingness and ability of a person, to seek out investment opportunities establish in an environment and be able to run an enterprise successfully based on the identified opportunities.

Nwafor (2007) noted that the developments of entrepreneurship are sometimes seen as stemming from economic theorist, psychological and behavioural approaches. According to him, all the three approaches have contributed significantly to the understanding of the entrepreneurship process. In which case any attempt to look at an entrepreneur from only one dimensional approach may not work, except a holistic approach is used – to describe the entrepreneurs personality traits influenced by his behaviours (psychologists view), when he is influenced by the society in which he lives sociologists view) and influenced by the economic opportunities and government incentives, (economist view). In line with this projection, entrepreneurship can be defined as the process of creating new economic entity centred on a novel product or service or at the very least, one which differs significantly from products, or service offered elsewhere in the market. Similarly, Nwafor emphasized that entrepreneurship is the process of creating new enterprise that gives value to humanity by filling up neglected area(s) or a yearning vacuum left unfilled. Entrepreneurs on the general terms are the pivot on which the economy of a nation rotates.

A nation that has entrepreneurial and intrapreneurial deficiency will find it difficult to industrialize and grow economically. Ogunjobi (2012) defined intrapreneurship as a method of stimulating and capitalizing on individuals in an organization who thinks that something can be done differently and better to increase output. Intrapreneurship is another dimension which enhances the entrepreneurial efforts in an organization. For example, an entrepreneur starts an organization and in due course, employs hundreds of talented engineers, technocrats, accountants, etc., to work in his/her company. These employees get involved in the organization work and they too would have entrepreneurial skills and talent to display in their departments and areas of jurisdiction. If they are allowed to exhibit their entrepreneurial skills and innate abilities, rather than routine work, then their innovative efforts and contribution will help them to grow better with reward. This process is referred to as Intrapreneurship and the word “Intra” means within the organization. “Developing a spirit of entrepreneurship within an existing organization is referred to as Intrapreneurship.”

Intrapreneurship is necessitated due to pressure of competitive calls for extra market share, business leadership, price supporting business reliability and brand image. To engender creativity and enhance continuous innovation, intrapreneurship, as a factor, plays a vital role. Ogunjobi (2012) noted that intrapreneurship requires a persistent and deliberate effort to involve all employees and get the commitment of top management to play a supportive role for monetary and non-monetary motivation. Intrapreneurial leaders, just like entrepreneurs, have to be visionary and flexible, understand the business environment, stimulate and support the team work and encourage suggestion and open discussion. The intrapreneur gets involved with the dream, mission and vision of the newly created venture, and will do almost everything possible to help ensure its success. Reward system should take care of the intrapreneur for the energy and efforts and risks expended in the creation of the new venture. The reward should be based on the attainment of an established performance goal.

Purpose of the Study

The main purpose of this study was to determine the traits and characteristics required by job seekers and industrialists toward the development of entrepreneurial skills to combat the influence of Global Financial Crisis in Anambra and Ekiti States. Specifically, the study sought to:

(1) identify the traits needed by job seekers towards the development and adoption of entrepreneurial skills industries or business set ups.

(2) determines the characteristics required of job seekers to enhance the development of entrepreneurial skills in business set up.

(3) to identity the factors required for promoting intrapreneurial climate for entrepreneurs.

Research Questions

The following research questions were raised and answered in this study.

1. What are the traits needed by job seekers towards the development of entrepreneurial skills and adoption of industries and to set up a business?
2. What are the major characteristics required to enhance the development of entrepreneurial skills among job seekers?
3. What are the factors required to promote intrapreneurial climate for entrepreneurs?

Methodology

A descriptive research design of the survey type was used in the study. A total of 100 industrialists and 200 job seekers from Ekiti and Anambra states were selected for the study using purposive sampling technique. The instrument used to collect the relevant data was a 44-item researcher designed and developed from literatures on global economic crisis, intrepreneurial and intrapreneurial skill development. The questionnaire was content validated, and thereafter pre-tested, yielding reliability co-efficient of 0.89. Frequency counts, percentage scores and ranking order statistics were used for the data analysis.

Results

The results of the study are presented below based on the stated research questions.

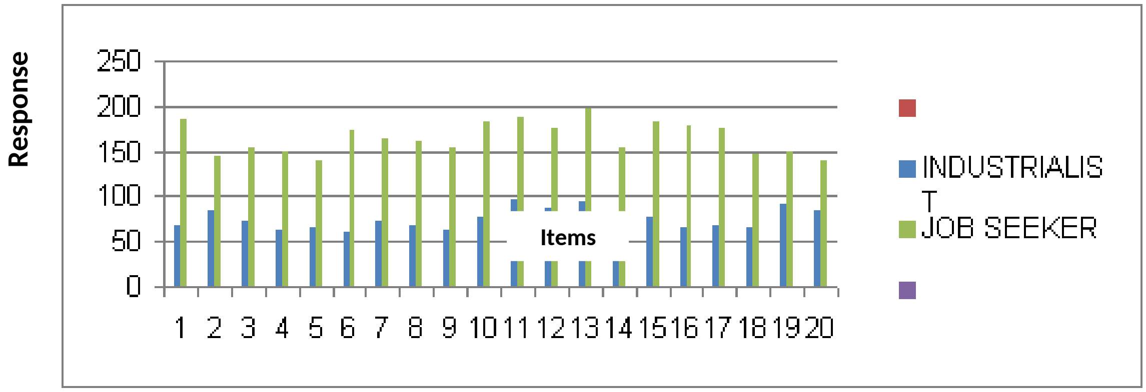
Research Question 1:

What are the traits needed by job seekers towards the development and adoption of entrepreneurial skills in industries to set up a business?

Table 1: Percentage perception of respondents on the traits needed by job seekers towards the development of entrepreneurial skills to set up a business

		Industrialists N-100		Job Seekers N-200		
S/N	**Needed Traits**	**Frequency**	**%**	**Frequency**	**%**	**Remarks**
1.	Optimistic	67	67	184	92	Needed
2.	Foresight	83	83	144	72	Needed
3.	Positive drive	73	73	153	76.5	Needed
4.	Perceptive	63	63	148	74	Needed
5.	Openness of mind	66	66	140	70	Needed
6.	Getting along well with others	60	60	174	87	Needed
7.	Hardworking	73	73	164	82	Needed
8.	Responsible to suggestion and criticism	68	68	160	80	Needed
9.	Individualistic	62	62	155	77.5	Needed
10.	Like challenges	78	78	182	91	Needed
11.	Risk taking ability	95	95	188	94	Needed
12.	Need for achievement	86	86	175	87.5	Needed
13.	Profit or goal oriented	93	93	196	98	Needed
14.	Independent individual	68	68	155	77.5	Needed
15.	Confidence	77	77	182	91	Needed
16.	Persistence	65	65	177	88.5	Needed
17.	Knowledgeable	68	68	175	87.5	Needed
18.	Perseverance	66	66	146	73	Needed
19.	Determination	92	92	148	74	Needed
20.	Versatility	85	85	140	70	Needed

Fig. 1 Traits needed for development of entrepreneurial skills



Key Q1-Q20 items on the questionnaire

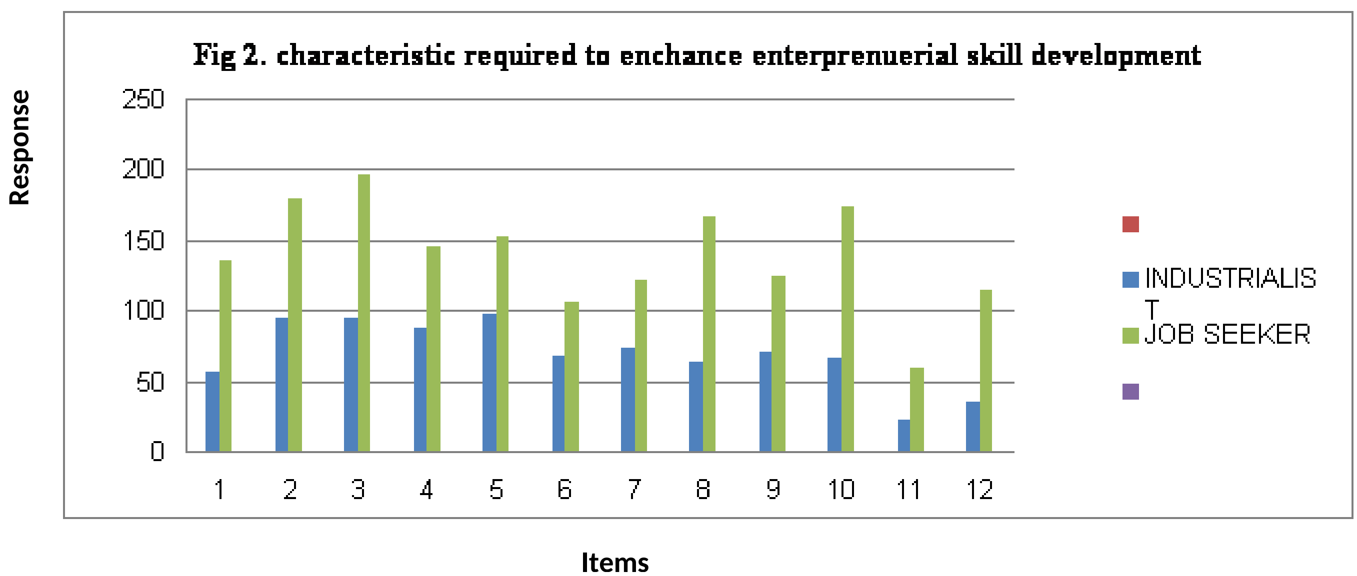
Results contained in Table 1 reveals twenty (20) needed traits by job seekers for the development and adoption of entrepreneurial skills needed for performance in a business or an industry. The respondents indicated agreement that the traits are all needed to encourage the process of starting a business, and to perform effectively in industries.

Research Question 2: What are the characteristics required to enhance the development and adoption of entrepreneurial skills among job seekers?

Table 2: Percentage perception of respondents on the characteristics required by job seekers towards the development and adoption of entrepreneurial skills.

S/N	Characteristics required	Industrialists		Job Seekers		Remarks
		Frequency	%	Frequency	%	
1.	Self confidence	57	57	136	68	Required
2.	Future-oriented mission	94	94	180	90	Required
3.	Creativity	95	95	196	98	Required
4.	Innovative	87	87	146	73	Required
5.	Risk taking	98	98	152	76	Required
6.	Originality	68	68	106	53	Required
7.	Leadership	73	73	122	61	Required
8.	Action oriented	63	63	166	83	Required
9.	Being proactive	70	70	124	62	Required
10.	Coordinator of scarce resorts	66	66	174	87	Required
11.	Wealthy	22	22	60	30	Not required
12.	Extremely educated	35	35	174	57	Not required

Key: Q1 – Q20 on the Questionnaire



Data presented in Table 2 shows that the respondents agreed with ten (10) out of the twelve (12) characteristics presented. They most agreed that creativity is mostly required (95% and 98%) for the development and adoption of entrepreneurial skills so as to be self-reliant. The respondents disagreed (22% and 30%), that a job seeker should be wealthy before he/she could take the option of establishing a business of his/her own. However, they have divergent views (35% and 57%) on the statement that a job seeker should be extremely educated before he/she could establish his/her own business.

Research Question 3: What are the factors required to promote intrapreneurial climate for entrepreneurs?

Table 3: Ranking order of entrepreneurs' perception on factors required to promote intrapreneurial climate in industries. N-100

S/N	Factors to Promote Intrapreneurship	%	Ranking Order	
1.	Establishment organizational vision/mission statement	70	7	Required
2.	Top management support	94	3	Required
3.	Multidiscipline team work	73	6	Required
4.	Reinforcements to be encouraged	70	7	Required
5.	Encouragement of voluntary efforts	66	9	Required
6.	Encouragement of trial and error methods	58	12	Required
7.	The use of technology/modern machines	83	5	Required
8.	Encouragement of innovations	95	2	Required
9.	New ideas and creativity to be encouraged	98	1	Required
10.	Adequate resources to be made available	63	10	Required
11.	Failure to be taken as part of work	60	11	Required
12.	Reward on attainment of established performance goals	90	4	Required

Results contained in Table 3 indicated the ranking order made by the entrepreneurs to encourage intrapreneurial climate in industries. They opined that new ideas and creativity should be encouraged, followed by the encouragement of innovations. They also ranked top management support as 3rd and reward on attainment of established performance goals as 4th. However, they agreed that all the identified twelve factors are required for intrapreneurial skills development in industries. Also, they ranked least, the statement that trial and error method should be encouraged even when it was believed to be required as a factor.

Findings and Discussion

The findings of this study show that respondents agreed with the twenty identified traits as needed by job seekers (as shown on the table 1) towards the development and adoption of entrepreneurial skills required to set up and sustain a business of their own or to perform effectively in industries. This finding is in agreement with those of Nwafor (2007) and

Aderogba (2011) who identified essential competencies and skills required for entrepreneurship development for students in schools and tertiary institution.

The study also revealed the ten (10) most important characteristics adjudged to be required by job seekers towards the development of entrepreneurial skills for self-reliance. This findings is backed up by the earlier findings of Igbo (1998), Fadakini and Famiwole (2002) who listed the different qualities of entrepreneurs. In 2011, Aderogba quoted Leghara and Mbah (2009) to reveal the identified characteristics that are common to most successful entrepreneurs as ability to take reasonable risk, self-confidence, handy work, as well as ability to set goals, accept the success and failure of one work and to be innovative.

The findings of the study shows in Table 3 the factors required to promote intrapreneurial climate for entrepreneurs in industries. The finding indicated that new ideas and creativity should be encouraged to promote intrapreneurship in industries. The finding is in consonance with Ogunjobi (2012) who defined an intrapreneur as a creative individual working for himself or working for an organization. According to him, where he works for an organization and still does the work of an entrepreneur, he is called an intrapreneur. According to Ogunjobi, to engender creativity and enhance continuous innovation, intrapreneurship, as a factor, plays a vital role and should be encouraged.

Conclusion and Recommendations

Arising from the findings of this study are the identified traits and characteristics adjudged to be required by job seekers towards the development and adoption of entrepreneurial skills needed to start and sustain a business or to perform effectively in industries. The findings also identified factors or climate required to promote intrapreneurialship in industries. Intrapreneurial leaders, just like entrepreneurs, have to be visionary and flexible, they should understand the business environment, stimulate and support the team work and encourage suggestions and open discussions aimed at increasing the productivity of the organization or industry. It has been emphasized that one of the ways of tackling unemployment and economic depression is to reduce unemployment, encourage business establishment and increase the GDP. The end product of economic depression is increase in poverty level of the people; hence, any attempt at reducing the poverty level and unemployment through the establishment of small and medium enterprise will go a long way to tackle economic depression.

Based on the findings of this study, the following are recommended.

1. Schools, colleges and tertiary institutions should review their curriculum to teacher or inculcate the identified traits and characteristics in their students.
2. Training institutions and apprenticeship programmes should also train appropriate traits and characteristics that are required for entrepreneurial skill development and adoption process.
3. Appropriate climate should be created in industries for more intrapreneur to emerge so as to improve the creativity of entrepreneurs and increase the output or productivity of the business set up.
4. More Vocational Education Schools and Vocational Community Centres should be established in all the states of Nigeria.
5. Specific learning experiences and traits that would enable unemployed youths and graduates to form positive habits and actions necessary for success in their business

should be encouraged by teachers, educators and instructors in schools, training institutes and in all apprenticeship scheme programmes.

6. Industries and all small and medium enterprises should work more in partnership with vocational schools, training institutes and the apprenticeships to identify specific traits and characteristics required for proficiency in jobs within their training organizations and industries.
7. Governments in Nigeria should diversify the funds realized from crude oil production and sales to the development of small and medium businesses and enterprises.
8. More funds should be allocated to Faculties and Departments where Entrepreneurial Studies are being conducted in all tertiary institutions in Nigeria.
9. Approaches to solving economic crisis in Nigeria should include a renewed, an integrated and systematic entrepreneurial skill development in schools, colleges, training institutes, community Vocational and Technical Centres and through the National Youth Service Corps scheme in Nigeria.

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The Nigerian State and Leadership Question: A Critical Appraisal

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ABSTRACT

The Nigerian nation is faced with so many critical challenges which have earned the country a disreputable status in terms of positive development amongst other nations. A cursory look at the historical developments of the country especially on governance portrays self-centredness whereby the will, good and rights of the governed have been relegated to the background by some leaders in order to actualize personal interests. In spite of claims by successive regimes to have governed to better the lives of the citizenry, the obvious remains that what is obtainable leaves much to be desired. This study traces the causes of these challenges to groups that have governed and/or governing the country; thus, adopted the elite theory for its analysis. With the aid of the theory, it shows the extent the activities of these few persons have contributed in stagnating and stifling development in the country. It concludes that there is need for an honest political leadership that would bring about the much needed development in the country. Therefore, the study makes a case for the restructuring of the nation to give room for the emergence of purposeful, viable and honest leadership with vision and strong will to move Nigeria forward.

INTRODUCTION

The prevailing system of governance that has over the years dominated Nigerian politics has remained a form of challenge towards the corporate existence and sustainable development of the people and nation. This is mainly as a result of insincerity and lack of genuine leadership on the part of the elite that governs. The nature of governance in the country is no doubt worrisome; this is because over the years, the government of the state never considered it imperative to better the lives of the populace. The series of political permutation and combination the system has been subjected to is posing serious worries to the system. The period of military interregnum bastardized the emerging democratic structures; the attendant civilian regimes since 1999 have not made any meaningful impact on the welfare of the people and advancement of the nation.

The paper attempts to go beyond the influence of Britain on the governing elite in Nigeria. It exposes the effect of the colonial administration on the psyche of the elite and buttresses how it affected development in the nation. The nature and character of leaders in the country overtime and how they have affected the development of the people and state were also discussed in this study.

The challenges of governance in Nigeria have remained multifarious, endemic and intractable in nature owing to the complexities and bizarre institutional practices the state adopted. From the emergence of Nigeria through colonial era till date, the system has continued to produce some obnoxious policies that never captured the interest of the masses. This is essentially part of the system of governance inherited from the British government. It left a sense of inhuman treatment on the people, which invoked the activities of most of the African nationalists. Thus, Abdullar cited in Yaqub (2000) calls for the rejection of imperial rule which he argues remains the bane of African crisis; the author asserts that, "I hate the Crown of Britain with all my heart because to me and my countrymen (and women), it is a symbol of oppression, a symbol of persecution, a symbol of exploitation, a symbol of brutality, and in short a material manifestation of iniquity. I hate the Union Jack because…wherever it goes…it creates a division. It cannot thrive without division. It feeds and nourishes on confusion and dissension. We must, therefore, have no more places for it in our hearts- this ugly representation of that satanic institution, imperialism…" Esiaba (2010) also shares in the frustration and thus, cautions that "the British knew what they did. He warns that: Never you under estimate British intelligence. Look at all the trouble spots in Africa and the world, can you or can you not see the expertise of the British, their political genius? And never you under estimate, as well, the imbecility of African leaders". This is purely one of the reasons why the structures of governance have not proved to possess the capacity to carry the populace along dutifully and constitutionally.

However, we cannot continue to hold the West responsible for all our woes, if we sincerely consider the issue of development to be important. This is because the present class of leadership is conceived in self-seeking formation, acute and extreme individualism which is beyond the colonial rule thesis. The questions are: *what is the essence of leadership in Nigeria where majority of the entire populace are wallowing in poverty? Why is it that after many years of colonial rule the state of Nigeria has not discovered its focus and locus? Why is it that after various successive regimes have come and gone the state keeps dwindling?* It is summed up in the character of leadership in the state and their level of commitment and competence.

Theoretical discourse

There are scholars that have analysed socio-political issues in Nigeria from the Marxists' Class perspective. Such an approach, no doubt, has its merits in understanding the deep structural issues in Nigerian politics. Class analysis explains the Nigerian situation in sections because it divides the state along several cleavages: ethnic, regional, educational and occupational lines (according to Kalu, as cited in Alemika and Okoye, 2000). It is the position of this paper that the bulk of Nigeria problem is the consequence of elite actions; thus, going by the works of elite proponents like Vilfredo Pareto: Machiavellian Realism and the Circulation of Elite; Gaetano Mosca: Ruling Class - which draws attention to the inevitability of an "Iron law of Oligarchy and Robert Michel (as cited in Krieger, 1993). The theory posits that:

> *"In all societies that are very meagrely developed and have barely attained the dawn of civilization, down to the most advanced and powerful societies; two classes of people appear – a class that rules and a class that is ruled. The first class always the less numerous, performs all political functions, monopolises power and enjoys the advantage that power brings, whereas the second, the more numerous class is directed and controlled by the first".*

In line with the submission above, it is consequential to note that the elite who are the few are characterised by three C's (3Cs) namely: group coherence, group conspiracy and group consciousness. They are designated variously as "the power elite", "the ruling class", "the political entrepreneurs", the establishment and the governing minority. Thus, their common thesis is that the concentration of power in a small set of controlling elite is inevitable in all societies that have marked history in politics. Hence, the nature of any society whether, democratic or authoritarian, dynamic or static, pacifist or totalitarian, legitimate or illegitimate – is determined by the nature of its elite. It shows that the type of elite that exists in a particular state determines the locus and direction of that state. It simply defines what is obtainable in such a state whether their policies will be in line with the desires and aspirations of the people.

In Nigeria, the elite is self-centred, think more of their families rather than the society; represents their pocket instead of the electorates, make self-protection policies against national interest. They preach democracy and practice the opposite under the guise that the country's democracy is nascent. Ake (1996a:11) aptly captures this issue, stressing that "democratisation in Africa has focussed on the elite who are the natural enemies of democracy. Although, the elite have provided the vast majority leaders of democratic movement, their involvement in democratic movement is mainly a tactical manoeuvre. It is a response to internal contradictions and power struggle within a group for whom democracy is essentially a means to power". It becomes imperative to note that over the years, the Nigerian system has suffered an immeasurable setback due to the style and character of leadership the nation produces. The collapse of several institutions is purely a function of group activities that are bent on using the state to achieve some ulterior motives against what should profit all for national development. The amazing scenario captures the fact that these few groups of persons have over the years continued to dominate and dictate paces for the citizens against their wishes and desires. Since independence, leadership has being a serious recurrent question in the country; those that govern have consistently continued in the acts that negate sustainable development. Despite the hue and cry from every quarter, they remained adamant to the plight of the public and are submissive to their various personal pockets (Ake, 1996b).

Owing to their low knowledge and sit tight traits to perpetuate themselves in power, they have created poverty in the system and have continued to do everything within their powers to sustain it. This accounts partly for why they emerge with one form of gimmicks or another in successive elections to hoodwink the electorates into believing that they meant well for them. They metamorphose overnight into achievers, Father Christmas, philanthropists, etc.; however, immediately the election is over, the whole financial spree and benevolence to the public disappear into oblivion. This explains why those who have found themselves in power always embark on all kinds of inconsistent and diabolical plans to maintain and sustain their stay in power. That tendency is painted vividly by Ake (1996b); arguing that because too much premium was placed on state power, people are going about it with Machiavellian unscrupulousness. This has led to the under-productiveness and underdevelopment of other sectors against the development of political office with so much financial attractions attached to it. In that light, therefore, no one wants to do any other thing than being a practising politician and living by the permutation of periodic election. It is against this backdrop that it is imperative to articulate that politicians of our contemporary times are pure jobbers who rely on government resources to sustain their existence. Importantly, this paper vis-à-vis the elite theory does not assert full comprehension and explanation of the socio-political, economic crises and the leadership challenge in Nigeria as these cannot be easily explained in a single work owing to the dynamics and complexity associated with the nature of Nigerian state.

A Critique of Leadership and Development in Nigeria

The need for social co-existence as Mclean (1996:223) observes informed social contract that was theorized from various perspectives by some scholars of the medieval period like: Thomas Hobbes, John Locke, Jean Jacque Rousseau, etc. The contract was formulated on the grounds that life in the society was brutish, nasty, hopeless and cruel and could be said to be cannibalistic. Fear, humiliation and domination were the routine practice that really affected social existence. The worries of that critical period necessitated the urgent need for solution to address man's inhumanity to man, which gave rise to the establishment of a central authority (the Leviathan) that commands general will and support. Following that common agreement, various forms of powers were bestowed on the man (the Leviathan), which include political, economic, legal etc.; according to the proponents of the social contract theory, the establishment of the state and government were institutionalized based on that group agreement. The essence of leadership, therefore, is the provision of good life for the good man in the good state and to do for the people what they cannot do for themselves.

The foregoing analysis provides a platform for us to have a comprehensive picture on the genesis, nature and import of the nation and the essence of government. This portrays the duties of government to the people and the betrayal of that on the part of leaders in Nigeria.

Drawing example from the experiences of states like, Canada, Britain, United States, Germany, etc., the interests and welfare of their citizens are paramount and are taken seriously. They treat their citizens with dignity, respect and sense of responsibility. They have a common goal of building *United Nations* with an unshakable economic base that would continue to spread their influence to states considered important or strategic for their national interests. This could account mainly for why their citizens are not abandoning their country for menial jobs elsewhere in a bid to sustain existence like Nigerians. The systems of these countries are so structured that in most situations they make Africans succumb to the notion of being an inferior race and the evidences are very overwhelming. First, the actions and inactions of Nigerian leaders in terms of hiding looted funds and seeking medical attention abroad confirm that. Second, the high level of insecurity in diverse forms that thrive in almost all the nooks and crannies of the country as the leaders run abroad for holidays is another pointer.

In fact, comparing the developed and developing states brings the obvious into the fore. It would not be out of place here to point out that a good number of Nigerian youths would prefer to be jailed abroad in search of greener pasture than to be at home to eke out a living. This is supported by the number of people, especially youths that leave the shores of the country on daily basis for what is assumed to be "a search for greener pastures". This explains the rationale behind the brain drain that confronts Nigeria today and the leaders are not disturbed by the great losses the country is experiencing in every sectors of human endeavours. Across the globe, Nigerians are making serious waves in virtually every sector; for instance, in the Information and Communication Technology - the computer whiz kid Philip Emeagwali stands out. The country has not yet considered it necessary to tap into the potentials and prospects of her intellectuals. Another instance, the likes of late Chinua Achebe, Chuba Okadigbo, Gani Fawehmi, Chike Obi, Pius Okigbo; Wole Soyinka, Philip Emeagwali, Ngozi Iweala, Humphrey Nwosu of Option A4, Oby Ezekwesili, to mention but a few, were purely under-used, under-explored and under-appreciated. Instead, mediocres are celebrated and crowned with *thieftaincy*, national honours and awards (by those who should have been the custodians of the state and the people) for milking the state treasury dry and depriving the citizens of their rights and privileges. The life styles of these leaders (serving and past) and their cronies tend to encourage and institutionalize corruption. The bid to emulate them by some of the citizens has led to a new wave of social vices ranging from cyber-crimes, robbery, kidnapping/abduction, youth restiveness and other social vices. The level of dexterity with which most of these cyber criminals manipulate computers and hack into restricted sites have caught the attention of the Western world and the manufacturers of computers and software programmes that they desire to apprehend them for rehabilitation and possible utilization. However, in Nigeria, the Economic and Financial Crimes Commission, Independent Corrupt Practices and other related offences Commission, apprehend these computer scam criminals and detain them. These agencies are supposed to be part of the security network that ought to protect and promote the well-being of the people. Ironically, the leaders that perpetuate more heinous crimes go scot-free in spite of glaring evidence.

The primary concern of some of those that govern or intend to govern Nigeria is on how to loot the treasury when (s)elected into office. They lack patriotic spirit but they preach patriotism to get the submission of the people to the law of the land, which they flout without regard. They have through their heinous and diabolical crimes become multi-millionaires and billionaires at the expense of the misery and poverty of the citizens. The constant siphoning of state finance to foreign banks according to Nwoye (2000) earned Nigeria a prolongation in debt forgiveness, which they borrowed and looted leaving the state worse than they met it. This is further manifested in the various elections that they have conducted since the return to civilian rule, instead of ensuring that elections deepen democratic roots they shocked the world by stage managing one of the worst (s)election in the world. Ndibe (2004) x-raying the economic policies of these leaders, submits that they rested on two broad principles: to maximize the misery of poor Nigerians and to remove the stumbling blocks in the path of those who obscenely siphon away the nation's wealth. Even when the country had a president (Mr. Obasanjo) as a member of Transparency

International (TI), he operated a system of governance that earned him high dishonour from the watchdog group. It was under his administration that Nigeria was branded the most corrupt country in the world and subsequently the second most corrupt country in the world. It became annoying and frustrating that at the end of his eight years administration, his government could not stem the tide of corruption in the country, instead it abetted it. Selective justice and injustice, ethnicism and cronyism assumed a centre stage. For instance, the former governor of Anambra State Dr Chris Ngige was abducted in collusion with a notable AIG of Police; the federal government did or said nothing to that effect. Most of the public office holders were not prosecuted as and when supposed, except when they work against the interests of a serving government. Government is sponsoring official waste, especially, in road construction and some other capital projects like highways along Lagos–Benin, Enugu–Onitsha, Aba–Port Harcourt, Onitsha–Asaba Bridge, just to mention a few. Importantly, in spite of the fact that both past and present government are making unending promises on these roads and series of contracts have been awarded to that effect, they are still valleys and shadows of death in the name of roads.

Exemplifying National Will and Patriotism?

Not long ago, the world economy was confronted with deep economic recession. The economic meltdown started in America and spread to other European states. With zeal and patriotic spirit inherent in their leaders, adequate attention was given to it. Their leaders and government, the United States for instances, offered a bailout plan of $700 billion. Transnational Corporations pushed money back home; private and stock investors did their part, all in a bid to salvage their dwindling and traumatized economy.

One imagines what was done in Nigeria? What did the government do to show its commitment towards protecting the economy of the state? What did the leaders that carted away billions of naira to foreign banks do? What is the basis of asking Nigeria citizenry to be patriotic when the leaders are not and the government care less about them? In the event of the economic meltdown, the country's stock market suffered seriously economic setback and many lost their jobs. What Nigerian government did was to make life more difficult for the people through wrong timing and introduction of policies that lay off bank workers, hike the domestic prices of vehicle fuel, diesel and kerosene.

There are symbols, events and songs that elicit patriotism, loyalty, commitment and dedication to the state from the citizens. The import of the United States of American Flag and Statue of Liberty to an average American is a classic example. The import of Nigerian National Flag and National Anthem are worthy of note, especially with regard to the lyrics and diction of the Anthem. When the Anthem is x-rayed in juxtaposition with the character of leadership in Nigeria and those we reverence as our past heroes, who fought assiduously and were incarcerated for the sake of independence of the State. We understand the magnitude and extent of their commitment in the fight for the independence of the Nigerian State. Today, the political vampires in power have bastardized that effort committed towards restoring the dignity of man. The first stanza of the Anthem reads thus:

> *Arise O compatriots; Nigeria calls obey, to serve our fatherland,*
> *with love, strength and faith.*

It arouses a great feeling, an inward movement, a passion that the independence of Nigeria was fought by people who loved their father land and were willing to die for the country. A call for brotherhood to rise, serve and defend our fatherland with love strength and faith in order to build a nation where peace and justice shall reign. Ironically, the present crops of leaders do not exhibit the essence of that clarion call. Most of them are not versed in any form of leadership training (formal or informal) with little or no knowledge that can hardly guarantee a peaceful administration of a family. However, they are piloting the affairs of the state.

> *The labours of our heroes past shall never be in vain. To serve with heart and might, one nation bound in freedom, peace and unity.*

The next stanza of the Anthem above invokes a pathetic feeling for the nation, not necessarily because of its present condition but because posterity would judge these leaders. It is a total failure for those who took over from our past heroes, our nationalists who fought for the independence of Nigeria, the likes of Nnamdi Azikiwe, Muokwugwo Okoye, Osita Agwuna, Habib Raji Abdallar, Obafemi Awolowo, Anthony Enahoro, Sarduana of Sokoto, etc. Thus, Agwuna cited in Yaqub (2000) made a pathetic statement in his effort at resisting continued colonial exploitation:

> *I rededicate my life anew to vindicate the cause of African Irredentism and neither fear nor loss of life…prestige and personal wealth shall make me deviate from the path I have chosen.*

With the benefit of hindsight, the leaders are the present enemies of the country. It is now explicit that enemies within are more dreaded and deadly than the enemies outside (the West); they have made the citizens slaves and objects of less value in their fatherland. For instance, when Ironsi tried to uphold the legacies of our past heroes, he was murdered under a coterie conspiracy; he was a virtuous *General* of *'a suo generic'* but his commitment was branded "Ironsi mistake" by those leaders in power today (Ironsi, 2000). Only two pounds was discovered in his account after his death to the utmost surprise of his military colleagues.

The country's experience with leadership and development leaves a sour taste in the mouth. Almost, all the sectors of the state and economy have been bastardized and disoriented. For instance, the power sector manned by the Power Holding Company of Nigeria (PHCN) known popularly as Nigerian Electrical Power Authority (NEPA) is one of the institutions that have attracted a lot of criticisms from the people because of its poor performance. Challenges of power generation and distribution have done untold harm to other sectors of the economy especially the manufacturing sector. The bureaucratic and other institutions of governance are over bloated and redundant. Provision of basic amenities and services are at its lowest ebb; hunger, diseases, unemployment and other indicators of poverty are prevalent in the country. Development in whatever form: human, infrastructure, etc., are nothing to write home about. Thus, Okoye (2001) argues that, "Nigeria is developing under underdevelopment". The submission of Okoye is not out of place as indices of development are seriously lacking in the country.

Conclusion

The nexus between leadership and development cannot be overemphasized. The level of development in any state is the function of the quality of leadership obtainable in that country. Where the leadership is poor, visionless, corrupt, oppressive and self-seeking; underdevelopment is the attendant result. This accounts for partly why most countries facing leadership challenges are found to be classified among third world or underdeveloped countries. Those that the leadership have improved tremendously and impacted positively on the quality of lives of the citizens are classified as developing countries. Those with well defined, developed and established systems in every ramifications reflected in the quality of lives of the citizenry, character of leadership and governance, infrastructural development and their roles in the global economy are classified as developed countries. From our analysis, the Nigerian state and the level of development no doubt places her amongst the third world countries; which is mainly as a result of the quality of leadership it parades over time. Therefore, the colonial legacy thesis can no longer explain fully the crisis of development in the country.

Recommendations

Leadership is not a career; it is a vocation to serve. It is devoid of selfishness, deceit, ignorance, greed, clannishness, amongst other negative attitudes found among leaders in Nigeria. The system of leadership that is practiced in the country has been imbibed into the psyche of the people that future generations may emulate them if it is not addressed. Therefore, there is urgent need for constant education on value re-orientation in every nook and cranny of the state to inculcate into the people the right kind of attitude towards leadership.

Furthermore, political processes need to be demonetised to enable decent people to participate and contribute meaningfully to the democratic process. Liberalization of the electoral processes in the country is important in that respect; when that is done, it will provide the masses good opportunity to participate in the political processes and elections that will encourage the emergence of legitimate and honest leadership. Honest political leadership is lacking in the country; the institution of honest political leadership is a sine qua non for positive development in the country. That is leadership with vision and will power to initiate and actualize drastic changes in the state.

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Early Child Marriage in Akwa Ibom State, Nigeria: Strategies for Mitigation

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ABSTRACT

Child marriage has been a topical issue of discuss and concern for centuries in developing countries of Africa. Recently, it is still in the front burner of discussion nationally and internationally. This is because it touches on child's right, gender bias, unintended pregnancy, poverty, tradition, custom, violence, values, rape and numerous socio-economic and psychophysiological concerns. This paper examined the concept of early child marriages, the causes and consequences of early child marriage, as well as examined some strategies for mitigation. Relevant recommendations to mitigate the practice were made such as encouraging girls to have life-skills and education to enhance their self-esteem and be economically empowered to survive and contribute meaningfully to national development among others.

INTRODUCTION

Birth, marriage and death are the major standard trio of events in people's lives. Among the three events only in marriage does one have the right to make a choice. The right to make this choice was recognized by law and was established in the International Human Rights instruments, yet many young girls in Africa enter marriage without any opportunity of exercising their rights to choose. Some are forced into marriage at a very tender age; others enter marriage too young to make a good informed decision about their marriage partner (International Planned Parenthood Federation, IPPF, 2006).

The Universal Declaration of Human Rights recognizes the right to consent to a marriage to be "free and full" when one of the individuals involved is not sufficiently mature to make an informed decision about a life partner (Hanzi, 2006). Early marriage, therefore, is considered a human rights issue, however, according to UNICEF (2008), thirty-six per cent (36%) of women between 20-24 years old who are married, or in a union, forced or consensual union before the age of 18 years. Any marriage carried out below the age of 18 years before the girl is physically, physiologically and psychologically ready to shoulder the responsibilities of marriage and child bearing is called child marriage. This involves either one or both spouses being children and may take place with or without formal registration under civil, religious or customary law (IPPF, 2006). The International Centre for Research on Women (ICRW) (2006) stated that 100 million girls will be married before the age of 18 years in the coming decade. Most of the child marriages will be in sub-Saharan Africa and the Asian sub-continent.

Marriage globally is a respected institution and practice; however, some cultures make children to marry too soon such as child marriage in Zimbabwe (IPPF, 2006). Several other studies acknowledge child marriage occurring in many other African countries. UNICEF confirms this by saying that many marriages go unregistered and girls' ages may be falsified (PPF, 2006: III). The estimate globally by UNICEF is that 64 million young women of age 20-24 get married before age 18 years.

Child marriage is now recognized globally as violation of children's rights. It is also a direct form of discrimination against the girl child because as a result of early marriage she is deprived of her basic right to development, health, education, religion and equality (IPPF, 2011). According to the Girl Child Network (GCN) organization whose vision and mission is to shelter, educate and empower female victims of early child marriage, an estimate 8,000 girls have been forced into early marriages or were held as sex slaves. Since 2008, writes IPPF, this tradition has negative effect on the girl child and human rights standards set by cultures, customs and religion. Nations should reconsider their cultures, customs and practices to favour the girl child's survival and meaningful contribution in the society. A culture, customs and practice that result in sexual abuse and exploit on the girl child or practices that conflict with the rights of the girl child must be jettisoned, eliminated or closely monitored to ensure that sexual abuse is minimized.

Child marriage was initially meant to prevent children from sexual relations and unintended pregnancies to avoid bringing shame to the family. Child marriage for some cultures means economic gain from bride price. They believe that when that child is married they are protected from HIV, hunger and other ills, but this is just a "myth" or a "lie" because several studies evidences have shown that such girls who entered into such marriage are exposed to sex penetration too early, have tears and end up as V.V.F. patients with viral infections, etc. (Hanzi, 2006; IPPF, 2011; Abdullahi, 1994). Hence, early marriage should be seriously looked into and mitigated for good.

This paper examined the concept of early or child marriage, causes and consequences of early child marriage. It also discussed some strategies for mitigation, prevention or total abandonment of early child marriage in the world particularly in, developing nations such as Nigeria. The next section will discuss the concept and the meaning of early child marriage.

Concepts and Definitions

Societies view the issue of child marriage in different perspectives especially culturally or religiously but through the legal perspectives and going according to global perspectives where the international human rights groups are concerned, child marriage could be defined as any marriage that involves children below the age of 18 years as stipulated by the law of the land and international law. The International Planned Parenthood Federation (IPPF, 2006), defined child marriage as any marriage carried out below the age of 18 years before the girl is physically, physiologically and psychologically ready to shoulder the responsibilities of marriage and child bearing. It is a marriage of individuals before they attain the legal age of 18 years for girls and 21 years for boys (PCMA, 2006). The United Nations Convention on the Right of Children views it as the union of children or adolescents under the age of 18 years. Studies revealed that one girl below the age of 18 years is married off every three seconds worldwide. In South America, North Africa and parts of Asia, one in seven of all girls less than 15 years old are married off. The rate of early or forced marriages are quite high in Europe, where 2.2 million girls are married before their 18th birthday (IPPF, 2006).

Causes and Consequences of Early Marriage

Several factors determine early child marriage across cultures and traditions. This study examined only a few of these factors such as;

1. Exposure to mass media
2. Impunity
3. Denial of education
4. Caste system
5. Tradition
6. Denial of freedom
7. Customs and traditions
8. Teenage sex
9. Poverty
10. Religion

If girls are exposed to the mass media (radio, television, internet, print media, audio, visual and audio visual media) they are less likely to marry early. Exposure to mass media has significant effect on age of marriage. Most girls from the rural area have no access to these facilities, hence, they marry early. Girls in urban areas marry late while the exposure to mass media affect marriage age. (Clark, 2004; CMA, 2006).

Caste System

This is a factor that causes and lures young girls into early marriage. The discrimination, the dedication to deities and idols of a family predispose them to limited choices of spouse, hence, they quickly rush into marrying anyone that ventures to ask for their hand in marriage to avoid late marriage because of caste system (UNIFPA, 2006).

Belief

The beliefs of the people about marriage, virginity, prevalence of HIV/AIDs are issues that make some young girls to be forced into marriage. Conversely, men prefer younger girls because they are easily controlled. The true drive for child marriage may be power control and patriarchy. This is also a myth because there are cases of young girls dealing mercilessly with their spouse, in retaliation for the hurting blows.

Impunity

Some cultures conduct child marriage without caring whose child's right is being violated because there are no laws mitigating such practices. Even when there are laws against child marriage the laws are weak and not adequately implemented, hence, the laws are violated with impunity. Some advocates against child marriage argue that convictions rate in the abuse and breach of the prohibitions against child marriage in most developing countries is actually zero (UNICEF, 2001). In Zimbabwe, the Police office turns blind eye to rape culprits, hence, rape becomes a common occurrence in Zimbabwe. Cases of rape of underage girls are reported in newspapers daily with an equivalent sanction meted out to such culprits to deter others (UNICEF, 2008; IPPF, 2011).

Teenage Sex

Teenage sex by boys and girls leads to teenage pregnancy between 13 to 19 years age brackets. Most girls want to perform experiments or just want to be promiscuous, some engage in teenage sex for economic benefits; to avoid this kind of situation in their lives, they go for early marriage (IPPF, 2006). Again, in Zimbabwe and some other African countries, including Nigeria, families' value marriage, therefore, when a girl gets pregnant in a relationship, it is believed that if she is suitable as a sexual friend, she should also be suitable for marriage. If the father of the boy or the man who made the girl pregnant is ready to shoulder the responsibility, marriage is pronounced between the two persons. Most early marriages are, therefore, contracted because of unintended pregnancy as a result of teenage sex involvement (UNICEF, 2008).

Tradition

The inequality in the enjoyment of rights by women is deeply embedded in tradition, history and culture, including religious attitudes. Nations should ensure that tradition, religious, historical and cultural practices and attitudes are not used to cover up or justify violators of the right of girls to equality before the law and to equal enjoyment of covenant rights of marriage (UNICEF, 2008)

Religion

Many societies hide under religion to abuse and exploit the girl child and children generally. They hide under the prophecy to make choice of women they like and for others. This practice must stop, otherwise, God that rules in the affairs of young innocent girls will rise on their behalf and deal with those exploiters (IPPF, 2011).

Denial of Education and Freedom

It is quality education that can empower and arm the girl child economically, socially, and psychologically to cope with the ever increasing demands of today's world. When she is denied education, then, she becomes a big prey to be abused. It is only through education that she can be economically independent and self-reliant, thereby, have the right to fight her course in life (Population Council, 2006). Otherwise they will depend on wealthy men for their needs and survival (IPPA & UNFPA, 2006).

Denial of Freedom

Women and girls at homes are not allowed to go out any how in many occasions. They cannot move about freely because of fear of abuse physically and sexually. Also, the multiple responsibilities of being a house-girl (maid servant), mother, daughter-in-law, nurse, teacher, advocate and mediator for her children at a very tender age denies her the freedom. Conversely, boys of her age who are married like her have freedom to move around and may not be fully committed to their wives; some even seek some relationship outside marriage (Siband, 2011). The girl child is also denied the freedom of relating with other peers and their education is terminated prematurely. They are made to marry older men who are free sexually and more experienced; this leads to partner violence and expose these girls to HIV/AIDS and other STI's diseases. Most of them give birth with bodies not fully mature and developed for child bearing and they end up with vascular vaginal fistula (VVF) or die in the process (IPPF, 2011).

Poverty

Poverty is a key reason for early child marriage. Many families in developing countries who see the training and education of the girl child as economic burden will jump at any opportunity of marrying her off to reduce the number of hungry mouths to feed. There could be a primary and secondary school in the community but most children usually drop out because their parents have no money. Many early marriages in Zimbabwe are related to poverty with parents needing the bride prize of a daughter to feed, clothe, educate and house the rest of the family (Muchawa, 2001). Some Zimbabwe women lawyers are advocating for their young girls, thus: "it is unlawful to marry a minor or allow a minor to be married off. Children should be given their time to fully develop. But if they are to be married, this restricts them from fully developing and realizing their full potential in life" (Muchawa, 2001). Danladi, (2011) further argued that marrying minors also exposes them to various diseases.

The truth we must all know, about child marriage is that child marriage does not help but worsens the cycle of intergenerational poverty. Child marriage not only perpetuates inter-generational cycle of poverty and lack, it also reinforces the subordinated nature of communities that traditionally serve the powerful class system by giving an innocent girl child in marriage to an older mate (UNICEF, 2005). Child marriage denies such girls of their freedom of relating with their peers and their education is prematurely terminated (Basiyange, 2011). Also, they are married to older men who are more sexually experienced leading to partner violence. Other consequences of such marriages are that it exposes them to HIV and other STI's and diseases. Most of them give birth with bodies not fully mature for child bearing and they end up with vascular vaginal fistula (VVF) or loose their child or even die in the process.

Strategies for Mitigation

Many strategies have been used to prevent, reduce or eliminate child marriage. There were success in some areas but some societies still do not know why child marriage should be abolished. This study has put forward some strategies which the authors feel are key strategies to be adopted to mitigate child marriage in Nigeria. These strategies are as follows:

- Provision of a cross-cultural interstate discourse
- Enacting new laws and amendment of old laws with proper implementation of such laws
- Litigation
- Advocacy
- Education and training
- Cognitive restructure counseling

1. *Cross-Cultural State Framework and Guidelines*: This should be put together with clear cut guidelines to prevent child marriages; people should be enlightened not to violate these guidelines. They should inform people's behaviour and beliefs in respect of the right of their children. According to Abdullahi (1994) although cultures are clearly distinguishable from each other, human cultures are characterized by their internal diversity, propensity to change and mutually influence other cultures. These characteristics can be used to promote normal consensus within and among state cultures through the processes of cultural transformation.

2. *Advocacy and Counselling by Non-governmental organizations* (NGOs) can be used to assist women and children involved in this menace to speak out by challenging the existing status quo while avoiding overt conflict with internal actors. NGOs can also initiate cross-cultural dialogue that will seek to promote universality by highlighting moral and philosophical common standards in human cultures and experiences to share insights and ideas or experiences which will over time help to mediate cultural and contextual differences and thereby produce common principles of best interest of the girl child concerning early marriage (Abdullahi, 1994). NGOs can Promote and protect sexual and reproductive health and the right of young girls, and young women through legislation, availability of services, information and community outreach. Promote gender equality and the rights of young girls and young women through education for better choice of marriage partners. The education act must recognize that all children have a fundamental right to education. It should be an offence if parents or husbands keep children of school age at home (UNIFPA, 2006).

3. *Establishment and Proper Implementation of Child Marriage Laws*: All women and children movements should examine the tradition of child marriage very well and harmonize laws concerning it. Customary laws or Marriage Acts should specify marriage age, and none of the laws should be below age 18 years as agreed in African Charter on the Rights and Welfare of the Child (UNIFPA, 2006). Parents, relatives and all stakeholders should all be aware of the negative impact of child marriage, so that no one will be in the dark concerning the implementation of such laws. All local and traditional laws, old and new, should be reviewed in the light of international standards. Article 2(f) and 5(a) of ICRW have stipulated that where cultural constraints on gender hinder the achievement of women's equality, it is the cultural practice that must give way (ICRW, 2007). The court should insist that the government compensate victims of human rights violations. Women's right advocates can hold the state responsible for private acts of discrimination and violence like child marriage (ICRW, 2007 and UNICEF, 2008).

4. *Advocacy:* All organizations, government and non-governmental organizations concerned with children rights in Nigeria should advocate and campaign against child marriage because it is detrimental to the well-being and life of the girl child. It may work better than litigation because advocacy and counseling takes time to explain the consequences of child marriage and why it is not the best

practice for the girl child. Advocacy and Counselling will help people to understand, why it should be mitigated. It will also assist people to avoid actions that make the girl child vulnerable to unintended pregnancy, the reason why parents marry girls off, to avoid shame on the family. The African union, Nigerian governments, international development agencies, non-governmental organizations should all adopt a clear unambiguous standard on early child marriage and forced marriages by signing a protocol to the African charter on human and people rights of women in Africa to ensure that special measures are taken to mitigate child marriage (UNICEF, 2008).

5. *Education and Training*: Lack of skills and opportunities for income generation, illiteracy or little education make the female children to depend on wealthy men to care for their basic needs. Some key programmes for skills acquisition and money yielding activities should be put in place to assist the change of attitude of people towards the education and training of the girl child, such as bead-making, hat-making, making snacks, buying and selling wares.

According to UNFPA (2006) there are four major guides for ending child marriage globally these among others will lead to attitude change.
(a). Training of key government officials, judiciary, law enforcement officers and policy makers, at all levels, on the law and related gender equality and human rights to support effective implementation and enforcement of the law and related policies, support. (b) Raising awareness and (c) Public education programmes.

Conclusion and Recommendations

From the above discussions, it can be concluded that early marriage is as a result of deep rooted and severe discrimination against the female child by the society, because of the poor understanding of the psycho-physiological, socio-economic consequences of this practice on the self-esteem and productivity of the girl child. Based on this conclusion, the following recommendations were made to mitigate this practice in our society.

1. Public sensitization on girls' reproductive health rights and the extension of quality education to girls and the importance of allowing girls to complete school instead of dropping out. Re-establishment of guidance and counseling units in all schools.
2. Enact laws or change laws supporting withdrawals of girls from school for marriage, like in some states of Nigeria, and make sure the law is enforced, and properly implemented.
3. Give girls free education because poverty drives their parents to force them to marry early.
4. Involving communities and traditional rulers in female child education matters and issues.
5. Creation of gender sensitive and friendly curricula in all schools.
6. Put in place a proper peer support and advocacy group to assist the continuing education of girls who got married early and as a result dropped out of school. This includes young nursing mothers
7. Provide vocational training skills and economic/income generating opportunities for girls at all levels.

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Empowering Nigerians through Adult Literacy and Vocational Training Programmes in the 21st Century

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ABSTRACT

The issue of empowerment in the 21st century has to do with the effective provision of opportunities for proper legislation, research, vocational training and literacy of today's adult in Nigeria to become a well-rounded citizen so as to be able to cater for his/her household and become more responsible to the society. This is a great concern to stakeholders in adult literacy and vocational education who are confronted by this challenge to empower the adult with vocational skills, eradicate the high rate of illiteracy and the number of uneducated citizens; reduce inflation, corruption, socio-political instability and poor religious tolerance across Nigeria. This study promotes the need for effective adult literacy and vocational training/skill programmes to empower Nigerians to cope with the life tasks of the 21st century. It also highlights the essence of such skills as empowerment tools to reduce vices, unemployment and promote self-reliance.

INTRODUCTION

Education has been recognized and acknowledged by various national and international organizations as a human right issue (Abosi, 2011) – whether as a child, youth or adult, many developing countries have honoured this state of declaration and made efforts to enhance access to education for all citizens (enlightenment, literacy, skill training) in line with the 1990 World Conference on Education for All. Education in this context, therefore, refers to formal education, which is rooted in literacy (Nwafor and Agi, 2013). The provision of appropriate education and training of the adult population in any country reflects committed initiatives by the citizens and governments to enhance national literacy and skill training, safeguarding peoples' rights so that they will be mobilised to perform civic duties and responsibilities in the spheres of the nation.

When it comes to adult development and growth, life sustainability and continued existence of the citizenry and state, the need for acquired skills and adult ability to contribute to the workforce of the nation is significant to any nation. This is where adult literacy and vocational education research and training becomes imperative, in order to identify viable areas for educational development and empowerment. Through the adult and vocational education programmes, the adult in the community learn to acquire literacy skills (which are the ability to read, write and compute) and work skills to become empowered citizens who can earn a living.

According to Ibeneme (2012), education has been a catalyst for every individual and national development, change and empowerment. Being a tool for the empowerment of the individual (child, youth and adult), it reduces his or her vulnerability and dependency; increases the individual involvement in the crucial issues of the nation whereby the citizens live together peacefully; interact and share in the same national issues effectively, create conducive environment for productivity and stable domestic growth. Thus, the educated or literate adult becomes a vital agent for national transformation, devoid of corruption, nepotism, and political manipulation, which has for long characterised Nigeria's economic, cultural and socio-political landscape.

Furthermore, when the adult is educated, literate and trained with vocational skills; he/she is fully empowered and integrated into the society not alienated; easily develop self-confidence in himself/hersel not rejection; become more capable of accommodating others not hatred; be able to take positive decisions on their own not cowardice; and make choices on his/her independent judgments not others thinking for them. Thus, Oreh (2010) advised that men and women should pursue education (literacy) as an essential development process, because it is a lifelong process that brings about positive changes in the pattern of the life of the people. Odumegwu (2005) as cited in Oreh (2010) maintained that it is the building block for social and economic reconstruction. Therefore, the most effective means of breaking away from the vicious cycle of underdevelopment, illiteracy, poverty, ignorance, unemployment, disease, chronic economic dependency and political instability is through a qualitative education system. In essence, having education or literacy creates the opportunity for individuals to know their abilities, civic responsibilities, their rights, exercise such rights, and understand the rights of others better, live and work better in their environment.

Nigeria's Education: A Lamentation!

Several researchers and writers have lampooned successive governments and leadership on the sad state and neglect of quality education in Nigeria, irrespective of her vast resources and oil wealth. This issue will continue to rear its ugly head in the media until government rectifies the situation with appropriate legislation, effective policy, standards and implementation. Ifedigbo (2011) lamented that education in Nigeria is in shambles. The author argued that while the rest of the world is leaving the physical to the virtual classroom world, adopting various models that have made learning fun, interactive and e-based; Nigeria still face the remote challenges of having classrooms with roofs, classrooms with furniture, and schools that don't look like refugee camps. In this age, many children still take classes under trees, take lessons on bare floors; teachers are not well paid, so nobody wants to be trained as a teacher, and so on.

This ugly situation of our education system is not only in very remote areas but in urban centers. And even when these young lads struggle and graduate, there is no job, no practical means of livelihood. However, as Ifedigbo (2011) rightly pointed out, the country's biggest problem as a nation is neither the absence of infrastructure, corruption nor bad leadership; it is the fact that Nigeria have failed to take education seriously and so, are producing a generation that is ill-equipped to understand its own challenges and clueless about how to evolve systems to remedy the situation. When we have half-baked graduates and ill-trained manpower base, and adults relapsing into illiteracy, high rate of unemployment; coupled with issues of corrupt politicians' intent to destabilize the country due to their selfish interests; the possibility of mobilizing and recruitment of these young people and ignorant adults into gangs of political thugs, terrorists and nefarious criminals becomes imminent. The nations' progress will be highly threatened by ignorant, uneducated and illiterate population. Such illiterate minds as Ifedigbo puts it, are available to extremist elements for radicalization and with the powerful influence of poverty; we must begin to take the United States seriously when they say we have got a lot of anti-terrorism issues on our hand. One can then imagine what it is like to be engaged in adult literacy programmes in Nigeria which is more of a non-formal education activity. The challenge becomes enormous to the stakeholders.

Case for Literacy and Vocational Technical Education Training

Literacy plays an important role as an agent of change and societal development, in a country that understands its value and need. When literacy is combined with vocational training, they become a major key to the socio-economic progress and overall growth of any nation. This reveals the significance of literacy and vocational technical education (VTE) to every nation in this 21st century. The essence of such efforts according to Obiozor (2011) are to increase literacy levels of the population, , improve on poverty alleviation goals, support people with disabilities and encourage human development in all sectors of the economy. Different studies have shown that Nigeria has launched myriads of programmes aimed at eradicating illiteracy and improving the wellbeing of the people, however inadequate planning, lack of strong political will, funding, and implementation have been the greatest problem. It is only by adopting a well-planned and sustained literacy programme that gender gaps can be closed, equal opportunity provided and development achieved in any country (UNESCO E9 Report, 2011).

Research statistics from the UNESCO E9 Report; indicate that several advances have been made in Nigeria towards eradicating illiteracy but "the country still houses about 60 million illiterates as at 2010. A cursory look at the International Benchmarks for Adult literacy shows that Nigeria is not yet operating within the recommended framework for adult literacy programmes (Fasokun and Powl, n.d). As its stands today with great number of the population still illiterates, there is a great doubt whether the Education for All (EFA) and the education related Millennium Development Goals (MDGs) could be achieved by the year 2015.

Furthermore, in the area of vocational, technical education (VTE) and skill training; several challenges come into focus in Nigeria to the stakeholders. Vocational education, according to Danko (2006) is an education programme that prepares students mainly for occupations requiring manipulative skills or non-technical occupations in such fields as Agriculture, Business Education, Home Economics, Painting, Decorating and others, organized to secure confidence and experience by the individual students. It is also designed to develop skills, abilities, understanding, attitudes, work habits and appreciation encompassing knowledge and information needed by a worker to enter and make progress in employment on a useful and productive basis. According to Danko, the objectives of vocational education are to prepare the learner for entry into employment in his or her

chosen career, meet the manpower need for the society, increase the option available to each student, motivating force to enhance all types of learning and enable the learner to wisely select a career. Based on these objectives, one could derive the importance of vocational and technical education as the provider of employment and poverty alleviation.
Technical Education on the other hand, is designed to prepare the leaner to enter an understanding of the laws of science and technology as applied to modern design and production. It also stresses the engineering aspects of vocational education, such as electrical/electronic, mechanical and automobile trade. It involves understanding and practical application of the basic principle of mathematics and science (Amoor, 2011). According to Olaitan, et al (1999) added that the task of technical education is based on the transmission of ideas, skills, values of work and environment and what individual can do with his or her life.

Vocational and Technical education according to Danko (2006), is the core of both the individual's and the society's economy. It is through acquisition of skills, individuals could explore their environment and harness the resources within it, which could serve them and the society since the wealth of the society determines to a large extent, the development of that society. Okorie (2001) opined that Vocational and Technical Education is basic for rapid technological advancement. Advocates of VTE has called for more attention to the field in Nigeria especially in tertiary institutions basically for combating unemployment and poverty, and to enhance national development and productivity. VTE training was being practiced more in Nigeria in the past as a trade/apprenticeship scheme for skills for young adults who could not enroll in formal education. This was right before the advent of trade schools and technical colleges in the country which added literacy component to those who were engaged in skilled trade or profession. Some of the trade/profession includes welding practice, auto-electrical work, panel-beating, spraying, wheel balancing and alignment, upholstery, vulcanizing, carpentry, etc. The essence is to train young adults with skills to add to the manpower base of the country. The challenge in this VTE area is that the literacy component are lacking in some of these apprenticeship training scheme for skill acquisition in the informal sector.

Based on this prevailing condition, the researchers believe that proper literacy and enhanced VTE programmes are urgently required from the public and private sector to salvage the condition which confronts the nation. Therefore, appropriate and effective adult literacy and vocational skill training programmes could be used as empowerment vehicle in solving problems of poverty, social vices, unemployment, illiteracy, ignorance, and citizen apathy in Nigeria. Nigeria should begin to invest in the future of her citizens by focusing more on mobilizing the youth and able-bodied adults to engage in occupational skills, especially, technical and vocational education training. Globally speaking, governments are doubling their efforts in promoting vocational and technical education in tertiary institutions, with a very firm and strong belief that skill formation enhances productivity and sustains competitiveness in the global economy (Amoor, 2011).

Therefore, in the formal and non-formal education sector, the institution of mandatory career and technical education programmes in all state school education system and on the central government level is highly advocated so that students would be exposed to rigorous school preparatory and work-based career with effective technical curricula. These young adults or individuals upon the completion of their skill training, and graduation, would be gainfully employed or become self-employed; thereby contributing to his/her development and community growth. Such adults would be satisfied with their life and relationship with the society, and never have time to be recruited or engaged in violence, robbery or suicide bombings. This is a huge step forward to securing national security (Ibeneme, 2012).

What needs to be done!

Adult literacy programme is a necessity for any nation wishing to take advantage of modern technological growth; such learning activity is an aspect of education organized outside the school system given to persons who have left school or have not been to school, who are seeking to improve their knowledge and skill in order to better their lives. Thus, literacy services become an embodiment of human capital building and empowerment to learners (Corley and Stedman, 2009; Banjo in Ukonze (2005).

Archer (2007) noted that

> Literacy should be seen as a continuous process that requires sustained learning and application. There is no magic line to cross from illiteracy to literacy. All policies and programmes should be defined to encourage sustained participation and celebrate progressive achievement rather than focusing on one off provision with a single end point.

Supporting the above statement, Ukonze (2005) stressed that literacy services have vital roles to play in ensuring that the day to day problems learners face are appreciated. In the light of the above, Rabinowitz (2013), further stressed that literacy programmes may be seen either as integral to the achievement of the goals of a larger community initiative (one on education, for instance), as one part of a multi-pronged approach to a community problem, or as a component of an all-out assault on poverty and other conditions that produce unwanted consequences in the community. Rabinowitz highlighted some initiatives that might include adult literacy services:

1. Violence prevention
2. Substance abuse prevention
3. Community health (either a general push toward a healthier community, or a campaign aimed at a specific health problem or concern).
4. Voter registration
5. Economic development
6. Job training
7. Education (an effort to assure that every child is reading by third grade, for instance)
8. Specific early childhood or school-based initiatives (Head Start, Even Start Family Literacy)
9. Anti-poverty (comprehensive initiatives including many of the above areas and others as well, designed to address the issue of poverty from many different angles.)

In this regards, it is imperative for the Federal Republic of Nigeria to keep to its promise to pursue vigorously the goals of Mass Literacy, Adult and Non-formal Education by providing sustainable functional literacy and continuing education programmes for adults and youths who have never had the advantage of formal education or who did not complete their primary education. Functional literacy is planned specifically to meet the needs and challenges of learners, thereby, influencing their livelihood, but in Nigeria at the moment it is not diversified to meet new challenges. This should be planned and implemented with experts in the sector. In addition to the literacy programmes must be the provision of vocational and technical education training to the teeming youthful and adult population across to country to equip them with occupational skills to earn a living.

The stakeholders should acknowledge the importance and appreciate the vital contributions of literacy and vocational and technical education programmes to individual development and national economic growth although they are empowerment tools to combat unemployment and poverty in our communities. Thus, a great need to open more training centres, adequately fund and equip adult literacy and VTE centres in rural communities and urban centres. Okorie (2001) argued that insufficient finance is a realistic and practical factor inhibiting the implementation of vocational and technical education programme in Nigeria.

Tertiary institutions should be mandated to expand the adult education and VTE curriculum, support more research and training of instructors in these fields in Nigerian colleges, polytechnics and universities.

The National Policy on Education should be further revised to give further credence to the field of adult literacy and VTE so as to ensure that they provide sustainable programmes that would touch positively the lives of the learners, create skills and abilities to work and generate income for better livelihood.

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Socio-Demographic Correlates of Sexual Behaviours IV: A Cross Sectional Survey of Adolescents In Imo State Secondary Schools.

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ABSTRACT

The study was designed to determine the socio- demographic correlates of sexual behaviours of adolescents in Imo State secondary schools. Three objectives and three hypotheses were formulated to guide the study. A cross sectional survey design was used and sample size was 3360 (2.2%) adolescents. A structured, validated and reliable questionnaire (r = 0.79) and focus group discussion were used as the instruments for data collection. Data analysis was done using mean, z-test and ANOVA statistics. The result generally, showed that the average sexual behaviours of the adolescents were below the decision mean of 2.50 and as such the adolescents were said to be sexually inactive. In Imo State secondary schools, alcohol significantly influenced the sexual behaviours of the adolescents (Z- cal. 9.51, Z-tab.1.96 & $P<0.05$). Illegal drugs significantly influenced their sexual behaviours (Z- cal. 4.38, Z-tab. 1.96 & $P<0.05$) and religious belief influenced the adolescents sexual behaviours significantly (F- cal. 10.95, F-tab.2.60 & $P<0.05$). Of great worry is that uncontrolled adolescents sexual behaviour may expose them to sexually transmitted infections/HIV/AIDS, unwanted pregnancies, illegal abortion and dropping out of school. Thus comprehensive sex education was recommended.
Keywords: Socio-demographic, Correlates, Sexual, Behaviours, Adolescents, Cross Sectional, Survey.

INTRODUCTION

Socio-demographic correlates of sexual behaviours of the adolescents talk about variables that influence their sexual behaviours. Adolescence is defined both in terms of age (spanning the ages of 10 to 19 years) and in terms of phase of life by special attributes. These attributes include rapid physical growth and development, physiological, social and psychological maturity, but not all at the same time (World Health Organization (WHO), 2003). Correlate is a causal, complementary, parallel, or reciprocal relationship, especially a structural, functional or quality correspondence between two comparable entities for example a correlation between drug abuse and crime (Wikipaedia, 2005).

Wikipedia (2005) opined that Sexual behaviour is a form of physical intimacy that may be directed to reproduction (one possible goal of sexual intercourse), spiritual transcendence, and/or the enjoyment of any activity involving sexual gratification. Sharma (2003) reported that adolescents practice a wide variety of sexual behaviours. The commonest of them is masturbation. Mutual masturbation among same sex adolescents is also common. Other forms of sexual behaviour include necking and petting, which are physical contacts in an attempt to produce erotic arousals without sexual intercourse. Sometimes petting and necking can also lead to orgasm. Sharma further noted that among the sexually active adolescents one may observe that many have single partners; others have multiple partners at a time.

Watney (1987) stated that adolescents' sexual activities were clearly not and never had been without risks. There are inherent dangers of unplanned pregnancy, dropping out of school, unsafe abortion and sexually transmitted infections/HIV/AIDS which are the major implications of sexual risk behaviours considering the grave consequences.

SOCIO-DEMOGRAPHIC CORRELATES OF SEXUAL BEHAVIOURS OF THE ADOLESCENTS.

The socio-demographic correlates of sexual behaviours of adolescents are factors that influence the sexual behaviours of this group. These factors include use of alcohol, use of illegal drugs and religious belief of the adolescents. According to Kirby et al. (2005) numerous studies have found relationships between adolescent's use of alcohol and illegal drugs and increased likelihood of having sex, having sex more often, having sex with more partners, and pregnancy. Kirby et al. also observed that those adolescents who use illegal drugs are less likely to use condom and more likely to contact sexually transmitted infection. Kirby et al further opined that of all the risk and protective factors, sexual beliefs, attitudes and skills are the factors most strongly related to sexual behaviour. Adolescents are more likely to have sex if they have permissive attitude toward premarital sex, perceive personal and social benefits, while the believe not to have sex before marriage or sex before marriage being against ones religious belief help in positive sexual behaviour (Kirby et al., 2005). Regular religious participation might provide the adolescent with a value system which, ostensibly, encourage responsible sexual behaviour in form of abstinence (Werner-Wilson, 2007). Lammers (2000) noted that studies link risk behaviours, such as alcohol or substance use to sexual risk taking. Robinson (1999) opined that smoking was the best predictor of sixth graders' engaging in sexual intercourse, regardless of ethnicity or gender. Kingree (2000) in his study of incarcerated youth found that unprotected sexual intercourse was most apt to occur in connection with marijuana use rather than alcohol use while Kaiser Family Foundation (1998) stated that seventeen percent of teen's ages 13 to 18 who have had an intimate encounter said they had done something sexual while under the influence of drugs or alcohol that otherwise they might not have done.

Religious involvement influences sexual behaviour (Holder, 2000). According to Holder in a study of youth ages 11 to 25, who were not sexually active, they scored significantly higher than sexually active youth on the importance of religion in their lives and reported more connection to friends whom they considered to be religious or spiritual.

This study looked at some socio-demographic variables that influence the sexual behaviours of the adolescents in Imo State secondary schools. Due to civilization, exposure to films, internet and cable network, Imo State secondary school adolescents learn sexual behaviours while quite young without being fully aware of the consequences of having sex.. Some adolescents in Imo State secondary schools drink alcohol and use illegal drugs which are associated with social vices including premarital sex. There is also proliferation of churches in Imo State that preach against immoral activities including premarital sex. Due to increase in risky sexual behaviours among the secondary school adolescents, WHO (1994) urges sex education in secondary schools. Thus before the commencement of sex education to help the adolescents make wise, useful and informed decision about their sex life, one needs to know their level of sexual behaviour, sexual risks and socio-demographic variables that influence their sexual behaviours. One needs to know how much the use of alcohol and use of illegal drugs have influenced their sexual behaviours and also find out if their religious beliefs play any role on their moral standard/sexual behaviours. The knowledge of the variables that influence their sexual behaviours consequently will assist in the establishment of operational profile in terms of strategies required to curb the excesses that predisposed them to risky sexual behaviours.

MATERIALS AND METHODS

A cross sectional survey design was used. The study population involved adolescents from 308 urban and rural Imo State government owned secondary schools comprising of a population of 153, 586 students (Ministry of Education Records, 2005). The sample consists of three thousand three hundred and sixty (3,360) adolescents (2.2%) drawn from the study population of 153,586 adolescents. This sample was considered high enough for generalization considering Nwana (1981) formula for sample size determination which stated that 5% or less sample will do if the population runs in several thousands. 28 schools were sampled and 120 adolescents sampled from each school. The instruments used were the validated questionnaire and focus group discussion. Section A, sought information on personal data of the adolescents and section B, sought information on sexual behaviours of the adolescents in Imo State secondary schools. The questionnaire instrument was structured on weighted four point scale of Strongly Agree (SA) 4, Agree (A) 3, Disagree (DA) 2, and Strongly Disagree (SD) 1, with a decision mean of 2.50. Any mean below 2.50 is sexually inactive and mean 2.50 and above is sexually active.

There was a trial test of the instrument on 20 adolescents, 10 adolescents each from government owned urban and rural secondary schools in owerri zone. The selected secondary schools were noted and were not included in the main study. The Cronbach's Alpha reliability technique was adopted in testing the reliability of the instrument. The Cronbach's Coefficient Alpha of r = 0.79 was got indicating that the instrument was reliable. The administration of the instrument lasted three months and data analysis done using 3260 validly returned copies of the questionnaire (Return rate 97%) and information from focus group discussion. Mean, z-test and ANOVA were used for analysis.

RESULTS AND DISCUSSION

Table 1: The Association between Independent Research Variables and Sexual Behaviours Practiced by the Adolescents in Imo State Secondary Schools.

S/N	Variables	Group	Frequency	Mean	Level of Sexual Behaviours
1	Alcohol Use	Yes	160	1.88	Inactive
		No	3100	1.44	Inactive
2	Illegal Drugs Use	Yes	155	1.60	Inactive

		No	3105	1.46	Inactive
3	Religious belief	**Catholic** **Pentecostal** **Moslem** **Pagan**	2225 959 32 44	1.47 1.45 1.75 1.72	Inactive Inactive Inactive Inactive

Table 2: Summary of Two Sample Z-Test Analysis of Sexual Behaviours of the Adolescents Relating to their Alcohol use.

Variable	observations	Mean	Known Variance	Z-cal	Z-tab	P(z<=z
Yes	160	1.88	0.33	9.51	1.96	0.0001
No	3100	1.44	0.16			

Table 3: Summary of Two Sample Z-Test Analysis of Sexual Behaviours of the Adolescents Relating to the Use of Illegal Drugs.

Variable	Observations	Mean	Known Variance	Z-cal	Z-tab	P(z<=z)
Yes	3105	1.60	0.15	4.38	1.96	<0.0001
No	155	1.46	0.18			

Table 4: Summary of ANOVA Procedure to Determine the Influence of Different Adolescents' Religious Beliefs on their Sexual Behaviours.

Source	Sum of Squares	DF	Mean Square	F-cal	F-tab	Pr > F
Religion	5.91	3	1.97			
				10.95	2.60	<.0001

Error	585.81	3256	0.18
Corrected Total	591.72	3259	

The results in tables 1 and 2 show that adolescents who used alcohol and those who did not use alcohol in Imo State secondary schools respectively had average sexual behaviour of 1.88 and 1.44 on a 4-point scale. This shows that in Imo State secondary schools, the sexual behaviours of the adolescents who used alcohol (**Mean** = 1.88) was higher than that of those who did not use alcohol (**Mean** = 1.44). The z-calculated value for the two means was 9.51 with a significance (two-tail) probability of <0.0001, which was less than 0.05. Thus the test was significant at 5% level of significance since $P < 0.05$. We therefore conclude that there was a significant difference in the levels of sexual behaviours of adolescents who used alcohol and those who did not use alcohol in Imo State secondary schools

The results in tables 1 and 3 show that adolescents who used illegal drugs and those who did not use illegal drugs in Imo State secondary schools respectively had average sexual behaviour of 1.60 and 1.46 on a 4-point scale. This shows that in Imo State secondary schools, the sexual behaviour of the adolescents who used illegal drugs (**Mean** = 1.60) was higher than that of those who did not use illegal drugs (**Mean** = 1.46). The z-calculated value for the two means was 4.38 with a significance (two-tail) probability of <0.0001, which was less than 0.05. Thus the test was significant at 5 percent level of significance since $P < 0.05$. We therefore conclude that there was a significant difference in the levels of sexual behaviours of adolescents who used illegal drugs and those who did not use illegal drugs in Imo State secondary schools.

Generally, under the influence of alcohol and illegal drugs, sexual urge increases, one feels elated, looses sense of judgement and does what under normal circumstances he could not have done. Thus in this study, use of alcohol and illegal drugs increased the sexual behaviours of the adolescents in Imo State secondary schools.

The result of this study is in agreement with that of Maswanya, Moji, Yamamoto and Takemoto (2005) on sexual behaviour and condom use among male students in Dar-es-Salaam, Tanzania, with emphasis on contact barmaids. The authors observed that sex with barmaids was associated with alcohol and illicit drug intake and sex was under their respective influences. Also AnnDenise et al. (2001) linked alcohol consumption to unprotected sex. The authors in their studies, largely those in Asia, documented associations between the consumption of alcohol and risky sexual behaviour among young men (casual and sex worker contacts). They further observed that the young people recognized that alcohol reduces social and sexual inhibitions, and reduces concern about disease prevention and safe sexual behaviour. Similar associations were observed by Isabhakdi (1995); Rugpao (1997); and Jong, Han, Hye, Dongand and Joo (1995).

Furthermore, the results in tables 1 and 4 show that adolescents in Imo State secondary schools who were catholics, pentecostals, moslems and pagans respectively had

an average sexual behaviour of 1.47, 1.45, 1.75 and 1.72. This shows that adolescents in Imo State secondary schools who were Moslems (**Mean** = 1.75) had the highest level of sexual behaviour, followed by pagans (**Mean** = 1.72), and the Catholics (**Mean** = 1.47), while adolescents who were Pentecostals (**Mean** = 1.45) had the lowest level of sexual behaviour among adolescents of different religious beliefs in Imo State secondary schools.
The F-calculated value for religious belief differences was 10.95 and F-tabulated was 2.60 with a significance probability of <0.0001, which was less than 0.05. Thus the test was significant at 5 percent level of significance since P < 0.05. We therefore conclude that there were significant differences among adolescents with different religious beliefs in Imo State secondary schools in terms of their levels of sexual behaviours.

This study showed that Moslems and pagans had higher levels of sexual behaviours than Catholics and Pentecostals. This could be attributed to the fact that Christian's faith in God and fear of God restrict some Christian adolescents from sexual immorality. The Christian doctrine of monogamy and adherence to the doctrine of fidelity helps the adolescents to restrain from early relationship while the polygamous nature of the Moslems and Pagans could be contributory to the increased involvement in sexual behaviour. From the result above, one could conclude that religious belief influences the sexual behaviours of the adolescents in Imo State secondary schools.

CONCLUSION

Findings from the study highlighted the sexual behaviours of the adolescents in Imo State secondary schools in relation to religious belief, use of alcohol and use of illegal drugs. Though the sexual behaviours of the adolescents in Imo State secondary schools were generally inactive, it is still a source of worry as the extent of involvement does not augur well with their health considering the consequences (unplanned pregnancy, dropping out of school, unsafe abortion and sexually transmitted infections/HIV/AIDS). This is as result of the fact that one deviant in sexual behaviour can affect the society within a short period. Comprehensive Sex Education is advocated for before the sexually active fall prey to consequences of premarital sexual behaviours. Also, reviews of health education programmes in several countries conclude that sex education does not encourage early sexual activity, but can delay first sexual intercourse and lead to more responsive behaviour (UNAIDS 1997 & WHO, 1994). Comprehensive sex education programme encourages abstinence, promotes the use of condom for those who are sexually active, encourages fewer sexual partners, avoidance of casual sex, identification and treatment of sexually transmitted infections as well as teaching of sexual skills and empowering the adolescents educationally. Akanle (2007) in his study also recommended sexuality education at home, school and media to help the adolescents make wise, useful and informed decision about their sex life. These will enhance the adolescents adherence to "non sex guide" until they become matured to marry. The results of this study will equip the health experts and guidance counselors with strategies to control sexual immorality among adolescents in Imo State secondary schools. If this is not done, the adolescents wrongly learn about sexual behaviours from the films and their peers without knowing the weight of the consequences.

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Primary School Teacher and Environmental Education for a Sustainable Future

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ABSTRACT

This study sought to investigate the extent teachers in Anambra state practice environmental education as a tool for a sustainable future. Two research questions guided the study. Multistage sampling techniques was used to draw a sample of 525 primary school teachers. A27-item scale was used to collect data. The instrument was validated and the reliability was computed using Cronbach Alpha Statistic which yielded reliability coefficients of 0.78 for items in section B and 0.74 for items in section C. The construct validity coefficients for the two sections were 0.75 and 0.76 respectively. Mean scores were used for data analysis. The results showed that the teachers were aware of the environmental education but lack knowledge on some of the strategies to employ to stimulate the pupils to become environmental conscious. Based on the findings the study recommends amongst others that teachers should encourage pupils discussions on environmental issues to develop positive attitudes toward environment, the schools should be encouraged to foster environmental responsibility in pupils, teachers and non-teaching staff and that the schools should reflect genuine commitment to environmental education.
Keywords: Environmental Education, sustainable future.

INTRODUCTION

The world today is confronted with a lot of emerging environmental challenges and Nigeria, as a nation has witnessed a range of pressure on the environment which include the degradation of land and waterways; population growth and associated urban sprawl, high energy consumption, storm water pollution of estuaries and coastal waters. Also the continued decline in biodiversity via land clearing, habitat fragmentation and introduction of pesticides to terrestrial future is an essential response to the current state of world's ecosystems; global warming etc (UNEP, 2012). Scientific breakthrough have occurred in every sphere of life. Science and technology have extended the scope for intervention in human life and in nature (UNEP, 2012).

The international council of science (ICS, 2010) observed that the pace and magnitude of human induced global change is currently beyond human control and is manifest in increasingly dangerous threats to human societies and human well-being. The impact of environmental terrorism is threatening the corporate existence of this country. The terrorism is designed to threaten the personal safety of its target audience. It tears apart the social fabric of the country by destroying business and cultural life and the mutual trust upon which society is based. The uncertainty about where and when the next terrorist attack will occur generates a fear that terrorism use of unconditional means of attack such as chemical, biological or radiological (radio-activity-spreading) weapons or nuclear weapons can cause choking which attacks the victim's respiratory system and hamper breathing, leading to death by suffocation. Some of them when inhaled or absorbed through the skin quickly attack the central nervous system obstructing breathing. The contamination of streams, lakes, underground water ways or oceans by substances harmful to living is increasing. The major pollutants include petroleum products, pesticides and herbicides, heavy metals, hazardous wastes, excess organic matter, sediment, infectious organisms and thermal pollution (Hart, 2000). When the water is polluted with refuse and sewage and people drink it, they suffer from dysentery, cholera and typhoid epidemics. Education must therefore provide broad awareness of interconnections in nature and about the interplay between humans and their inhabitants. The teaching must unite clear understanding of the nature's matter, forces and species with an appreciation of how social organization and technology both solve problems and impinge on the biosphere. There cannot be a more critical goal for the future of human kind than to ensure improvement in the quality of life for the present and future generations in a way that respects the planet we live and depend on.

Environmental Education (EE) can be regarded as an organized effort to teach about how natural environments function and particularly how human beings can manage their behaviour and ecosystem in order to live sustainably. It often involves education within the primary up to tertiary levels. In a more broad way, it may include all efforts to educate the public and other audiences, including print materials, media campaigns. Environmental education is a learning process that increases people's knowledge and awareness about the environment and associated challenges, develop necessary skills and expertise to address the challenges and foster attitudes, motivations and commitments to make informed decisions and take responsible action (UNESCO, Tbilisi Declaration; 1978) UNESCO emphasized that environmental education focuses on awareness and sensitivity about the environment and environmental challenges; knowledge and understanding about the environment and environmental challenges; attitude concern for the environment and help to maintain environmental quality; skills mental problems and participation for exercising existing knowledge and environmental related programmes.

The creation of a sustainable future is an essential response to the current state of world's ecosystems (Austrialian Government, Department of the environment and heritage, 2005). Education for sustainable development is a life wide and lifelong endeavour which challenges individuals, institutes and societies to view tomorrow as a day that belongs to all of us or it will not belong to anyone (UNESCO, 2004). Environmental education for sustainability is a concept encompassing a vision of education that seeks to empower people of all ages to assume responsibility for creating a sustainable future. Thus an essential part of the environmental education for sustainability is students learning to achieve a better understanding of the world which we live and provide opportunities for them to be empowered to create a sustainable future (UNESCO, 2002). Explaining further, UNESCO argued that within this vision, students' knowledge, skills, values and actions are enhanced through active, self directed learning and ethically responsible citizenship.

There are several research evidences that support environmental education. Eames, Cowie and Bolstad (2008) studied a national project on environmental education application and found that participants environment awareness and respect for nature increased and as well as students' knowledge. Value and attitudes towards the environment also developed. Similarly, Chunteng (2004) carried out a study to evaluate the environmental education studies in primary schools in Beijing district in China and the findings revealed that there was a great need for environmental education at the primary schools.

At the primary school levels, environmental education can take the form of science enrichment curriculum, natural history field trips, community service projects and participating outdoor science schools.

According to Scottish Environmental Education Council (SEEC, 1996) environmental education takes place through formal and informal education at home, in the community, at work and at leisure with a single purpose which is to provide the knowledge skills and attitudes which lead to a citizenship able and committed to care for the environment and it's life support systems. People and the environment are interdependent. Therefore the awareness of interdependence is becoming a major issue in children's education. The conservation of resources, the desire for a clean environment, the importance of the quality of life on a global as well as local scale can all be understood by pupils. Thus, choices of today's children will shape the environment of the future.

The effectiveness of environmental education is dependent on the entire school community being aware of and actively contributing to the careful use of the environment. That means that the education process must include developing knowledge about environment as well as guiding the development of attitudes and values which influence behaviour and affect life styles. According to UNESCO (2002) essential features of environmental education include an esthetic appreciation of the natural and built environment; a sense of belonging to and ownership of the global environment, an awareness of the interdependence of people and nature, an awareness of individual social responsibility and the need to respect the collective good. And that every part of school environment and the day to day life of the school can be utilized as a context for teaching and learning about the environment. UNESCO identified five contexts for developing a whole school approach to environmental education. These areas include through formal curriculum, where environmental education forms part of the programme of study across subjects (like science, mathematics, social studies, expressive arts and language information and computer technology); Extra-curricular activities (giving pupils opportunities to develop their interest and understanding of the environment outside school hours through clubs that involve environmental activities) such as Nigerian Conservation Foundation Club; special events like environment days/weeks and environmental competitions; whole-school ethos (the spirit and atmosphere of the school will reflect the extent to which the school is genuinely committed to environmental education and actions, parental involvement and physical involvement) and school involvement in community action. Specifically, teachers can foster the learning of environmental education through the use of real situations, story telling, school grounds, encouraging inquiry-based learning, action-based fieldwork, fieldtrips, residential experiences. Teaching and learning processes such as group work, discussions debate, role play and problem-solving can effectively stimulate and sustain pupils interest in the environment (UNESCO, 2002)

With a global worsening environmental crisis as indicated by the increased area of holes in the ozone layer, more rapid deforestation of the tropical rain forests, expanding deserts, other ecological problems as well as toxic waste produced by industries in the advanced world being dumped in economically less developed countries, environmental education has become imperative in the primary schools. Primary school level is the foundation upon which all other levels of education are built. If we are to provide each child with opportunities to acquire knowledge, skills values, attitudes and commitment needed to protect and improve the environment (UNESCO, 2004), environmental education should be incorporated into primary school programme of study with focus on the learners, the content, the teachers, methods and the school. It is against the above view that it becomes necessary to find out how primary school teachers and the head teachers practice environmental education as teaching tool for a sustainable future of Nigeria.

Research questions

The following research questions were formulated to guide the study.

1) What teaching strategies do teachers adopt to foster environmental education?
2) What roles do schools play to ensure implementation of environmental education?

Method

The study adopted a descriptive survey design. This design was deemed appropriate because the authors had the opportunity to sample opinions from a significant representative number of respondents in the area of study.

The population comprised all the public primary school teachers in twenty one Local Government Education Authorities of Anambra State. The sample size for the study was five hundred and twenty five (525) primary school teachers including the head teachers. Multistage sampling technique was employed to draw the sample. First, simple random sampling technique was used to choose six out of twenty one local Government Education Authorities. Secondly, from each of the six Local Government Education Authorities, five schools were randomly drawn making it a total of thirty primary schools. These thirty schools have five hundred and twenty five (525) teachers and this constituted the sample.

The Environmental Education Strategies Scale (EESS) was developed by the researchers.

Two experts, namely measurement and evaluation, and early childhood and primary education both of Nnamdi Azikiwe University, Awka validated the scale. The scale which was originally made up of thirty (30) items was reduced to twenty seven (27) items as a result of the validation exercise. The scale was administered on 20 primary school teachers who did not participate in the study. The reliability was computed using Cronbach Alpha Statistics yielding reliability coefficients of 0.78 for items in section B and 0.74 for items in section C and construct validity coefficients of 0.75 and 0.76 respectively using factor analysis.

Using three trained research assistants, the Environmental Education Strategies Scale (EESS) was administered on 525 primary school teachers including the head teachers. The administration of the instrument lasted for a period of one month. The data were scored as follows: Very great extent = 4, Great extent = 3, Small extent = 2, No extent = 1 and analysed using mean scores.

Research Question 1

To what extent do teachers adopt teaching strategies that could foster environmental education?

Table I: Mean scores of teachers on the extent they adopt teaching strategies that could foster environmental education.

S/N		$\bar{X}$	Remarks
1	Using real situations like pollution of local stream or environment near the school.	2.20	Small Extent
2	Using videos, photographs, newspapers, magazine articles to explain problems of unfamiliar bad environments.	1.13	No Extent
3	Encouraging pupils inquiry learning to enable them respond to their own curiosity and investigate and act on environmental issues.	2.01	Small Extent
4	Using environment as a context for hypothesis-testing to enable pupils develop skills of recording information, analysis and interpretation.	1.30	No Extent
5	Engaging pupils on fieldtrips in inorder to provide pupils with first hand experience of topics taught in the classroom.	3.15	Great Extent
6	Encouraging pupils learning through story telling to explore environmental education for sustainable concepts, attitudes and skills	2.10	Small Extent
7	Encouraging pupils to discuss about their residential experiences over a period of time.	1.07	No Extent
8	Involve the pupils in the collection of items for nature corner.	4.20	Very Great Extent
9	Involve the pupils in practical caring and maintaining cleanliness of the classroom.	4.31	Very Great Extent

Results in table 1 indicated that primary school teachers to a very great extent involve the pupils in the collection of items for nature corner, and in practical caring and maintaining cleanliness of the classrooms. To a great extent they also engage pupils on fieldtrips. To small extent they use real situations, encourage pupils in inquiry learning, and story telling. However, out of the 9 listed strategies, teachers showed lack of knowledge on the use of videos, photographs newspaper and magazine articles (mean = 1.13); use of environment as a context for hypothesis testing (mean = 1.30) as well as encourage pupils to discuss about their residential experiences (mean = 1.07).

Research Question 2

To what extent are the schools committed to environmental education?

Table 2: Mean ratings of teachers on the extent schools are committed to environmental education.

S/N		$\bar{X}$	Remarks
	The spirit and atmosphere of the school that reflect the extent to which the school is genuinely committed to environmental education and action are through		
1	Making environmental issue a regular topic at school assemblies	1.10	No Extent
2	Using school notice boards to display environmental work and materials	1.20	No Extent
3	Inviting representatives of environmental organizations to make presentations and stimulate discussions	0.21	No Extent
	Consistently giving environmental messages such as		
4	Care of the school building and grounds	3.70	Very Great Extent
5	Energy efficiency	1.15	No Extent
6	Recycling	0.13	No Extent
7	Conservation	0.25	No Extent
8	Disposal of waste	3.67	Very Great Extent
9	The school is affiliated to Nigerian conservation foundations club	0.00	No Extent
10	Encouraging Parent/ Teachers Association to make environmental issues part of their planned programme of activities by raising funds or giving practical support to improve school	2.10	Small Extent
	Ensuring that teaching and non teaching staff, pupils and visitors all share a commitment to continuous monitoring the care and appearance of the school environment by:		
11	Placing door mats at strategic points	3.58	Very Great Extent
12	Ensuring that rooms, corridors and stairs are clean and in good repair	4.10	Very Great Extent
13	Providing clean toilets	4.12	Very Great Extent
14	Making available sufficient litter bins in classrooms, corridors and playgrounds	4.03	Very Great Extent
15	Encouraging pupils to keep the entire compound litter free	2.76	Great Extent
16	Motivating pupils to monitor litter control and the general cleanliness of the physical environment of	3.08	Great Extent

	the school		
17	Organizing environmental day where the school will devote a block of time to activities with an environmental theme like planting of trees etc	0.00	No Extent
18	Monitoring the environmental impact of roadway leading to their schools	2.10	Small Extent

Results in table 2 revealed that the teachers to a very great extent agreed on the items 4, 8, 11, 12, 13, and 14. to a great extent, the schools encourage pupils to keep the compound litter free and motivate pupils to monitor little control. To a small extent, the schools encourage PTA to make environmental issues part of their planned programme of activities as well as monitoring the environmental impact of roadway leading to their schools. The teachers responded negatively on items 1, 2, 3, 5, 6, 7, 9 and 17. The implication of these negative responses is that the primary schools are not fully committed to environmental education.

Discussion of Results

Findings as depicted in table 1 showed that the teachers to some extent involve the pupils in the collection of items for nature corner, practical caring and maintaining cleanliness of the classrooms; engage pupils on fieldtrips; use of real situations like pollution of local stream or environment near the school to engender interest and encourage pupils to reflect on real environment issues; encourage pupils on inquiry learning as well as learning through story telling. The result also indicated that the teachers expressed negative responses on the use of videos, photographs, newspaper and magazine articles; use of environment as a context for hypothesis-testing and encouraging pupils to discuss about their residential experiences. The negative responses on the use of materials portrays lack of necessary teaching materials in the primary schools. This implies that no matter how intelligent the teacher may be, without the necessary tools he/she cannot perform. However, when teachers lack knowledge of using certain strategies that will enhance learning, continuous training of teachers becomes imperative to equip the teachers with emerging pedagogical strategies. The findings are in contrast with UNESCO's (2002) aim on environmental education that stated that each child should be provided with opportunities to acquire the knowledge, values, attitudes, committed skills needed to protect the environment and this could be achieved by using diverse learning and teaching devices that will add to the effectiveness of the learning.

Results in table 2 revealed the extent the spirit and atmosphere of the schools reflect how they are genuinely committed to environmental education. From the analysis, it showed that the schools, teachers and pupils demonstrate some degree of environmental awareness but they seemed to concentrate more on the general cleanliness and as such not fully committed to environmental education. For instance, the teachers expressed that the schools do not make environmental issues a regular topic at school assemblies, display environmental materials on the notice boards, invite representatives of environmental organizations, give environmental messages such as energy efficiency, recycling, conservation, the schools are not affiliated to Nigerian conservation foundation club and the schools do not organize environmental day activities. These findings confirmed some research evidences (Froud, 1994) that despite a high degree of environmental awareness and positive environmental values, there is generally a failure for these perceptions and values to be reflected in their actions even at a shallow environmental level. Despite the fact that the schools have done a good job in making their pupils, teachers and other non academic staff aware of environmental issues like general clealiness they do not appear to have developed the school responsibility and actions on a wider scale that are essential to environmental education.

Whole school approaches have been advocated as the best approach to environmental education on the assumption that the concern shown for environmental problems in the formal and taught curriculum of a school should where possible, be addressed in the day to day practice in the school's non-formal curriculum (UNEP, 2012). In this way the values and attitudes that are espoused in the classroom are reflected in the day to day behaviour of teachers, pupils and support staff.

Conclusion

For a sustainable future of Nigeria, it is important that from an early age, children acquire a good knowledge and understanding of their surroundings and the natural resources of their bountiful country. This will enable them to gain respect for the environment and a desire to take care of it. This is a key to a sustainable future for Nigeria. In as much as environmental education is very vital in itself, it has great potential to be used as a great teaching tool to deepen children's understanding of science, mathematics, language, arts and social studies. As education at a young age is experiential, interactive and creative, using environmental education as a tool for interdisciplinary, hands-on teaching will stimulate the children's interest and excitement about learning. Only then will children gain the motivation, confidence and independence necessary to achieve their full potential.

Humanity are confronted with worsening poverty, hunger, ill health, illiteracy and continuing deterioration of ecosystems on which we depend for the well being (UNEP, 2011). Integration of environment and development concerns as well as greater attention to them will lead to the fulfillment of basic needs, improved living standard for all, better protected and managed ecosystems and a safer, more prosperous future.

Recommendations

Based on the findings, the study recommended that:

1. Teachers should encourage pupils discussions on environmental issues since environmental education is about developing positive attitude towards the environment.
2. Teachers should provide substantive conversation about understanding of the local and global impact of our environmental problems.
3. As environmental education is relevant to all subjects, it should be taught by all teachers.
4. Teachers should be provided with instructional materials needed for the implementation of environmental education.
5. Teachers should use environment as a context for hypothesis testing to enable pupils develop skills of recording information.
6. Teachers should encourage pupils to discuss about their residential experiences.
7. As environmental education is about schools practicing what they teach, schools should be encouraged to foster environmental responsibility in pupils, teachers and non-teaching staff.
8. Schools should provide opportunities for the pupils to connect to their local environment through field work and investigation.
9. Schools should provide opportunities for the active involvement of pupils in improving the school environment by making environmental issues regular topics at school assemblies.
10. Schools should display environmental materials on the schools notice boards for the pupils to see and read.
11. Schools should invite representatives of environmental organizations to make representations in order to stimulate the pupils on the environmental issues.
12. Schools should consistently give environmental messages such as energy efficiency, recycling and conservation to pupils and teachers.
13. Schools should be affiliated to Nigerian Conservation Foundation Club.

It is hoped that when these recommendations are implemented by teachers and their schools, the sustainable future of Nigeria would be ensured.

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Quality Teachers/ Educators: Issues and Imperatives for the 21st Century

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INTRODUCTION

The teacher occupies a central position in the achievement of educational goals. This fact the Federal Government admits as it asserts that "…no education can rise above the quality of its teachers…",FGN (2004:39), no doubt this underlies the teachers' crucial function in policy interpretation and implementation for the production of quality manpower needs of the nation. National development can be achieved and accelerated if the education system is qualitative and to realize this rests solely on the quality of teachers that implement the programme. This point to the fact that education, teachers and teacher education are inseparable (Ali 2000), as the quality of teachers produced impinges on the quality of manpower and consequently, on national developmental process. No matter how laudable the curriculum is , how sophisticated the resources used in teaching are, the teacher is over-riding factor , as it is the teacher that interprets the policy , manipulates the human and non-human variables in the classroom in order to achieve the goals of education. Little wonder, Ukeje (1991) quoted in Momoh- Olle (2000: 112) confirms that the quality of education provided in any society and the nature of changes effected by that education are both dependent on the quality of teachers and their effectiveness in teaching. Aggrawal (1981) cited in Afolabi (2000:128) succinctly sums it thus, that "The destiny of a nation is shaped in the classroom and it is the teacher who is a very important instrument in moulding that destiny'. Unfortunately, the professional deficiency of teachers in the Nigeria education system is said to be responsible for all the rot in the school system (Ciwar 2005),.

Specifically, the deficiencies in teachers are reflected in the performance of learners as revealed in the Monitoring Learning Achievement (MLA) conducted in 1996 which showed that the national mean percentage score of the literacy, numeracy and life skills test are 25.1; 32.2 and 32.6 respectively. Falayijo, Makoju; Onugha; Okebukola & Olububudun (1996). Also, the national means of the MLA conducted in 2001 by the UBE were: 40%;34% and 39% for literacy, numeracy and life skills respectively, FME/UNESCO (2003:37) . In 2004, the MLA result equally showed mean scores of 35.05% for literacy, 33.4% numeracy and 43.81 life skills. In all these , the performance of pupils in private schools were better than those in public school, though teachers in private were found not to be more qualified than those in public schools. Bakari (2009) cites the results of test administered on teachers by the Kwara State Universal Basic Education using the test instrument it had earlier administered on primary four pupils in the state. The results show that only 75 teachers out of 19,100 teachers that wrote the test scored up to 50% ; 7 teachers only scored 75%; and more than 50% scored below 30%. He also reported that a similar test in Adamawa State that showed that 50 % of the teachers could not read simple passages and many were unable to write simple sentences correctly. Bakari concludes that higher educational qualification the teachers have did not reflect on their achievement in the tests administered and concludes that higher educational qualification of the teachers is not a guarantee of quality teaching and learning; as a good number of them hold a degree certificate. Little wonder Udosen &Ubom (2004) assert that Nigerians have lost confidence in public schools as pupil who graduate from it have failed to acquire functional literacy , numeracy and life skills. Udosen (2010) adds that the results of research on pupils achievement in the past four decades reveal that public schools have failed to equip learners with literacy and numeracy skills in English and their mother tongue.

Issues Related to Selection of Entrants

Since the quality teachers that drive the education system shape the destiny of the nation, it becomes imperative that in selecting entrants into teacher education programmes as well as recruiting teachers the best must be selected. Evidence from research reveal that the inability of the teaching profession to attract academically best graduates to the profession are as a result of the low social status of teachers (Lassa 2000), low remuneration, poor conditions of service, feminization of teaching (Izuagba,2009) and the fact that all kinds of people are admitted into the profession. Adelabu (2005) adds that poor entry behaviour of the entrants into the teacher education programme has remained a perennial problem in the achievement of teacher education objectives. Most entrants to the teaching profession are those who cannot gain admission in their area of choice, those who have been rejected by other departments due to their poor performance either the WAEC or in the Unified JAMB Examination and this has made education departments of universities, polytechnics and colleges of education the dumping ground for poor quality students. This has rubbed off adversely on the teaching profession and on the quality of teaching and learning generally, (Udosen (2010) Education Sector Analysis (2008); Omojuwa,(2007); UNICEF (1993).

Another related issue is the multiple entries into the profession. This is obviously visible from the different cadres of teachers in the system, which is a reflection of the duration of the teacher education programme they were exposed to. Multiple entries into the teacher profession are drawback on the teaching profession and have adversely affected the status of teaching as well as its ability to attract the best students in to the profession. Presently, in the profession there are some auxiliary teachers with O/L certificate while others hold either Tc11 or NCE or (Udosen (2010) the first degree or OND or HND without teaching qualification in addition to those who are professionally trained teachers. This equally implies that the teacher- trainees in the different teacher education programmes are not exposed to the equal breadth and depth of content and learning experience. Take for instance the NCE teacher- trainee undergoes a three- year programme while the degree teacher-trainee undergoes a four -year programme. When this is compared to what obtains in other professions like law and medicine where every student is exposed to the same depth and breadth of course content and learning experience; and spends equal duration of time in the programme , the effects of this on the quality and tone of the teaching profession become obvious.

The use of quota system as a criterion in admitting candidates in to teacher education programmes as well as in the recruitment of teacher is another cause of defect in the programme. Quota system as a Federal Government policy demands the reflection of federal character in admission and recruitment of teachers (especially in federal owned institution) . This is irrespective of ability, additional qualification/, competences possessed especially in relation to educationally disadvantaged states. Though the rationale for the use of quota system is to ensure that different geographical zones of the country are the given the chance of being selected or employed for the stability and unity of the country. It is also believed that it will facilitate the educational growth of states that are educationally disadvantaged. Unfortunately, this policy is abused as it encourages mediocrity. This is because rather than focusing on academic qualification , intellectual ability, attitudes, personality and competences acquired by prospective candidates as criteria for selection and recruitment , state of origin and catchment area of the institution are criteria given pre-eminence. The implication is not be admitted or recruited. Confirming this Lassa (1996) in Izuagba (2006) asserts that the use of quota system as a criterion for selection and recruitment of teachers lowers academic standards, especially when we consider the fact that teachers are the engine house of development and the best hands must be put to use. The data presented below support the facts highlighted.

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Table 1: DEGREE ADMISSION FROM 2009/2010 to 2011/12

S/N	YEARS/ CHOICE OF COURSE	NO THAT APPLIED UNDER UTME	NO THAT APPLIED UNDER DIRECT ENTRY	TOTAL THAT OPTED FOR EDUCATION AS FIRST CHOICE	NO THAT OPTED FOR EDUCATION AS SECOND CHOICE	NO ADMITED	% ADMITED
1	2009/10 SESSION 1. EDUCATION AS FIRST CHOICE 2. EDUCATION AS SECOND CHOICE	1723 2348	1932	3653	2348	1000	17%
2	2010/2011 1. EDUCATION AS						31%

	FIRST CHOICE. 2. EDUCATION AS SECOND CHOICE	867 718	1638	2501	718	1000	
3	2011/2012 1. EDUCATION AS FIRST CHOICE 2. EDUCATION AS SECOND CHOICE	1794 2388	2651	4445	2388	1500	22%
	TOTAL			10599	5454		

Source : Degree Admission Office, A I F C E, Owerri

The above show data shows the number of candidates that sought admission for the degree programme for three sessions in the college. A total number of 10,599 students entered education as their first choice while 5454 entered education as their second choice course. Focusing on the UTME candidates, one could see that 1723 candidates applied to read education as their first choice course while 2348 opted for education as second choice. Most of these candidates applied to read education as a second choice after they were screened out from their courses of first choice. The other group was the Post NCE candidates where 1932 candidates applied to read education. For 2010/11 session, 2501 entered education as their first choice; out of this number 867 were UTME candidates. 718 candidates applied after they were screen out from their courses of first choice. For 2011/12 session, 4445 candidates entered education as their first choice; out of this 1794 were UTME candidates. 2388 UTME candidates entered education as their second choice course.

The picture becomes clearer if we focus on the UTME group for the three years : out of 9838 of them, 4384 enter education as their first choice courses while 5454 entered education as their second choice showing 44.6 % and 55.4% respectively. This tallies with the anecdotal evidence that education is chosen when all other options fail as more candidates applied to read it as a second choice through supplementary admission when either screen out dropped from their course of first choice.

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Table :2 NCE ADMISSION FROM 2009/2010 t0 2011/12

S/N	YR/ EDUCATION AS COURSE OF CHOICE	EDUCATION AS FIRST CHOICE	EDUCATION AS SECOND CHOICE	NO ADMITTED	%
1	2009/2010 1. EDUCATION AS FIRST CHOICE 2. EDUCATION AS SECOND CHOICE	432	901	526	39.5
2	2010/2011 3. EDUCATION AS FIRST CHOICE 4. EDUCATION AS SECOND CHOICE	521	583	464	42.1
	2011/2012 5. EDUCATION AS FIRST CHOICE 6. EDUCATION AS SECOND CHOICE	659	996	875	53

	TOTAL	1612	2400		

Source : NCE Admission Office, A I F C E, Owerri

From table 2 above, for 2009/10 session, 432 applied for the NCE programme while 901 applied as second choice through the supplementary admission representing 32.4% and 67.6% respectively. In 2010/11, 521 applied as first choice course while 583 applied as second choice course (supplementary admission) representing 47.2% and 52.8% respectively. In 2011/12, 659 applied as first choice while 996 applied as second choice (supplementary admission) representing 39.8% and 60.2 % respectively. In summary, 4092 candidates applied for NCE admission for three years, out of this number 1612 applied as first choice while 2400 applied to read education as a second choice course representing 39.4% and 60.6% respectively This figure shows that more candidates opted read education when they could not gain admission in their courses of first choice.

Table3 :PRE-NCE ADMISSION, ALVAN IKOKU FEDERAL COLLEGE OF EDUCATION

S/N	YEAR	NUMBER THAT APPLIED	NUMBER ADMITTED	%
1	2009/10	18	16	89
2	2010/11	10	7	70
3	2011/12	7	5	71.4
	TOTAL	35	28	

Source Primary Education Department, A I F C E

In table 3 above, 35 candidates applied to read the Pre-NCE course in the years under review out of this number 28 were admitted . The entry qualification for this programme is lower than that of the NCE programme. Usually, a three credit passes including English and /or Mathematics are accepted. The low entry qualification was pointed outs in the body of this work as one of the factors that adversely affect the quality of entrants coupled with the creation of a programme like this that makes it possible for candidates of low ability levels to be trained as teachers. If the best must teach based on the crucial role of teachers in national development, the PRE-NCE programme must be scrapped.

Table 4 : DEGREE ADMISSION 2009/10-20121/12, COLLEGE OF EDUCATION, TECHNICAL, AROCHUKWU

S/N	YR/ EDUCATION AS	EDUCATION	NUMBER	%

	CHOICE OF COURSE	AS FIRST CHOICE	ADMITTED	
1	2009/10 1 . EDUCATION AS FIRST CHOICE	158	158	100
2	2009/10 1 . EDUCATION AS FIRST CHOICE	109	109	100
3	2009/10 1 . EDUCATION AS FIRST CHOICE	6	2	33.3
	TOTAL	273	271	

Source: Admission Office, COE(Tech) Arochukwu

The data in table 4 above shows that a total of 273 applied for admission to read education in the institution for the years under review out of which 271 were taken. From the data above, the number that apply to read education has thinned down greatly over the three years and this has grave implications on the future of the teaching profession. It is also a reflection of the perception of the profession by youths, which is embodied in the body of this study.

Table 5 :NCE ADMISSION 2009/10-20121/12- COLLEGE OF EDUCATION, TECHNICAL, AROCHUKWU

S/N	YR/ EDUCATION AS CHOICE OF COURSE	EDUCATION AS FIRST CHOICE	NUMBER ADMITTED	%
1	2009/10 1 . EDUCATION AS	491	366	74.5

	FIRST CHOICE			
2	2009/10 1 . EDUCATION AS FIRST CHOICE	289	258	89.3
3	2009/10 1 . EDUCATION AS FIRST CHOICE	335	290	86.6
	TOTAL	1115	914	82%

Source: Admission Office, COE(Tech) Arochukwu

The data in the table above shows that 1115 candidates applied to read education out of this number 914 was admitted. But a closer look at the data shows that the number of students applying for admission to read education has dropped greatly which could be a reflection of the candidates interest and perception of the profession as discussed in this study.

Table 6 :PRE-NCE ADMISSION 2009/10-20121/12- COLLEGE OF EDUCATION, TECHNICAL, AROCHUKWU

S/N	YEAR	NUMBER THAT APPLIED	NUMBER ADMITTED	%
1	2009/10	7	4	57.1
2	2010/11	6	6	100
3	2011/12	0	0	0
	TOTAL	13	10	

Source: Admission Office, COE(Tech) Arochukwu

The data presented above for 2009/10, and 2010/11 admissions show that out of thirteen candidates that applied for the Pre-NCE programme ten were admitted. No candidate was admitted for the 2011/12 session. This data supports the assertion that not many candidate willingly enroll to read education.

Certification

The development of professional standards for the certification for teachers is a means of improving quality of teaching and teacher education, unfortunately, in spite of efforts by the NUC and the NCCE in developing the Minimum Academic Standards a lot of factors affect its full implementation. For instance the number of students to be admitted yearly based on the institution's carrying capacity is rarely adhered to by institutions. Even at that, the NUC ; NCCE and the Teachers' Registration Council of Nigeria have not been able to harmonise the entry requirement for various teacher education programmes . For admission into the faculty of education /institute of education of universities, candidates are expected to possess 5 credit passes at the O/L including English language, mathematics and their special subject. Entry requirements in to colleges of education states among others that a prospective student should have 5 credit passes in at least two sittings and these should include the candidates' special subject. In addition to the above, all prospective students must write the Unified Matriculation Examination (UTME). However, provision is made for admission to the Pre-NCE programme which entry requirements are lower than the above and these groups of students do not write the Unified Tertiary Institution Matriculation Examination. But more important is that the UTME cut-off mark for admission in to the teacher education programme is always lower than that of candidates seeking admission to other departments or professions. For instance, to be admitted to read medicine despite the 180 general cut off mark for admission, universities insist on admitting only candidate that scored 250 and above and a minimum of five credits in one sitting including English, mathematics and the sciences. Five credit passes in two sittings imply that the student may not be an average student and discrepancies like this make students in the teacher education programmes to be looked down upon students in other departments, Ojogan & Oyearome (2008), Izuagba & Afurobi (2008).

Furthermore, supervisory agencies – Nigerian Medical Association and the Nigerian Bar Association unlike the Teachers' Registration Council, participate in most important decisions in relation to quality of students to be admitted, updating the content of the programmes, number to be admitted vis-à-vis facilities and human resource available, monitoring process quality, vetting final year examination questions and admitting/ inducting graduates into the profession as well as the withdrawal of practice – licence in case of misconduct. . This type of supervisory role ensures quality entrants; process quality, quality of output that ensures that the graduates acquire the expected competences and instills discipline in members as the role of the agency(NMA or NBA) is felt all through the individual in training.

In other words, if the quality of entrants is to be improved, the minimum qualification for entry in to teacher education programme should five credit passes in one sitting and the UTME score should be raised. In the same vein , to be recruited into the teaching profession the minimum entry qualification should be B.Sc. Ed or B.A.(Ed) and for those that hold the single honours degree or M Sc/ MA they should be required to obtain a postgraduate diploma in education before being recruited to teach in any level of education. Put differently, the policy of making the NCE the minimum entry requirement for teaching is anachronistic given the crucial role of teachers in nation building and the fact that there is no minimum entry requirement for medical practitioners and lawyers , other than a first degree in medicine and law from an approve university. Raising the minimum entry qualification will ensure that those who go into training to become teachers must do so by choice not by chance as prospective teachers will first be required to obtain an acceptable level of qualification (first degree/ HND) from the universities or polytechnics before undergoing the professional training in education. This therefore implies that the role of colleges of education must change to centers for excellence in teacher education. Izuagba (2008) identifies some benefits of this development as follow:

- It will prevent mediocre from entering the profession
- It will minimize exist from the from the profession as only those interested will be admitted
- It will make the teaching profession credible.
- It will improve the social status of teachers.
- It will improve the quality of teaching and learning and hence shower up the development of the nation.
- Teachers will be proud and committed to their profession.
- Teacher flight will be minimized
- More men will be willing to enter and remain in the profession.

In addition to the above, every prospective teacher must undergo a one year mandatory teaching practice that is jointly monitored and supervised by the student's institution, and the Teachers' Registration Council of Nigeria.

Another factor is the discrepancies between the quality of certificates possessed by students admitted in to teacher education programme and their actual performance while in training. Many of the student- teacher is colleges of education, institutes of education, school of education of polytechnics and the NTI have impressive West African School Certificate or GCE /NECO or NABTEB but their actual academic performance and classroom participation while in training do not correlate with the excellent WAEC/NECO/GCE/NABTEB results they brandish and this affects the achievement of the objectives of teacher education. NISER and World Bank report quoted in Omo-Ojiugo (2006:4) confirms this discrepancies and add that the education system has degenerated as the report revealed that an average graduate 'who leaves a university or polytechnic with a degree or certificate is not worth the certificate". The report also confirms that the average Nigerian graduate lacks technical skills, has a poor command of English and is largely unemployable, It is then obvious that they cannot perform when they are employed to teach (Onukogu 2003; Bakari 2009; Izuagba & Nwigwe 2009). Omo- Ojiugo concludes that it is then not surprising that students' performance in the West African School Certificate and the National Examination Council is abysmally poor. One is then not surprised that the quality of entrants in the teaching education programme is abysmally poor since a systemic relationship exist between all the levels of education.

Omojuwa (2007;33-34) supports the above and adds that teachers trainees performance in the English language is poor as a result they cannot effectively implement the primary English curriculum on graduation. She also quotes that Umorem and Ibe (1988) as saying that a majority of teachers of science do not understand science concepts they are supposed to teach the pupils while Yoloye; Makoju; Okebukola; Samuel ; Nwabueze &Stanela (1993) in Omojuwa confirm similar defects in teachers of mathematics. All these are indications that there are some obvious defects in the quality students admitted which has equally affected the quality of output of teacher education programme. Omojuwa (2007) concludes that this is why a good number of candidates who enter teacher education programme do so because they do not have alternative. She cites example with 13 students in her degree class out of which only 5 chose education as their first choice while the rest had education as second choice, but even at that, all the 13 students are of low ability and their level of interest in the course is quite discouraging.

Curriculum Issues

The curriculum of teacher education programme has been found to be very narrow and out of tune with current needs in the society, (Ali, 2000: Yusuf, 2005). In spite of different paths that exist in the teacher education programme , the structure of the curriculum remains almost the same, what varies is the depth and breadth to content and learning experiences the student teachers are exposed to. In as much as the curricular were so designed to take in to consideration the student-teachers' basic pre-requite knowledge of would-be- teachers and the level of education they will be expected to teach on graduation, there is now need for harmonization of the both the entry requirements, duration and the curriculum content. Also, considering the fact that the task of the teacher is to help students to achieve high standards of knowledge, ability, technical skills and moral character, the curriculum need to be enriched and broadened in line with global demands

In addition, a comprehensive teacher education curriculum is needed to develop in teachers the abilities to (1) create meta-cognitive classroom environment; (2) prevent and reduce learning barriers and motivate students to be robust and strategic learners ;(3) monitor comprehensively, students learning and progress, Ebenebe (2006:10). When the above competences are related to the curricular content of teacher education programme as stated in FRN (2004: section 8) which comprise the under-listed broad components: '*General Studies; Foundation studies ; Special Subject area and Teaching Practice*' , it becomes obvious that there are discrepancies. This becomes more glaring when some of the policy provisions are not adhered to in practice especially, FGN 2004 (Section 8B: 74) which states that '*... teacher education shall take cognizance of changes in methods and curriculum and teachers shall be regularly exposed to innovations in their profession*'
Discrepancies exist because there are no in-built systematic processes for developing the capacity of teachers in service neither are they effectively exposed innovations in the

profession. Research findings show teachers use old tools to address new problems and issues, (Yusuf 2005 :Obanya,2002; 2004 & 2007; Izuagba & Nwigwe 2010; Adeosun 2011) ; the implications of this are that their products will not only be deficient in terms of current knowledge and skills but they cannot compete on equal footing with their counterparts from other countries. Furthermore, in spite of the fact that technology powers teaching in the 21st century most teachers lack knowledge and ability to use information and communication technology in teaching,(Yusuf 2005; Adeosun & Maduekwe 2008 ;Adeosun 2011; Ezekoka 2010). Izuagba; Nwigwe & Afurobi (2010) conclude that the labour market is driven by technology and to produce learners that are functional and able to compete favourably in the global knowledge driven market, teachers should husband IT skills by using it as a medium, and tool.. This does not just demand developing the capacities of the teachers but revising the curriculum to integrate ICT as aspect, medium and tool in pre-service and in-service teacher education programme..

From another dimension, teacher education programme is offered through the sandwich programme, distance learning programme, and weekend programmes in satellite campuses of universities and colleges of education. The production of professionals through these means is seen as defective because most of the programmes run in this manner are rushed, taught without adequate facilities and quality human resource and bedeviled by sharp practices. Confirming this Nwanna (1993) quoted in Lassa (1996) said that` *Fewer lecturers are scheduled ,night lectures, cases of corrupt practices, hardly any practical or laboratory work etc. in fact they have become more of commercial ventures than academic outfits*`. The National Universities Commission has intervened in this severally by banning the use of out-reach campuses but the problem keeps rearing up.

Issues Relating to Internship

Teaching Practice is an important component of the teacher education curriculum. It is a practical teaching activity that gives the student teachers the opportunity in actual school setting to demonstrate some pedagogical skills, knowledge and competences they have acquired and improve on them over a period of time based on the inputs provided by cooperating teachers in their schools of practices and supervisors from their institutions, Izuagba & Obiefuna (2003). The objective of the teaching practice programme according to Izuagba(2006) is to enable teacher acquire practical experience of teaching, develop their professional skills of teaching through practice, as well as be acquainted with the culture of the school through observations and interaction with teachers , pupils and the school environment in the cooperating schools. The implication is that if it is not well implemented the objectives of the programme may not be achieved.

The importance of teaching practices in teacher production is reflected in the credit load assigned to it in the curriculum of teacher education. At the NCE and the degree levels the credit load is 6 units each. While at the degree level students are expected to go on teaching practice twice- in the first semester of the second year and in the first semester of the final year for duration of 6 weeks each respectively. Students undergoing the NCE programme are expected to undergo a 26 week teaching practice in the first semester of their final year, NCCE (2009)

To achieve the objectives of this programme, the student teacher is mentored by cooperating teachers is the co-operating school who supervise and attend to some of their academic needs and problems as they prepare and teach their daily lessons. With the introduction of the log book by some colleges of education in order to help teacher trainees develop reflective practice, the cooperating teachers are now expected to interact with the student- teachers on daily basis, review what they have done, make inputs to help them develop their teaching skills, facilitate good lesson plan development and scaffold their skills in the implementation of the lesson plan. At the end of every week the cooperating teachers are expected to make input in the log book based on their assessment of the quality work/ teaching of the student teachers, regularity to classes and their level of commitment .

On the part of the student-teachers, they are expected to document every task performed daily and reflect on them to determine: how well they were done; problems encountered in the process and if there are lapses and they are expected to identify them. They are then expected to think of how they will improve on the lesson if given the opportunity to re-teach in order to overcome the lapses. The summary of all their reflections are to be documented in the logbook. It is believed that having time to reflect on their practices in order to identify gaps and strengths as well as finding solutions to the problems will develop in the student-teachers a repertoire of skills and other crucial teacher behavior necessary for effective instructional delivery. While commending the integration of reflective practice and the lengthening of the duration of teaching practice for the NCE teacher education programme, it is worrisome that these innovations have not been reflected in the teaching practice programme at the degree level in the universities and this does not augur well for quality teacher education

Another gap in the teaching practice programme is the need for clinical supervision of teaching practice programme similar to what obtains in other professions like medicine. Teaching practice should be part of the institutions- based internal learning process if we recall that medical students do their clinical years in a teaching hospital which provides ample opportunities for them to practice daily under the close supervision and mentoring of skilled consultants and resident doctors; it become necessary for all teacher education institutions to use their demonstration schools as laboratories. Supporting this , Osa-Ogulu (2002:7) adds that: “Teaching practices under professional supervision should be earned as part of the institution- based internal learning process in the university college teaching school” He argues that since teaching practice is a pre-graduation training exercise and bears a course code Ed325 and 425 for degree students and EDU 311 for the NCE students, it should be done in the institutions’ demonstration school.. This argument tallies with what obtains in Finland were student-teachers do their teaching practice in the primary and secondary schools run by teacher education institutions.

In the same vein, micro-teaching that would have been an opportunity of safe practice opportunity for student-teachers before the teaching practice is either handled in a haphazard manner in institutions where it exists; but the fact is that it does not exist in many institutions. This leaves many pre-service student teachers unaided.

In addition to the above, there are some other critical issues that affect that effective implementation of the teaching practice programme and these are::

- Logistics- Most often the organization of Teaching Practice is affected by the non-provision of enough funds to facilitate the movement of supervisors to the cooperating schools for supervision. This usually delays the take off of the programme and when it eventually takes off, supervision is rushed and this defeats the purpose/ objectives of the exercise.
- Lack of discipline: Many student teachers lack discipline, they do not report to their schools of practice on time and once they are supervised they bolt away thereby disrupting the activities in the cooperating schools. In addition to this, is the low moral behavior of some students-teachers such as indecent dressing of most female student- teachers, irregularity in school attendance, fighting, stealing etc. These have made some schools to reject them from practising in their school especially; as they believe that they would have some negative influence on their students.
- Poor communication skills of students. Teaching is one activity that depends on effective communication for its success. Learning to a large extent is the meeting of mind- of the teacher and the learners- and this happens if both are able to use language effectively to communicate their ideas in speech, writing reading and listening. Unfortunately, many student-teachers have very poor communication skills of English ,(Obanya 2002; Udosen 2010) which is the language of teaching and learning from primary 4 through the tertiary level. Even those that teach primary 1-3, where the language of instruction is the mother tongue or the language of the immediate community, are equally deficient in the reading and writing skills of the mother tongue/language of the immediate community, (Izuagba 1998; Emenanjo,2000; Udosen & Ubom 2004;Izuagba & Nwigwe 2009). Poor language facility adversely affects their ability to utilize the teaching practice programme to develop the expected competences, hence their inability to effectively develop sound knowledge of the subject matter they teach and to write good lesson plan.
- In addition, given the poor intellectual quality of many of these student-teachers some primary and secondary schools do not allow them to practice in their schools, as such many of them opt to do their teaching practice in private commercial schools where it most cases the school organization is inefficient and the quality of cooperating teachers if available at all is a suspect.

Competences Required of Teachers

Quality education empowers the citizens of any nation to redress challenges of social, cultural, economic and technological change and to achieve this requires quality teachers and quality teacher education programme. For teacher education programme to be of quality the input –process-output dimensions must be of quality. Principally, the curriculum must be dynamic reflecting emergent needs and problems in the society. It is only by so doing that teachers will be adequately equipped with the expected competences.

The implication of the above is that the level of competence of teacher educators is crucial to effectiveness of teaching and learning in all levels of education and to the achievement of national objectives. Competences required include sound knowledge of the subject matter, sound pedagogic-content knowledge, ability to integrate technology in teaching and the use of constructivist strategies in teaching.

Specifically, in addition to mastery of basic technical skills, quality teachers are expected to demonstrate a thorough understanding of the content of their curricular areas. They should be able to communicate this content to students using apt language, using methodologies that are appropriate for the age and abilities of the learners, preferably the constructivist strategies that enables learners to learn how to learn and construct knowledge themselves rather than being given knowledge. These teachers must stay abreast of changes and advancements in their specialty areas. They should be knowledgeable about various methods of instruction and sound understanding of different levels of human development, both typical and atypical. They should be capable classroom managers and skilled at motivating students. Furthermore they must be open, approachable in their interaction with students and diplomatic in conveying information.

In a technologically oriented world, these teachers should use contemporary modes of communication like email, smart boards, internet and interactive websites in addition to traditional means of communication in teaching and learning. Unfortunately, the above have not been achieved in the teacher education programme in Nigeria as the curriculum is still narrow and teacher educators who should have been examples of best practices they expect from their students in terms of knowledge of current issues in their disciplines and pedagogical skills are deficient , (Obanya 2007, Adeosun 2011).

Recruitment

The Federal Government believes that "…no education system can rise above the quality of its teachers" FGN (2004) to achieve this Udofort (1990) quoted in Akpan (2007:15) says that teacher education 'must recruit intellectual talented individual who should be able to apply theory, engage in theoretical analysis, understand personally theory, learning theory and motivation and engage in professional decision making', but unfortunately and ironically , in practice it is the dregs of this educational system that are trained and recruited to teach. This no doubt points to the fact that the quality of entrants contradicts policy provisions and the objectives of teacher education especially, FGN(2004: 8 b &d

- To encourage further the spirit of inquiry and creativity in teachers
- To provide teachers with the intellectual and professional background adequate for their assignment and to make them adaptable to any changing situation not only in the life of their country but in the world at large .

For teacher education in Nigeria to achieve the above two objectives, it should be able to attract intellectual sound and active students, as inquiry and creativity will be illusive if the cognitive function of teacher-trainees is low. In the same vein, to achieve the second objective above demands that those admitted into the programme should have the prerequisite cognitive knowledge, affective disposition and psychomotor competences on which the content and learning experiences of teacher education programme will be built. This also predisposes the fact that other input variables like- quality teachers/ educators, apt teaching and learning facilities, comprehensive/ and up-to-date curriculum and adequate funding, conducive learning environment- necessary for their preparation should be provided in the right quality and quantity.

Even at that, the process of recruiting of teachers and teacher educators are faulty when compared to some best practices in developed countries. Specifically, in recruiting teacher educators in Nigeria, in addition to the prospective teacher possessing the required qualification, oral interviews are conducted but all questions focus on assessing the prospective teachers intellectual ability in relation to his/her mastery of the subject he/she intends to teach and probably comportment and fluency in communication. There is no evidence in literature to confirm that written tests and interviews used in the selection of teacher educators assess personality and attitudes of these teachers, neither are they required to bring written or oral testimonial from previous employers that clearly specify personality attributes and behaviours that are pointers to their effectiveness in teaching and commitment to the profession. The integration of tests of personality attributes and attitudes are crucial in selecting teacher educators as a teacher who is morally bankrupt will have a negative influence on the learners.. In other words, knowledge of the subject matter should not be the main criterion for selection and recruitment. This is why when some of these critical features are neglected in the selection of would-be teachers the achievement of the objectives of teacher education becomes a mirage. The fact remains that the use of interviews and tests of personality and attitudes of teachers in the recruitment of teachers is seen as the cornerstone of the selection processes as such rigorous tests and interview helps :

- ❖ system know what the prospective teachers had done in similar contexts / environments
- ❖ in the selection of teachers who would be models for the learners,

Wilson (1989)supports this and reports that in the UK in recruiting teachers into the profession and entrant at the pre-service teacher education programme are selected based on face to face interview and written examination and much emphasis is placed on the personality and attitudes of the pre-service teacher in the selection process. In Finland, South Korea rigorous interviews are used to recruit teachers and this help them in selecting only the best academic achievers not into the teaching profession as well as the teacher education programmes, Thornton &Bricheno,(2006).

Unfortunately, in Nigeria instead of using such comprehensive instruments that ensures that the best is selected to teach vis-à-vis cognitive ability, affective disposition and psychomotor competences of the prospective student teachers and would be teachers, the exercise is politicized , and in most cases ,not only does government decide who is to be employed and number to be employed irrespective of existing vacancies, the character and personality of those recruited are not taken into consideration..Also, not including the personality attributes, attitudes , interest and love for the teaching profession in the evaluation instruments opens the entrance to the programme to candidates of shady characters and those who ordinary do not like to teach but will want to use teaching as a stop gap, Ukeje (1991). However, more disheartening is that politicians use their position to favour their cronies- children, friends and relations- irrespective of the areas of need and quality of teachers needed

Retention

Teaching is one profession that the quality of its practitioners improves by years of experience. Aleyideino,(2000:37) succinctly adds that 'Education as an industry depends on the stability of its staff. It is often said a good teacher becomes even better the longer he stays in the classroom'. Unfortunately, one of the problems with the education system in Nigeria is high teacher attrition and flight to other fields, principally due to poor funding, poor salary, feminization of teaching, low social perception of teaching, low morale and motivation of teacher, over-production of teachers, workloads and inconsistency in policies that affect teachers and teaching .Attrition and flight to other fields has become` like a permanent leak which would steadily ruin national effort in ensuring that quality personnel would be available for teaching', Aleyideino (2000:37).

Examples from performing school systems in the world especially in Finland- shows that best teachers can be retained if they are adequately taken care of. Hyland (2010) asserts the world's best performing school systems have strategic and systematic strategies to attract, develop, retain and ensure efficacy of the most talented educators and the system include:

- Close monitoring of the demand for teachers and regulating supply to match it, so that teachers who complete the selective training are guaranteed jobs in the profession- hence over production of teachers are eliminated.
- Offering competitive compensation for teachers, so that the financial rewards from teaching attracts and retain top third students.
- Offer opportunities for advancement and growth in a professional working environment which bestows enormously prestige on the profession.
- Those going into teacher education at the university level generally are first class or 2.1 degree candidates.
- Provision of good working conditions and opportunity are provided for teachers to participate in continuing education and training to ensure retention..

While Hirsh, (2001) identifies strategies for attracting and retaining teachers in the profession as

- Offering forgivable loans and scholarship to student-teachers while in training
- Luring retired quality teachers back to the classroom to mentor new teachers
- Increase in the salaries of new and older teachers in order to prevent turnover..

Omogun & Enu (2008) reports that Korea, Britain and New Zealand have increased retention by increasing remuneration for all teachers. They quoted Thornton & Bricheno (2006) who reported other enticing packages introduced to make teaching attractive and to increase retention. Some of these are: higher salaries, funding of training, and work load reforms.

Onuegbu (2007:12) aptly sums it up that unless teachers are be carefully selected and trained ; effectively inducted and professionally encouraged through regular in-service training and adequately remunerated by the state for services to the nation retention will not be guaranteed.. In spite of these suggestions by scholars in Nigeria and best practices in developed countries there is no strategy adopted by either the state of federal government to motivate and increase retention of teachers in the education system in Nigeria..

Assessment

Assessment for promotion of teachers/ educators has implications for quality teacher production. Currently, assessment is generally based on stipulated number of years spent on a particular grade level. For teacher educators the number of years is usually between 3 years – 4 years depending on the cadre of teacher educator, plus a stipulated number journal articles and text book published. This tend to play down on the importance of quality of teaching as there is no defined instrument used to determine how effective teaching has been for the years the teacher educator is being assessed, especially , when we consider that teaching is the teacher`s principal assignment. Supporting this and suggesting a solution, Abduikadir (1991) quoted in Lassa (1996) and Izuagba & Nkwocha (2010) identify the type of assessment procedure that can guarantee quantity and quality of teaching by teacher educators this is the use of feedback from assessment by students and assessment by peers. They go on to argue that if feedback from learners are integrated in the data used in determining who is to be promoted it will have a positive impact on the quality of teaching as well as quality of teacher produced. The rationale for this is that the teachers will be more conscientious, regular and punctual as these variables can be monitored by the learners; while the quality of what he/she teaches; how and with what can be assessed by his/her peers- obtrusively or unobtrusively. The present assessment criteria is not comprehensive as it does not incorporate assessment of the regularity, punctuality and quality of teaching of teacher to classes, relationship and attitude to students as well as their quality..

Management & Motivation

Teacher's work environment is described as the most impoverished of all sectors of the labour. The physical environment is characterized by decay in all forms and lack in all ramifications. Adelabu (2005) supports this based on the results from stakeholders he investigated who unanimously affirmed that there is teacher motivation crisis in Nigeria and this is manifested in teachers' low output, high teacher turnover, regular strike, poor pupils' performance, irregular attendance and absenteeism. Poor funding is a perennial problem in curriculum implementation in Nigeria, as it adversely affects effective management and motivation of teachers for quality education. Unfortunately, despite increased student enrolment in to teacher education institutions, funds made available to teacher education institutions keep depleting, Lassa (1996; 2000) adds that inadequate funding is one factor that adversely affect the achievement of the objective of producing quality teachers by colleges of education and related institutions. At the primary and secondary education levels, poor funding is contributory to the low motivation, high turnover of teachers and poor quality of teaching and learning, Lassa (2000). Nuhu (2000) adds that low income of teachers has made many teachers to engage in other economic activities to supplement their incomes and this has made them part- time teachers. While Ugwuanyi and Olokun (2000) assert that poor funding has made teaching to become a career reserved for the aged, the lame, the socially useless and this explains why men leave the profession in droves abandoning it for women which has led to the feminization of teaching (Izuagba 2009) especially at the primary and secondary education levels.

As a matter of fact, people seek jobs and stay on the job if physical, social, economic and security dimensions associated with the conditions of work are satisfactory (Afolabi,2000). Promotion is a form of reward for work well done and this boasts the morale and motivates the workers to work harder but a situation where teachers are not promoted for as long as 4 or 5years or continuing professional development is not provided, the teachers morale is usually low and followed by frustration. Put differently, if work conditions are not perceived as satisfactory, then turnover can be expected for teacher that are able and more skilled and for those that cannot , psychological withdrawal is expected. The consequences of this is high rate of flight and hatred for the profession as many youths today manifest aversion for teaching as a career and those that enroll only use it as a stepping stone. Ali (2000) adds that even when we produce high quality teachers, the depressing task and hassles that go with teaching, coupled with the poor and deplorable work environment and conditions of service for teachers lower their morale and commitment.

Imperatives for the 21st Century

Apart from the National Policy on Education, FRN (2004) ,the National Economic Empowerment and Development Strategy (NEEDS) which is a translation of the Millennium Development Goals in Nigeria recognizes education by implication the teacher as a crucial instrument in the socio-economic development and empowerment of Nigerians (National planning Commission 2004) but this cannot be achieved if the teacher education curriculum is not realigned to contemporary needs and challenges in Nigeria and the world at large. In as much as the different agencies : the National Universities Commission, National Council for Colleges of Education have developed Minimum Academic Standards that guide teaching and learning and effective management of these institutions, research and anecdotal evidence show that the curriculum is still defective as it does not equip the teachers with tools needed to prepare learners for the 21st century knowledge driven economy. Simmons (2010) notes that teachers do not need just the basic understanding of educational theory and classroom management, in additional they should learn to collaborate with other educators to learn how to implement technology in the classroom and how to prepare students for the knowledge driven economy.

Furthermore, the National Institute of Education, Singapore developed a teacher education model for the 21st century tagged TE21 (2009) in which the expected knowledge and competences of the 21st century teacher were discussed. Correlating this will Darling-Harmond (2006) in Adeosun (2011) which emphasised the core areas of need for effective teacher education in the 21st century as:

- a common, clear vision of good teaching that permeate all course-work and clinical experience creating a coherent set of learning experience.
- Well defined standards of professional practices and performance that are used to guide and evaluate course work and clinical work.
- A strong core curriculum taught in the context of practice and grounded in knowledge of child and adolescent development and learning, and understanding of social and cultural context, curriculum, assessment and subject matter pedagogy
- Extended clinical experience- at least 30weeks of supervised practicum and student teaching opportunities in each programme- that are carefully chosen to support the ideas presented in simultaneous, closely interwoven course work.
- Extensive use of case methods, teacher research, performance assessments, and portfolio evaluation that apply learning to real problems of practices.

- Explicit strategies to help students to confront their own deep seated beliefs and assumptions about learning and students and to learn about the experiences of people different from themselves.
- Strong relationships, common knowledge, and shared beliefs among school- and university- based faculty jointly engaged in transforming teaching, schooling and teacher- education (P110-111)

Hirsh (2001 adds that teacher education programme in the 21st century should among other things lay emphasis on inquiry based learning , constructivist learning , reflective practice, portfolio work and the use of case studies in teaching and learning. The important of case notes in teacher education rest on the fact that it facilities the development of reflective practice, and close analysis of problems related to teaching and learning . Its use also support systemic learning from a particular context and from more generalised theory about teaching and learning(Hammond 2006;16). When case studies are developed on aspects of school, teaching and families, communities , by observing ,interviewing, examining students work and analyzing data they have collected, (Adeosun 2011) the student-teachers develop strategies to handle problems emanating from teaching and learning, develop their own professional practices relevant to their context.

Furthermore, for effectiveness, teacher educators should have close working relationship with the schools- primary and secondary- since they constitute their field of research or laboratory for testing some of theories, strategies and principles. Confirming this ,Otuka (2001) argues that

> it is by working closely with the schools that they get accurate data on the nature of the learners and how they learn, as well as the applicability and how realistic some of the theories, principles and strategies are when put to practice and such information when acquired are reflected in the process of training of teachers p10.

The Way Forward

Since education is used as the instrument 'par excellence' for effecting national development FGN (2004:4) entrant to the profession as well as teachers and teacher educators to be recruited should be the best and this can be achieved through the following:

- One common entry requirement into teacher education similar to what obtains in other professions
- High UTME cut off mark as obtained in other courses (in the selection of entrants to the teaching profession).
- Consistent monitoring of teacher trainees while in training to ensure that only those that are interested in the profession and that are intellectually strong are inducted and licenced.
- Extension of the duration of teaching practice at the end of which the TRCN issues a practice licence after induction without which one cannot teach. This will be similar to the one year compulsory law school for lawyers or one year compulsory houseman-ship for doctors.

- Number admitted in to teacher education should to take into cognizance vacancies existing in the system to avoid over production.
- Comprehensive assessment tool should be designed and utilized for the recruitment of entrants to teacher education programme and the teaching profession, so that their intellectual ability, personality and interest in the profession will be captured
- Teacher educators should be equipped with apt pedagogical skills such as the constructivist strategies , use of case studies and the inquiry based learning should be emphasized in teacher education. In addition, the policy on regular in-service training to keep them abreast with developments in content and methods should be implemented.
- Teacher educators should be examples of best practices they expect of their teacher- trainees- in teaching and behaviour
- Favourable and motivating conditions of service to encourage retention
- Retired skilled teachers should be lured back to service to mentor new teachers
- There should be a synergy between primary and secondary curriculum and teacher education curriculum in theory and practice.
- School experience should be integrated into the programme to reduce the gap between the realities of today and teaching/ learning process,.
- Emphasis should be on learning through hands-on activities than content coverage and certification
- B A ; B.Sc plus PDGE or BEd should be the minimum entry requirement for entry into teaching profession
- Curriculum of teacher education should be flexible in order to integrate emergent issues like peace education, emergency preparedness, climate change ,inter-cultural understanding etc in teacher education curriculum.
- Use of ICT in teaching and learning as medium, aspect and tool
- Teacher educators should have close working relationship with primary and secondary since they constitute their field of research or laboratory for testing some of theories

- Assessment for promotion should utilize feedback from learners' and peer assessment in addition to years of experience

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Effect of Study Skills Technique in Reducing Test Anxiety among Secondary School Adolescents in Anambra State

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ABSTRACT
The study is on the effects of Study Skills Technique in reducing test anxiety among secondary school adolescents in Awka South Local Government Area of Anambra state. Two research questions and two hypotheses guided the study. Theoretical studies and various empirical studies were reviewed. The population for this study was made up of 369 students with test anxiety in junior secondary schools 2 (JS2) in Awka South Local Government Area of Anambra state. The sample for the study was 72 JS2 students with test anxiety. The Spielberger (1980) test anxiety inventory (TAI) with 20 items was used for data collection. The data collected were analyzed using mean scores and Analysis of Covariance (ANCOVA). Results showed that study skills technique is very effective in reducing test anxiety of secondary school adolescents. Study Skills Technique has high retention value of the reduction of the behaviour. Based on the findings and their implications, it was recommended, among others that school guidance counsellors should adopt the study skill technique in reducing test anxiety among secondary school students under their care.

Key words: ***Effect, Study skill, Technique, Reducing, Test Anxiety and Adolescents***

INTRODUCTION

Most of the time, students at the verge of entering for a test or examination are seen trembling, fidgeting or panicking. This should not be, as examination or test is a normal situation which one should not be afraid to participate in (Dryden, I998). It is common to see secondary school students meditating and expressing openly, the type of distress they have during examination or test. This experience of distress before, during or after examination could be a psychological condition, which is a type of anxiety disorder.

Anxiety which is derived from the latin word 'angere', means to choke, or strangle. Heering (2009) further noted that anxiety disorder involve an excessive or inappropriate state of arousal, characterized by feelings of apprehension, uncertainty or fear. Anxiety as opined by Halgin and Whitbourne (2003) is one of the most prevalent clinical problems and is a prominent feature in many psychopathological conditions. Hendrick (2008) referred to such condition as a disorder that involves a shift in the way the body responds to normal activities and thoughts. Thus, test anxiety could be seen as a situation where individuals have fear towards test/ examination that they ought not to experience. It is an unreasonable fear, a condition where someone emotionally or physically experience distress, prior, during or after taking a test/examination (Egbochukwu, Obodo & Obadan, 2008). However, Drowetzky (1997) earlier pointed out that a psychologist definition of test anxiety is where the anxiety negatively affects the person's performance in school, to the extent that it affects the individual's ability to learn even outside school. Kovel (1991) referred to Yerkes Dodson law which states that an optimal level of anxiety is necessary to best complete a task, such as examination but when the level of anxiety exceeds that optimum level, it results in a decline in performance.

However, Birenbaum and Nasser (1994) claimed that test anxiety has become one of the most disruptive factors in schools. Schafer (1996) pointed out that it has been estimated that 30% of all students suffer from various levels of test anxiety. This is perhaps why Omoluabi (I993) opined that test anxiety in most cases results to frustration and is capable of affecting the totality of the individual as well as his personality. Adeyoju (I995) concurred that debilitating anxiety in students before and during examination has been observed to cause diminishing intellectual performances.

Schafer (I996) summed up the four main sources of test anxiety as; concerns about how others will view you if you do poorly, concerns about one's own self image, concerns about ones future security and concerns about not being prepared for a test. According to Mathew (2008) among the causes of test anxiety is poor time management, cramming a night before the examination, failure to organize information, lack of concentration among others. These mean that test anxiety could be caused by poor study habits or poor study skills, worry about past performance on examinations and many more. However, no matter the route of the test anxiety, any anxiety that continues for a long time or begins to interfere with normal life is considered abnormal.

Psychologists are of the view that there are similarities in the symptoms, for instance, Woodard (2004) opined that students with test anxiety complain of such things as nervousness, inability to concentrate, a blank mind and a feeling of sickness. Similarly Jaytunge (2008) pointed out that some students with test anxiety manifest psychosomatic ailments such as abdominal pains, vomiting, headaches, dizziness, tremor and many more, that have no apparent medical basis. This, according to Egbochukwu (2000) is one of the reasons why Guidance Counsellors are needed greatly in the schools because cases like these that are not medical cases, could keep reoccurring if not handled.

No matter the symptoms it is apparent that the student with test anxiety is unable to behave normal once test/examination is presented, thus most often students with test anxiety, according to Osisioma (2001) may resort to short cut measures, like forms of examination malpractice; impersonation, copying, sorting and many more. Similarly, some students in the bid to overcome test anxiety resort to the use of drugs. Hence, it is very important to master the art of staying calm throughout any examination /test, bearing in mind that test or examination is a normal phenomena. However, owing to the fact that examinations are meant to assess or evaluate the academic achievements of students and the method by which the society is assured of the suitability of individual on their chosen fields, promotion from one class to the other, admission into secondary schools, and university, the importance of excellent performance in examination cannot be undermined. Thus examination, in spite of the adage that says is not a true test of knowledge, still stands as the mainstay, the major determinant of human future, optimal level in academics and invariably achievement and success in life generally.

Smith (2006) pointed out that whether an individual experiences test anxiety, phobia or panic disorder, the person has an anxiety disorder and one can do something to overcome it. Bower (2008) opined that test anxiety is actually a type of performance anxiety; where the pressure is how to do well. Going further to highlight that it is a situation where one has participated in class, done all the homework, and think he has a grip of the material but on the day of the examination/test the person blanks out, freeze up, zone out or feel so nervous that he cannot get it together to respond to the questions. Smith (2008) concurred that test anxiety include the feelings of apprehension or dread, trouble concentrating, feeling tense, anticipating the worst, irritability, restlessness, watching and waiting for signs and feeling that the mind has gone blank and scary. Hence, in this study the counselling being received by the students in their respective schools using other techniques other than Study Skills is referred in this work as counselling.

However to reduce fear and anxiety and other emotional maladjustment problems series of Psychological theories have been propounded and used. These theories as pointed out by Adeola (I987) have embedded in them counselling therapies, which can be used in treatment of emotional maladjustment in general, fear and anxiety in particular. However, following the Gestalt theory of learning Study Skills are approaches to learning. According to Tallis (2008) there are numerous study skills which may take the process of organising and taking in new information or dealing with assessments, among which are; study tips, Questioning, Summarizing, Time management, Memory tricks, Examination technique, Note-taking and many more. However, this study applied Summarization, Study Tips, Note taking, and Memory tricks. Hence, any skill which boosts a person's ability to study and pass examination can be termed as study skill.

Nelson- Jones (I991) in his view explained the poor performance of students with test anxiety to be as a result of deficient in study skills. Kirkland and Hollandsworth (1980) pointed out that study skills are focused on equipping students in effective examination taking strategies, adaptive self instruction statement and skills. Paulman and Kennelly (2004) also posited the proponents of this therapy as having the assumption that intervention measures targeted at improving study and examination taking skills are capable of reducing test anxiety. To this Kirkland and Hollandsworth (1980) enumerated the skills required by the client from the point of preparation of test\examination, before, during, and after the examination, emphasizing on achieving self confidence in all the stages. Malayalam (2004) concurred, when in his assertion presented a long range of perception to be adopted by the students facing test anxiety in order to overcome it, to include adequate preparation before the test/examination, for enhanced self confidence to enter the examination with fear. The concept of Study Skills as perceived by Zbornick (2001) involves test anxiety being remedied of its effects in four forms, which include among others, the teaching of test–taking and study skills. Expatiating further, Zbornick (2001) pointed out that studies have indicated that certain groups of students with test anxiety, lack the necessary study skills to perform adequately on examination. Similarly, Thompson (1996) in his own submission, opined that among the overall functions of the guidance counsellor is to help students develop coping skills, as most clients problems may be classified in such areas as conflict with self, conflict with others, lack of information about self, lack of information about the environment and lack of study skills. Stressing the link between study skills acquisition and test anxiety, Marshal (1994) likened the memory as a vast filing system where everything one has learnt is being filed and the more learning the more files, where the ones often used like name, address of family and many more, stay in front depending on how often they are referred, thus frequent preparation or study builds confidence and keep the file in front of the memory file. Hence when one is aware that the information is in the memory, fear may not arise.

Onyechere (1996) summarized the principles for one to excel in a test without fear to entail mastery of skills for test preparation. This we can buttress with examples where, for instance, one is at a party where names are exchanged and he/she starts talking, often, by the time they part, he/she might ask the new acquaintance's name again, which is because he has forgotten, and before asking he might be afraid that the new acquaintance, might feel bad, that he has forgotten, whereas if he has repeated the name several times in a corner, when he first told him, he would have learnt the name. Onyechere (2004) gave a detailed and encompassing analysis of study skills acquisition therapy maintaining that, to excel in examinations without fear, the client need to work harder and work better, revise early, revise regularly with the confidence that breeds successes, obey the rules and regulations of examination for success. Hence test anxiety and its attendant examination malpractice are very serious threat to our educational system and to individual students.

Students with test anxiety need practical assistance through counselling processes. One popular technique that came up after the failure of Systematic desensitization to adequately reduce test anxiety is Study Skills technique. Study Skills technique is focused on intervention measures targeted at improving study and test taking skills. The researchers therefore, were motivated to determine the effects of the technique in reducing test anxiety as contribution to the literature in the area with a local background.

The following research questions were formulated for the study

1. What is the mean loss of the students with test anxiety when exposed to Study Skills technique?
2. What is the difference in the post test and retention mean scores of students exposed to Study Skills technique?

The following null hypotheses are formulated for the study and tested at 0.05 level of significance

1. There is no significant difference in the mean scores of students on test anxiety, exposed to Study Skills technique and the students in the control group.
2. There is no significant difference in the post and retention test mean scores of students on test anxiety, exposed to Study Skills Technique.

METHOD

Quasi experimental research design was employed in this study. Bearing in mind that Nworgu (2006) pointed out that quasi experimental research design could be used on students in a school setting where it is not always possible to use pure experimental design which they consider as disruption of school activities. Many quasi experimental methods are available but the one employed in this study is the non- randomized pre test-post test control group design.

Here two groups of subjects are involved, one experimental groups and one control group. All of them were pretested. The experimental group received treatment on test anxiety using the Study Skills technique, while the control group received theirs from their school guidance counsellor. Then on two different settings the two groups were post tested and retention test also administered.

The population of this study is 369 JSS2 secondary school students with test anxiety in all the secondary schools in Awka South local Government area of Anambra State. This population was gotten from the result of the pre test administered to all the JSS2 students using Spielberger (I980) test anxiety inventory (TAI). The sample for this study is 69 JSS2 secondary school students who exhibited test anxiety in the two purposively selected Secondary Schools in Awka South Local Government Area

The instrument used in this study is the test anxiety inventory (TAI) originally developed by Spielberger (1980), and validated for use with Nigerian Sample by Omoluabi (1993). The instrument was designed to measure anxiety in test, which was adopted by the researchers for this study. The inventory was specifically used in this present study to measure the test anxiety levels of adolescent students facing continuous assessment. The test anxiety inventory consists of 20 items and each item is scored on a 4 point scale ranging from 1 – (almost never) to 4 – (almost always). The inventory provides scores on three components of test anxiety: Worry (W, 8 items), Emotionality (E, 8 items) and Total (T, all the 20 items). The total scale comprising all the 20 items were used in this present study. For scoring purposes, the TAI manual according to Spielberger (I980) indicates that there is direct scoring and reverse scoring of the items.

The test anxiety inventory (TAI) used for this study has been used extensively in both clinical practice and research, with Nigerian Samples. For instance: Omoluabi (1993), Egwu (2004) and many more. The instrument has been validated in numerous studies for use in Nigeria (Omoluabi, I993). The norm for interpreting TAI by Omoluabi (I993) for Nigeria students, the limit is 34.77 and 34.37 for male and female respectively. Omoluabi (1993), reported test retest reliability coefficient values for both Male and female Nigerian samples as follows: - Worry (W) = .73, Emotionality (E) = .79, Total (T) = .80, after 72 days interval of administration.

The treatment was administered on all the JSS2 students with test anxiety in school A using Study Skills technique in their group counselling process by the researchers, while the control group was counselled by their school counsellor (Research Assistant) using other ways, different from the technique. The Counselling period for Study Skills was one session per week, each session lasting at least 40 minutes, for eight weeks which was during the counselling period as agreed with the school administrators. At the end of the counselling periods, a post test was administered to the two groups. Three months later a durability test was given to the treatment groups to verify if the effects of the treatment were durable.

The Data collected for the study was analyzed. In answering the research questions, mean was used. Then, Analysis of Covariance (ANCOVA) was used in testing the hypotheses.

RESULTS

Table 1: Pretest and Posttest Mean ratings of Students who Received SS and those in the Control Group

Source of Variation	N	Pretest Mean	Posttest Mean	Loss Mean	Remark
Study skills Technique	38	46.13	31.34	14.79	Very Effective
Control Group	34	69.62	67.53	2.09	

Norms = 34.54

Data in table 1 shows that with pretest mean score of 46.13 and posttest mean score of 31.34 with loss mean 14.79 for the students treated with the study skills as against pretest mean score of 69.62 and posttest mean score of 67.53 with loss mean of 2.09 for the students in the control group, study skills technique has positive effects. Also the posttest mean score 31.34 of students treated with Study Skills technique is below the norm of 34.54.

Table 2: Posttest and Retention Mean ratings of Students who Received SI

Source of Variation	N	Posttest Mean	Retention Mean	Gained Mean	Remark
Study Skills.	38	31.34	28.42	-2.92	Very durable

Norms = 34.54

Table 2 reveals that with gained mean of -2.92, the effects of study skills technique in the reduction of test anxiety of the students is very durable.

Table 3: ANCOVA on the Mean Scores of Students Treated with SS and those in the Control Group

Source of variation	SS	df	MS	Cal. F	Crit. F	P ≥ 0.05
Corrected Model	23536.72	2	11768.36			
Intercept	958.69	1	958.69			
Pretest Scores	38.09	1	38.09			
Treatment Models	3124.45	1	3124.45	183.80	3.99	S
Error	1172.94	69	17.00			
Residual	193587.00	72				
Corrected Total	24709.65	71				

In table 3, it was observed that at 0.05 level of significance, 1df numerator and 69df denominator, the calculated F183.80 is greater than the critical F 3.99. Therefore, study skills are significant in reducing students test anxiety.

Table 4: ANCOVA on the posttest and retention mean scores of students treated with SS.

Source of variation	SS	df	MS	Cal. F	Crit. F	P ≥ 0.05
Corrected Model	70.87	1	70.87			
Intercept	162.94	1	162.94			
Posttest Scores	70.87	1	70.87	10.70	4.11	S
Error	238.40	36	6.62			
Residual	31004.00	38				
Corrected Total	309.26	37				

In table 4, it was observed that at 0.05 level of significance, 1df numerator and 37df denominator, the calculated F 10.70 is greater than the critical F 4.11. Therefore, there is significant difference in the posttest and retention mean scores of students exposed to Study Skills on test anxiety.

Summary of the Findings

From the analyses the following findings were made:

1. Study Skills technique is effective in reducing test anxiety among secondary school students.
2. Students who were treated with Study Skills technique have high retention value after three months of the posttest.
3. Study Skills technique is significant in reducing students test anxiety.
4. There is significant difference in the posttest and retention mean scores of students exposed to Study Skills Technique in test anxiety reduction.

DISCUSSION

The results of this study reveal that Study Skills have effects on the test anxiety of secondary school adolescents as shown in table 3. Study skills technique is effective because it focused on equipping clients in effective study strategies. The result confirms Kirkland and Hollandworth (1981) who posited that intervention measures targeted at improving study skills are capable of reducing test anxiety. Furthermore, with Malayalam (2004) who presented, long range of perception to be adopted, by students having test anxiety with the bid to overcome it, emphasizing on adequate preparation before the test/ examination. This is in line with the study carried out by Nemeyer and Raskin (1990) on the role of homework and study skill acquisition in the outcome of group cognitive therapy for depression. And the findings indicated that study skill acquisition promoted and reinforced treatment.

Study Skills Technique has effects on test anxiety of secondary school adolescents because it is an obligation exercise that involves intervention measures targeted at improving the clients from the point of preparation of test, before, during and after the examination, emphasizing on adequate preparation. Zbornick (2001) pointed out that studies have shown that certain groups of students with test anxiety lack the necessary study skills. To which Tallis (2008) opined that inadequate preparation precipitates fear in examination. Thus in counselling clients are exposed to study skills by enumerating ways to optimize study skills and putting the clients to practice them, through home works, rehearsal, study skills testing and many more.

Thus, the result is in line with that of Bates (1980) on the effectiveness of intrapersonal skill training on the social skill acquisition and the results showed that social skills can be acquired through skill training. Also tallies with the study reported by Ozlem (2001) on study skill acquisition on income generation and the result showed that given skill training in an on the job setting, effective skills can be acquired. Study skills technique has effect on test anxiety of secondary school adolescents as it emphasizes effective examination taking strategies. Thus, Concurring with Onyechere (2004) summary on the principles to excel in a test without fear to entail mastery of test taking skills. Hence, agrees with Kirkland and Hollandworth (1980) who referred to test anxiety as a reaction that occurs when individuals lack requisite test taking skills. Kirkland and Hollandworth (1980) in their study on the effective test taking skills acquisition verses anxiety reduction, where a skill acquisition treatment for test anxiety was compared with two anxiety reduction conditions, which results indicates that the test skill acquisition group was superior to the other condition in terms of performance.

Study Skills Technique has effect on test anxiety because of its emphasis on self confidence. Knowing that as humans, we are always afraid of the unknown, while familiarity brings contempt. Among the strategies used in study skills acquisition is the enhancement of self confidence to enter into test or examination without fear. Available literatures show that clients with test anxiety tend to perceive evaluation situations as personally threatening and apprehensively. But for Marshal (1994) adequate preparation for study builds confidence. Malayalam (2004) concurred when he emphasized on adequate application of the study skills for enhanced self confidence. Wright (1985) pointed out earlier the influence of study skills on increasing students' confidence in test. These are all on the effect of study skills on the test anxiety of secondary school students.

Thompson (1996) in his submission observes that among the overall functions of the guidance counselor is to help clients develop coping skills, as most clients' problems may be classified in such areas as lack of skills. Marshal (1994) linked the study skills and test anxiety by likening the memory as a file where all one has learned are filed and the ones used often stay intact and are easily recalled with confidence without any anxiety. Thus it become apparent to help these students build up their study and examination taking skills, so that when they are aware that the information is in their memory, anxiety is reduced. Hence, concurring with Onyechere (2004) principles of excellence in examination without fear to involve mastery of study skills.

The study showed that the adolescent students with test anxiety who were exposed to study skills retained the change that was effected on them. As shown in table 2 the minor difference in the post test and retention test showed that the study skills were highly retained by the clients. Thus in line with Paulman and Kennelly (2004) who posited that the proponents of Study Skills as having the assumption that intervention measures targeted at improving study and examinations taking skills are capable of reducing test anxiety. Also, Zbornick (2001) pointed out that studies have indicated that certain groups of students with test anxiety lack the necessary study skills to perform adequately on examination. Because, the clients have been exposed to the need for frequent preparation of their study, their work now stay in front of their memory in the filing system, thus the anxiety over test is now at the minimal as the now see or participate in test or examination with self confidence.. Thus, Study Skills could be traced to the adage; practice makes perfect as the clients in the process of treatment were exposed to series of homework, assignment, practical exercises, the mastery tendency cannot be ruled out.

Conclusion

From the findings of this study the following conclusions have been made:

- There is a significant difference between the posttest mean score of the experimental group after treatment and the posttest mean scores of the control group.
- Study skills are very effective in reducing test anxiety of secondary school adolescents.
- Study skills effect on test anxiety of secondary school adolescents could be retained some months after treatment.

Implications of the study

The findings of this study have numerous implications arising, and having known that test anxiety of secondary school students is reduced or eliminated by Study Skills Technique. The major implication of this finding is that guidance counsellors should use the technique in handling test anxiety.

The study revealed that study skills is effective in reducing test anxiety in secondary school students the implication of this finding is that counsellors, teachers and psychologists who use study skills technique on reducing test anxiety should go on and use it. Which goes to show that the intervention of the techniques could aid adequate preparation for the students in their academics activities?

Recommendations

Based on the findings of this study and the implications of this study the following recommendations were made;

1) Every secondary school in the country should have a well equipped counselling unit to be manned by professional counsellors. The aim is to enable these counsellors effectively diagnose and treat students with test anxiety and other maladaptive behaviours in the school.
2) Proper and accurate diagnosis of the circumstances precipitating most examination malpractice among the students should be conducted to identify those whose inert problems are test anxiety who should be referred to the school Counsellor.
4) Teachers should as much as possible pay close attention to their students' attitude in class before, during and after test or examination to identify those who exhibit symptoms of test anxiety and refer them for counselling.
5) Counsellors in our Secondary Schools should use Study Skills Techniques in order to reduce test anxiety among students.
6) School counsellors should organize workshops and enlightenment seminar/workshop for teachers and school Administrators on test anxiety, its identification and reduction; this will help improve academic excellence.

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