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Chapter 1

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

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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. The population for this study comprised 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.

Keywords: Effect, Study skill, Technique, Reducing, Test Anxiety and Adolescents.

INTRODUCTION

Most times, students at the verge of entering for school tests or examinations are seen to exhibit some forms of anxiety – restless, trembling, fidgeting or panicking. This should not be the case, because examinations or tests are normal situations which one should not be afraid to participate in (Dryden, 1998). It is common to see secondary school students meditating and expressing openly, the type of distress they have during examination or tests. This experience of distress before, during or after examinations 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 involves 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 and 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, researchers in the 1990s claimed that test anxiety has become one of the most disruptive factors in schools with about 30% of all students suffering from various levels of test anxiety, which in most cases results to frustration and capable of affecting the totality of the individual as well as his/her personality. Therefore, debilitating anxiety in students before and during examination has been observed to cause diminishing intellectual performances (Birenbaum and Nasser, 1994; Schafer, 1996; Omolubi, 1993; Adeyoju, 1995). Thus, Schafer 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, 08035277417 prince 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 phenomenon. 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, and 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. Bower further highlighted 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 (1987) 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.

Furthermore, Nelson- Jones (1991) 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. 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.

Research Questions

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?

Hypotheses

The following null hypotheses were 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 pretest-posttest control group design.

Here, two groups of subjects are involved, one experimental group 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 pretest administered to all the JSS2 students using Spielberger (1980) 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 (1980) 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, 1993). The norm for interpreting TAI by Omoluabi (1993) 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 and in answering the research questions, mean was used followed by the Analysis of Covariance (ANCOVA) used in testing the hypotheses.

Results

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

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>N</th>
<th>Pretest Mean</th>
<th>Posttest Mean</th>
<th>Loss Mean</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study skills Technique</td>
<td>38</td>
<td>46.13</td>
<td>31.34</td>
<td>14.79</td>
<td>Very Effective</td>
</tr>
<tr>
<td>Control Group</td>
<td>34</td>
<td>69.62</td>
<td>67.53</td>
<td>2.09</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>N</th>
<th>Posttest Mean</th>
<th>Retention Mean</th>
<th>Gained Mean</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Skills</td>
<td>38</td>
<td>31.34</td>
<td>28.42</td>
<td>-2.92</td>
<td>Very durable</td>
</tr>
</tbody>
</table>

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.

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

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.
<table>
<thead>
<tr>
<th>Source of variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>Cal. F</th>
<th>Crit. F</th>
<th>P ≥ 0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>70.87</td>
<td>1</td>
<td>70.87</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>162.94</td>
<td>1</td>
<td>162.94</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttest Scores</td>
<td>70.87</td>
<td>1</td>
<td>70.87</td>
<td>10.70</td>
<td>4.11</td>
<td>S</td>
</tr>
<tr>
<td>Error</td>
<td>238.40</td>
<td>36</td>
<td>6.62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residual</td>
<td>31004.00</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>309.26</td>
<td>37</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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. Thus, it becomes 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.


Chapter 2

Psychometric Properties of NABTEB Economics Multiple-Choice Test Items from 2005 To 2011

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ABSTRACT

The purpose of the study was to determine the psychometric properties of Economics multiple-choice test items administered by the National Business and Technical Examination Board (NABTEB) from 2005 to 2011 in Nigeria. The study was a descriptive survey conducted in Awka town, Anambra State, Nigeria. Three research questions and one hypothesis guided the study. The population of the study comprised of 3,558 SS. three students in the seven government-owned secondary schools in Awka town, Anambra State. A sample of 300 SS. three students was selected through simple random sampling for the study. The research instrument was the Economics multiple-choice test administered by NABTEB in 2005, 2006, 2008, 2009 and 2011. The method of data analysis was item analysis and computations of percentages of acceptable difficulty indices (P), discrimination indices (D) and distracter indices (D.I) of the multiple-choice test items for the study. The Chi-square test was used to test the hypothesis. One of the major findings of the study was that: the qualities of NABTEB Economics multiple-choice test items increased progressively from 2005 to 2011. Based on the findings, it was recommended among others that NABTEB should mount regular training/workshop/seminars and brief sessions for item writers, moderators, supervisors and examiners to update their knowledge in test construction.

Keywords: National Business and Technical Examination Board (NABTEB), Psychometric properties, Tests Items and Item Analysis

INTRODUCTION

The need to quantify behaviour inculcated in the learners has placed evaluation at an indispensable position in the teaching/learning process in schools. Evaluation, in this context, is concerned with determining the extent to which educational objectives and the desired behavioural changes in the learners have been attained, as well as making value judgments on the worth of the attributes. Test is an important measuring instrument employed to determine the extent of learners’ attainment of educational objectives. The above was supported by Capper (1996) when he said that better test means better teaching and better teaching means better learning.
Sidhu (2005) defined test as an examination to reveal the relative standing of individuals in the group with respect to intelligence, personality, aptitude or achievement. It is administered to the testee for determining the extent he/she has attained previously identified objectives in a learning situation. The objectives here may be based on cognitive achievement, attitude, interest, personality, social adjustment, or psychomotor skills. Therefore, testing is a fundamental part of the teaching-learning process used not only as a basis for ranking students at the end of the teaching/learning process but to guide teaching and aid in the development of curriculum, as well as in the assessment of needs, learning difficulties, level of mastery and differences among students.

Test could be in essay or objective form. Essay test is a test where the testees are allowed to answer the questions with sentences composed and organized by them (Nkwocha, 2004). On the other hand, objective test is a test in which every question is set in such a way as to have only one correct answer. The opinion of the examiner is not required to judge the correctness of the answer. One example of an objective test is multiple-choice tests which contain items that are usually with four to five plausible answer options from which testees are expected to recognize the correct answer. Tests such as a multiple-choice test are judged worthwhile when it possesses psychometric properties.

Kline (2000) defined psychometrics as those aspects of psychology which are concerned with psychological testing. The field of psychometrics is primarily concerned with the construction and validation of measurement instruments such as test, questionnaires and personality inventories. Psychometrics is applied widely in educational assessments to measure abilities in domains such as reading, writing and mathematics. The psychometric properties that every measuring instrument such as a test should possess are validity and reliability. Okoye (1996) defined validity as a measure of the extent to which the test (or an instrument) measures what it intends to measure. Enyi (2002) remarked that if a test possesses other qualities but lacks validity, the test will be considered as not being useful. Validity is the watchword or foundation stone over which the entire superstructure of testing is based (Sidhu, 2005). Therefore, Onah (1994) stated that tests are required to be valid if results based on them are going to be utilized for value judgment. If an item is valid, such an item is said to be reliable to a greater extent. Reliability of a test refers to the degree to which a test measures accurately and consistently yielding comparable results when administered a number of times (Akuezuilo and Agu, 2003). A test validity and reliability can be ascertained through item analysis, among others.

Nwaobia (1990) stated that item analysis is concerned with ascertaining the worth of test items. Item analysis involves quantitative computation used to verify how each test item measures effectively the construct it is designed to measure. Item analysis helps to improve a test by revising or discarding ineffective items, provide diagnostic
information on what examinees know and what they do not know. Item analysis usually
calls for the computation of some indices such as difficulty index, discrimination index,
and distracter effectiveness (Okoye, 1996).

For a long time now, all Examination Bodies in Nigeria construct both essay and
multiple-choice tests in all school subjects. The National Business and Technical
Education Board (NABTEB) was established in 1993 to conduct Senior Secondary
School Certificate Examinations (SSCE) in both federal and state technical schools due to
the criticisms against WAEC. In Nigeria, the analysis of past NABTEB results of 2006,
2007 and 2008 have shown that there have been continuous failure in some subjects
such as Mathematics, English language and Economics (Anayochi, Anagara, Anosike and
Asoluka, 2010). Anayochi, et al., observed that the examination results in Mathematics,
English language and Economics were poor, and therefore, was not encouraging. This
problem seems to have led to public lack of confidence in the examination body,
thereby, decreasing the number of students’ enrollment in NABTEB examinations
especially in Economics. Because of the continuous failure in some NABTEB
examinations especially in Economics, the question is, how does the Economics
multiple-choice test items constructed by NABTEB satisfy psychometric properties of a
test in terms of difficulty, discrimination and distracter indices?

It has been observed that students continuously perform poorly in some subjects in
examinations conducted by NABTEB. Some people then believe that NABTEB multiple-
choice test items are properly designed. Some people do not even know or recognize
that NABTEB is one of the examination bodies in Nigeria not to talk of the quality of
their test items in terms of the difficulty index, discrimination index and distracter
index; this made some people believe that NABTEB examinations are not valid like
other examinations.

Furthermore, in some Nigerian technical colleges, the students now prefer to register
for WAEC examinations instead of NABTEB examinations simply because WAEC
examinations are considered to be more valid than NABTEB. The same matter is
observed in the admission of students into tertiary institutions where some Nigerian
universities discriminate against NABTEB and some universities do not accept NABTEB
result for admission. These criticisms and doubts about the quality of NABTEB multiple-
choice test items has motivated the researchers to study the psychometric properties of
NABTEB Economics multiple-choice test items from 2005 to 2011 in terms of their
difficulty indices, discrimination indices and distracter indices.
Research Questions

To carry out this study effectively, the following questions were posed:


Hypothesis: There is no significant difference between the percentages of acceptable and unacceptable NABTEB Economics multiple-choice test items from 2005 to 2011.

Method

The design of the study was descriptive survey. The study was carried out in Awka town, Awka South Local Government Area of Anambra State, Nigeria. The population of this study comprised of three thousand, five hundred and fifty-eight (3,558) Senior Secondary (SS) three (3) students in the seven (7) government-owned secondary schools in Awka town. The sample of this study comprised three hundred (300) SS. 3 students from five government owned secondary schools in Awka town. Three hundred (300) students sampled were used to study the Economics multiple-choice test items administered by NABTEB in 2005, 2006, 2008, 2009 and 2011. The Economics multiple-choice test items administered by NABTEB in 2005, 2006, 2008, 2009 and 2011, comprised of the instrument of the study.

The NABTEB Economics multiple-choice test is a public examination; therefore, the study was on the issue of its validity and reliability. The researcher analyzed research questions one to four by computing the difficulty indices, discrimination indices, and distracter indices of the administered NABTEB Economics multiple-choice test items in 2005, 2006, 2008, 2009 and 2011 using the item analysis statistics. Percentages were used to further analyze the computed difficulty, discrimination and distracter indices of NABTEB Economics Multiple-choice test items from 2005 to 2011. Finally, Chi-square test was used to test the hypothesis at 0.05 alpha level.

Results

Table 1: Number and Percentages of NABTEB Economics multiple-choice test items with various Difficulty Indices in 2005, 2006, 2008, 2009 and 2011

<table>
<thead>
<tr>
<th>S/N</th>
<th>YEAR</th>
<th>0.0</th>
<th>0.1</th>
<th>0.2</th>
<th>0.3</th>
<th>0.4</th>
<th>0.5</th>
<th>0.6</th>
<th>0.7</th>
<th>0.8</th>
<th>TOTAL</th>
</tr>
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<tbody>
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<td>3</td>
<td>7</td>
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<td>8</td>
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<td>-</td>
<td>50</td>
</tr>
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<td></td>
<td>%</td>
<td>2</td>
<td>6</td>
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<td>34</td>
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<td>4</td>
<td>16</td>
<td>14</td>
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<td></td>
<td>%</td>
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<tr>
<td></td>
<td>%</td>
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<td>4</td>
<td>6</td>
<td>36</td>
<td>8</td>
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<td>14</td>
<td>22</td>
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<td>5</td>
<td>2011</td>
<td>-</td>
<td>3</td>
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<td>6</td>
<td>9</td>
<td>-</td>
<td>-</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>-</td>
<td>6</td>
<td>42</td>
<td>12</td>
<td>10</td>
<td>18</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100</td>
</tr>
</tbody>
</table>

The analyses of difficulty indices for NABTEB Economics multiple-choice test items revealed the following; for 2005, 39 items representing 78% met the acceptable difficulty indices while 11 items representing 22% did not meet the acceptable difficulty indices.

For 2006, 2008 and 2009, 45 items each which represent 90% met the acceptable difficulty indices while 5 items which represent 10% did not meet the acceptable difficulty indices. For 2011, 47 items which represent 94% met the acceptable difficulty indices whereas 3 items which represent 6% did not meet the criteria for acceptable difficulty indices.


Table 2: Number and Percentages of NABTEB Economics multiple-choice test items with various Discrimination Indices in 2005, 2006, 2008, 2009 and 2011

<table>
<thead>
<tr>
<th>S/N</th>
<th>YEAR</th>
<th>0.0</th>
<th>0.1</th>
<th>0.2</th>
<th>0.3</th>
<th>0.4</th>
<th>0.5</th>
<th>0.6</th>
<th>0.7</th>
<th>0.8</th>
<th>NEGATIVE</th>
<th>TOTAL</th>
</tr>
</thead>
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<td>16</td>
<td>7</td>
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<td>-</td>
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<td>50</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>10</td>
<td>-</td>
<td>32</td>
<td>32</td>
<td>14</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>12</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>2006</td>
<td>4</td>
<td>2</td>
<td>14</td>
<td>24</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4</td>
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<tr>
<td></td>
<td>%</td>
<td>8</td>
<td>4</td>
<td>28</td>
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<td>3</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>8</td>
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<td>30</td>
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<td>-</td>
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<td>100</td>
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<tr>
<td>4</td>
<td>2009</td>
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<td>3</td>
<td>12</td>
<td>24</td>
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<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td></td>
<td>%</td>
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<td>6</td>
<td>24</td>
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<td>-</td>
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<td>100</td>
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<tr>
<td>5</td>
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<td>3</td>
<td>17</td>
<td>23</td>
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<td>-</td>
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<td>50</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>-</td>
<td>6</td>
<td>34</td>
<td>46</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>100</td>
</tr>
</tbody>
</table>

The analyses of discrimination indices for NABTEB Economics multiple-choice test items revealed the following; for 2005, 23 items which represent 46% met the
acceptable discrimination indices whereas 27 items representing 54% did not meet the acceptable discrimination indices. For 2006, 26 items representing 52% met the acceptable discrimination indices whereas 24 items which represent 48% did not meet the acceptable discrimination indices. For 2008, 27 items representing 54% met the acceptable discrimination indices whereas 23 items which represent 46% did not meet the acceptable discrimination indices. For 2009, 31 items representing 62% met the acceptable discrimination indices whereas 19 items which represent 38% did not meet the criteria for acceptable discrimination indices and for 2011, 29 items representing 58% met the criteria for acceptable discrimination indices while 21 items which represent 42% did not meet the criteria for acceptable discrimination indices.


**Table 3: Distracter Indices of 2005 NABTEB Economics multiple-choice test items**

<table>
<thead>
<tr>
<th>S/N</th>
<th>YEAR</th>
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<th>0.4</th>
<th>0.5</th>
<th>0.6</th>
<th>0.7</th>
<th>0.8</th>
<th>NEGATIVE</th>
<th>TOTAL</th>
</tr>
</thead>
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<td>1</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>14</td>
<td>150</td>
</tr>
<tr>
<td>%</td>
<td></td>
<td>14</td>
<td>62</td>
<td>10.7</td>
<td>3.3</td>
<td>0.01</td>
<td>-</td>
<td>-</td>
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<td>9.3</td>
<td>100</td>
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<td>2</td>
<td>2006</td>
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<td>-</td>
<td>14</td>
<td>150</td>
</tr>
<tr>
<td>%</td>
<td></td>
<td>16</td>
<td>50.7</td>
<td>18.7</td>
<td>3.3</td>
<td>0.01</td>
<td>0.01</td>
<td>-</td>
<td>0.01</td>
<td>-</td>
<td>9.3</td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>2008</td>
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<td>83</td>
<td>25</td>
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<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>%</td>
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<td>14.7</td>
<td>55.3</td>
<td>16.7</td>
<td>4</td>
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<td>-</td>
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<td>100</td>
</tr>
<tr>
<td>4</td>
<td>2009</td>
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<td>76</td>
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<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
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<td>-</td>
<td>4.7</td>
<td>100</td>
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<td>5</td>
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<td>61.3</td>
<td>12.7</td>
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<td>-</td>
<td>5.3</td>
<td>100</td>
</tr>
</tbody>
</table>

The analyses of distracter indices for NABTEB Economics multiple-choice test items revealed the following; for 2005, 90.01% of the items possessed good distracter indices whereas 9.3% of the items did not possess good distracter indices. For 2006, 88.73% of the items had good distracter indices while 9.3% of the items did not have good distracter indices. For 2008, 92% of the items possessed good distracter indices whereas 8% of the items did not possess good distracter indices. For 2009, 95% of the items had good distracter indices whereas 5% did not have good distracter indices and for 2011, 94.01% of the items possessed good distracter indices whereas 5.3% of the items did not possess good distracter indices.

**Hypothesis:** There is no significant difference between the percentages of acceptable and not acceptable NABTEB Economics multiple-choice test items from 2005 to 2011.
Table 4: Difference between the percentages of acceptable and unacceptable NABTEB Economics multiple-choice test items from 2005 to 2011.

<table>
<thead>
<tr>
<th>Item</th>
<th>X² - Cal</th>
<th>DF</th>
<th>Alpha Level</th>
<th>X² - Crit</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty Indices</td>
<td>300.80</td>
<td>4</td>
<td>0.05</td>
<td>9.49</td>
<td>Reject</td>
</tr>
<tr>
<td>Discrimination Indices</td>
<td>9.76</td>
<td>4</td>
<td>0.05</td>
<td>9.49</td>
<td>Reject</td>
</tr>
<tr>
<td>Distracter Indices</td>
<td>358.53</td>
<td>4</td>
<td>0.05</td>
<td>9.49</td>
<td>Reject</td>
</tr>
</tbody>
</table>

From the above table, the $X^2$-calculated values were 300.80, 9.76 and 358.53; these values were greater than $X^2$-critical value of 9.49. Therefore, the null hypothesis was rejected at 0.05 level of significance.

Bar chart showing the percentages of acceptable difficulty, discrimination and distracter indices for NABTEB Economics multiple-choice test items from 2005 to 2011

Summary of the major Findings

From the analyses presented in this chapter, the major findings that emerged from the study revealed that:

1. Greater than or equal to 78% of the items each in 2005, 2006, 2008, 2009 and 2011 NABTEB Economics multiple-choice test items have acceptable difficulty indices;
2. Greater than or equal to 46% of the items each in 2005, 2006, 2008, 2009 and 2011 NABTEB Economics multiple-choice test items have acceptable discrimination indices;
3. greater than or equal to 90.7% of the items each in 2005, 2006, 2008, 2009 and 2011 NABTEB Economics multiple-choice test items possessed good distracter indices;

4. the qualities of NABTEB Economics multiple-choice test items increased progressively from 2005 to 2011 (see the above Bar chart) and

5. the difference between percentages of acceptable and not acceptable NABTEB multiple-choice test items from 2005 to 2011 is significant.

Discussion of Results

Difficulty Indices of NABTEB Economics multiple-choice test items

The results of the study revealed that greater than or equal to 39 items out of 50 items each in 2005, 2006, 2008, 2009 and 2011 NABTEB Economics multiple-choice test items met acceptable difficulty indices. Also, the results of 2005, 2006, 2008, 2009 and 2011 NABTEB Economics multiple-choice test items revealed that less than or equal to 11 items in each did not meet the set criteria respectively. This means that the test items with acceptable difficulty indices between 0.3 and 0.7 increased progressively over the years under consideration. The above supports the findings of Esomonu and Agbonkpolo (2011) on construction and validation of achievement test in senior secondary school Economics in which 43 items out of 80 items were found to be good with appropriate difficulty indices from 0.3 - 0.7.

Discrimination Indices of NABTEB Economics multiple-choice test items

The results of the study revealed that greater than or equal to 26 items each in 2005, 2006, 2008, 2009 and 2011 NABTEB Economics multiple-choice test items have acceptable range of discrimination indices. Also, the analyses of discrimination indices of 2005, 2006, 2008, 2009 and 2010 NABTEB Economics multiple-choice test items showed that less than or equal to 24 items did not meet the set criteria respectively. This means that the test items with acceptable discrimination indices between 0.3 and 1.0 increased progressively over the years under consideration, this may be resulted from improvement on test item construction by NABTEB.

The above results contradicts the findings of Kolawale (2007) in a study on comparative analysis of psychometric properties of two Nigerian examination bodies (NECO and WAEC) for senior secondary school Mathematics in which the findings revealed that all their test items maintained the same discrimination level and they are both valid and reliable. The above contradiction may be as a result of the difference in the subjects used in the present study and the study carried by Kolawale.
Distracter Indices of NABTEB Economics multiple-choice test items

The results of the study revealed that greater than or equal to 36 items each in 2005, 2006, 2008, 2009 and 2011 NABTEB Economics multiple-choice test items possessed good distracter indices whereas less than or equal to 14 items were found without good distracter indices. This means that NABTEB test items had satisfactory distracter indices which increased progressively over the years under consideration; this may be resulted from improvement on test item construction by NABTEB. The above results contradicts the findings of Nwosu (2010) on the comparative study of WAEC and NECO Economics past question papers from 2006 to 2010 in which more than 21 items each from 2006 to 2010 WAEC and NECO Economics past question papers have positive distracter indices and less than 29 items did not comply with set the criteria. This means that NABTEB Economics multiple-choice test compares favourably with WAEC and NECO Economics multiple-choice tests.

The difference between the percentages of acceptable and not acceptable NABTEB Economics test items from 2005 to 2011.

The result of hypothesis shows that the X²-calculated values were 300.80, 9.76, and 358.53; these values were greater than X²-critical value of 9.49. The hypothesis was, therefore, rejected at 0.05 alpha level using 4 as degree of freedom. This means that there is a significant difference between the percentages of acceptable and not acceptable NABTEB Economics multiple-choice test items from 2005 to 2011. The percentages of acceptable NABTEB Economics multiple-choice test items from 2005 to 2011 are greater in number than the percentages of not acceptable NABTEB Economics multiple-choice test items from 2005 to 2011. This findings contradicts the study carried out by Adebule (2009) on the reliability and levels of difficulty of objective test items in a mathematics achievement test revealed that there is no significant difference between the reliability coefficients of a true-false and a multiple choice test formats. Also, the studies revealed that multiple choice and true-false have means of 0.39 and 0.43 respectively. This meant that true-false (TF) item were much easier for the students than multiple choice (MC) test items. This also revealed that there was no significant difference between the difficulty indices of MC and TF test items. This contradiction may have resulted in the combination of MC and TF test items in the study carried out by Adebule.

Conclusion and Recommendations

From the findings of the study, the conclusions was that NABTEB Economics multiple choice test items in 2005, 2006, 2008, 2009 and 2011 possess acceptable difficulty, discrimination and distracter indices and, therefore, should be accepted as standard questions for the senior secondary school certificate examination in Economics subject. Based on the findings of the study, the following recommendations were made;
1. NABTEB should mount regular training/workshop/seminars and brief sessions for item writers, moderators, supervisors and examiners to update their knowledge in test construction.

2. NABTEB should improve on designing and constructing test items which possess psychometrics properties in terms of acceptable difficulty, discrimination and distracter indices in order to be same quality when compared with test items of other exam bodies.

3. Tertiary institutions should recognize and accept NABTEB results like the results of other examination bodies for students’ admission since the test items constructed by NABTEB possess psychometric properties like every other test items of other Examination Bodies.

REFERENCES


Chapter 3

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 identify the traits, characteristics and entrepreneurial climate required by job seekers and industrialists for the development of entrepreneurial skills needed in industries to combat the challenges of global financial crises in Nigeria, with particular reference to Ekiti and Anambra states. A survey research design was adopted for the study with 100 industrialists and 200 job seekers from the two states selected for the study through the 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 be developed and sustained between the schools and industries in Nigeria.

Keywords: Entrepreneurs, entrepreneurial studies, job seekers, intrapreneurs, economic dysfunctions, financial crisis, and skill development.

INTRODUCTION

The concept of economic crisis can be conceptualized as difficult moments for the economy of any 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) described 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 activities around the world which affected productivity, business operations and investments by way of reducing domestic and international demand for goods and services. It increased unemployment, because many industries and organizations laid-off their workers. Lewis (2009) noted that the economic meltdown affected global oil price, currency exchange and interest rates, including economic activities and national budgets. Thus, all economic activities were slowed down, and characterized by unemployment and decline in investments.
In the light of the above, Akinbami (2011) explained 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 remarked that 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. In discussing entrepreneurship, Fadakinni and Famiwole (2001) defined an entrepreneur as an individual who initiates, owns and runs a business successfully. The individual can organize human and material resources for the production of goods and services to maximize profit. Awe (2002) explained that entrepreneurs are capable of affecting positive changes in the business activities of their environment no matter how small it maybe. They can be described as persons who organize, manage a business undertaking and assume risk for the sake of maximizing profit. An entrepreneur perceives needs, conceives goods and services to satisfy the client 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.

According to Aderogba (2011) the concept of entrepreneurship revolves around activities that includes 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 the author, 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. Therefore, the traits an entrepreneur should cultivate and develop include a good entrepreneurial mindset, flexibility, positive interest with the zeal to acquiring most of the desired skills to perform effectively. These are major requirements toward a successful entrepreneurship venture.

Furthermore, Nwafor (2007) noted that the developments of entrepreneurship are sometimes seen as stemming from economic, psychological and behavioural approaches. According to the author, all the three approaches have contributed significantly to the understanding of the entrepreneurship process. Thus, an entrepreneurship cannot be looked at from only one dimensional approach but via a holistic approach – used to describe the entrepreneur’s 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 services.
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. Intrapreneurship is a method of stimulating and capitalizing on individuals in an organization who thinks that something can be done differently and better to increase output (Ogunjobi, 2012). 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 identify the traits and characteristics required by job seekers and industrialists toward the development of entrepreneurial skills to combat the challenges 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 for industries or setting up a business.
2. identify the major characteristics required to enhance the development of entrepreneurial skills among job seekers.
3. 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 and adoption of entrepreneurial skills for industries or setting 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 survey research design 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 questionnaire derived from literatures on global economic crisis, entreprenearial and intrapreneurial skill development. The questionnaire was content validated, and thereafter pre-tested, yielding reliability coefficient 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

<table>
<thead>
<tr>
<th>S/ N</th>
<th>Needed Traits</th>
<th>Industrialists N-100</th>
<th>Job Seekers N-200</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Frequency</td>
<td>%</td>
</tr>
<tr>
<td>1.</td>
<td>Optimistic</td>
<td>67</td>
<td>67</td>
</tr>
<tr>
<td>2.</td>
<td>Foresight</td>
<td>83</td>
<td>83</td>
</tr>
<tr>
<td>3.</td>
<td>Positive drive</td>
<td>73</td>
<td>73</td>
</tr>
<tr>
<td>4.</td>
<td>Perceptive</td>
<td>63</td>
<td>63</td>
</tr>
<tr>
<td>5.</td>
<td>Openness of mind</td>
<td>66</td>
<td>66</td>
</tr>
<tr>
<td>6.</td>
<td>Getting along well with others</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>7.</td>
<td>Hardworking</td>
<td>73</td>
<td>73</td>
</tr>
<tr>
<td>8.</td>
<td>Responsible to suggestion and criticism</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>9.</td>
<td>Individualistic</td>
<td>62</td>
<td>62</td>
</tr>
<tr>
<td>10.</td>
<td>Like challenges</td>
<td>78</td>
<td>78</td>
</tr>
<tr>
<td>11.</td>
<td>Risk taking ability</td>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td>12.</td>
<td>Need for achievement</td>
<td>86</td>
<td>86</td>
</tr>
<tr>
<td>13.</td>
<td>Profit or goal oriented</td>
<td>93</td>
<td>93</td>
</tr>
<tr>
<td>14.</td>
<td>Independent individual</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>15.</td>
<td>Confidence</td>
<td>77</td>
<td>77</td>
</tr>
<tr>
<td>16.</td>
<td>Persistence</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>17.</td>
<td>Knowledgeable</td>
<td>68</td>
<td>68</td>
</tr>
</tbody>
</table>
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 the 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.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Characteristics required</th>
<th>Industrialists</th>
<th>Job Seekers</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Frequency</td>
<td>%</td>
<td>Frequency</td>
</tr>
<tr>
<td>1.</td>
<td>Self-confidence</td>
<td>57</td>
<td>57%</td>
<td>136</td>
</tr>
<tr>
<td>2.</td>
<td>Future-oriented mission</td>
<td>94</td>
<td>94%</td>
<td>180</td>
</tr>
<tr>
<td>3.</td>
<td>Creativity</td>
<td>95</td>
<td>95%</td>
<td>196</td>
</tr>
<tr>
<td>4.</td>
<td>Innovative</td>
<td>87</td>
<td>87%</td>
<td>146</td>
</tr>
<tr>
<td>5.</td>
<td>Risk taking</td>
<td>98</td>
<td>98%</td>
<td>152</td>
</tr>
<tr>
<td>6.</td>
<td>Originality</td>
<td>68</td>
<td>68%</td>
<td>106</td>
</tr>
<tr>
<td>7.</td>
<td>Leadership</td>
<td>73</td>
<td>73%</td>
<td>122</td>
</tr>
<tr>
<td>8.</td>
<td>Action oriented</td>
<td>63</td>
<td>63%</td>
<td>166</td>
</tr>
<tr>
<td>9.</td>
<td>Being proactive</td>
<td>70</td>
<td>70%</td>
<td>124</td>
</tr>
<tr>
<td>10.</td>
<td>Coordinator of scarce resorts</td>
<td>66</td>
<td>66%</td>
<td>174</td>
</tr>
<tr>
<td>11.</td>
<td>Wealthy</td>
<td>22</td>
<td>22%</td>
<td>60</td>
</tr>
<tr>
<td>12.</td>
<td>Extremely educated</td>
<td>35</td>
<td>35%</td>
<td>174</td>
</tr>
</tbody>
</table>

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. Majority 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.

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

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 Famiwolo (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 good climate required to promote intrapreneurship 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 teach or inculcate the identified entrepreneurial traits and characteristics in their students.

2. Training institutions and apprenticeship schemes should also teach appropriate traits and characteristics needed for entrepreneurial skill development and adoption process.

3. Appropriate climate should be created in the local industries for more intrapreneurs 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 businesses 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 partner with vocational schools, training institutes and the apprenticeships to identify and develop 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 in rural and urban communities across the country.

8. More funds should be allocated to Faculties and Departments where Entrepreneurial Studies are being conducted in all tertiary and higher institutions in Nigeria.

9. Approaches to solving economic crisis in Nigeria should include a renewed, integrated and systematic entrepreneurial skill development programmes in schools, colleges, training institutes, community Vocational and Technical Centres and through the National Youth Service Corps scheme in Nigeria.

REFERENCES


Chapter 4

Language, Gender, and the Millennium Development Goals in Nigeria

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ABSTRACT

Development is an issue that has attracted the attention of world leaders and different interest groups. The climax of this concern was the coming together of leaders from both developing and developed countries in the year 2000 for the purpose of tackling poverty and development generally. The outcome of the brain-storming exercise was the Millennium Development Goals (MDGs) initiative which is geared towards fast-tracking global development. Unfortunately, a lot of factors have limited the development of many people in the world, thereby denying them the opportunity of contributing towards national growth. This study assessed the extent to which some of the development policies have been translated into practice to facilitate development. The findings; among others, show that the patriarchal social system which gives men strong control over women’s labour is a primary factor that has limited women’s access to social amenities and personal development. Recommendations on bridging the gaps between policies and practices; different socio-cultural inhibitions and language use, equity, education and participation of women in every sector of the economy were provided.

INTRODUCTION

Gender issues have constantly attracted global attention, and in Nigeria, these issues cannot be discussed or understood outside the patriarchal social system. A detailed analysis of this structure is imperative in a holistic approach and understanding of gender inequality, particularly in Igboland (Southeast Nigeria). Patriarchy is defined in a number of related ways, and in a general sense, viewed as a social system in which the father or a male child has absolute authority over the family group. It is similarly defined as a social system in which the role of the male as the primary authority figure is central to the social organisation (Macmillan Encyclopaedia of Sex and Gender, 2007). It is indeed a social structure that is centred on male authority and domination of
women in every facet of life, to the disadvantage of the female. There is established male preference which oppresses and subdues the female through social, political, economic and educational institutions. Patriarchy, thus, implies the institution of male rule, privilege, and independence on female subordination. From these definitions, there is no doubt that Nigeria is traditionally a patriarchal society. The subsequent discussion on this issue examines the extent to which the patriarchal system has institutionalised gender inequality and its impact on the Millennium Development Goals in Nigeria, particularly the Igbos of South Eastern Nigeria.

The patriarchal social system and gender inequality

Historically, patriarchy has manifested in the social, legal, political and economic organisations of a range of different cultures. It even has a strong influence on modern civilization. Although many cultures have moved towards a more egalitarian social system over the past century, yet these social systems still have full or partial elements of patriarchy. For instance, Nigeria in general, and the Igbos of the South East in particular, are predominantly patriarchal although the Bende region in the North East of Igboland is matriarchal in nature. Walby (1990) identified six areas of male domination in the Igbo cultural setting, namely - sexuality, the household, male-on-female violence, paid employee, cultural institutions and the state. In addition to the highlighted areas, language is a very powerful and subtle instrument which the patriarchal system uses to subdue women. Some of these issues are discussed in this study.

Language and patriarchy

There are different ways in which the patriarchal system imposes oppressive ideas on the psyche of women; inclusive are the negative linguistic expressions, linguistic limitations and inhibitions. These linguistic devices are characteristic of the patriarchal social structure. Language use in the patriarchal Igbo setting manifests in the choice of names given to the boy child/girl child and the negative words that are used in describing women at the slightest provocation. Names are very significant in the Igbo society; at birth, the preference for the boy child is reflected even in the names given to them. Some of the popular names include- Ezenwa (the king amongst children), Obioha (the wish of the people), Obinna (father's desire/wish) Ahamefula (my name should not become extinct). In contrast, the girl child is from birth rejected or at best accepted for economic benefits through her beauty which are expected to attract rich suitors.

The situation is so bad where women who have only female children could be described as 'childless' in some quarters. Some of the derogatory female names include- Achifuo (throw away), Nwanyiomeole (what can a female do?). Those expressing beauty or economic value include, Nwanyibuaku (a female is wealth), and Akudo (peaceful inheritance/wealth), Akunna (a father's wealth). At marriage, the patriarchal norms and values are further reinforced through some of the names given to wives. They include: Okwerenkediya (she who accepts whatever the husband says), “Ugodiya” (husband’s honour); Ugwudiya (husband’s respect); Akudiya (husband’s property); Ahudiya (husband’s body). Women are, therefore, from birth reduced to commodities for economic use and second class citizens who can be reduced to literal servitude. Unfortunately, women internalize this culture of patriarchal values as a norm; they are psychologically made to accept the view that women have a responsibility to obey and
serve the men. It is, indeed, an accepted cultural expectation for wives to be humble, quiet, submissive, and subordinate and some of these values are expressed in names given to females. Language is, thus, used to internalise these ideas and manipulate the psyche of women into believing that they are mere property owned by their husbands and are, therefore, expected to always submit to them.

Linguistic expressions are also used in other ways to perpetuate the patriarchal values and norms. From childhood, the girl child is brought up to believe that females are subservient to males and by the time she gets married, it is generally seen as normal and any objection to this practice is seen as a rebellion. A woman who exhibits character traits that are contrary to these expectations is usually vehemently condemned and is described with derogatory words like *okenwanyi* (masculine woman), and *ajakajanwanyi* (rough/wild woman). In addition, other derogatory language forms used on females by males include the general use of the word *ashawo* (prostitute) on females at the slightest provocation. This is because every female is seen as a sex object/prostitute until proved otherwise. It is probably for this same reason that sexually transmitted diseases, which are generally associated with immoral lifestyle have linguistic expressions which are specifically linked to women among the Igbos. The word *nshinwanyi* (women's poison) describes all forms of sexually transmitted diseases; this gives the wrong impression that only women contract and spread the disease.

Furthermore, women are culturally groomed to accept the argument that their role in the family is inferior to that of the men; women are generally seen as mere homemakers who are provided for by their husbands, even when it is not so. The general picture presented in the Igbo society gives the impression that it is the responsibility of a husband to take care of the general upkeep of his family within the patriarchal system. The word ‘oriaku’ (the one who enjoys the family wealth) is a general Igbo name for wives. Even when a man fails to play this role, it is normal for a wife to struggle and irk out a living for the family while she still gladly accepts to be addressed as ‘oriaku’. This is because the patriarchal system does not encourage women to lay claim to their success or contributions in the family. A husband takes glory for whatever success a woman makes in life. After all, a wife and whatever she possesses belong to her husband. Similarly, wives raise no objection to being addressed as ‘odoziaku’ (the one keeps custody of her husband's wealth), even when she lives in abject poverty. Indeed, the husband takes credit for every success in the family while the wife is not only blamed but held responsible for the negative things that happen in a home, including failure / misbehaviour of children.

Women are generally viewed from a negative perspective and are expected to be seen and not heard; the men take decisions on issues concerning women without bothering about their feelings. This is probably the background kolanut-breaking in Igboland; it is because the patriarchal system does not recognise women that kolanut is not shown to them at social gatherings. A small boy, irrespective of his age, has more recognition than a woman, particularly on kolanut issues. As a result, even in a meeting of elderly women, they will look for a male, irrespective of his age, to break kolanut for them because it is a taboo for women to break kolanut. The Igbo holds this culture in high esteem and they use it and other strategies to perpetuate gender inequality in the society.
Furthermore, women suffer much inhibition in their language use within the Igbo patriarchal system. The Igbo language is rich in proverbs and Chinua Achebe in Things Fall Apart (1964) states that ‘proverb is the oil with which words are eaten’. Women are, however, culturally prohibited from using proverbs, particularly in discussions with men. Similarly, discussions on sexuality are taboo for the female, but the male particularly adult male, talk freely on it without inhibitions, sometimes to the displeasure and embarrassment of women. Even the mere mention of sex organs by females is generally seen as vulgar and immoral. Females, particularly young girls, can go through ordeals in their private part for fear of mentioning the area of their problem. It is, however, noteworthy that freedom of expression is a fundamental human right; any infringement on it is oppressive. In this sense, cultural inhibitions on female language use are an expression of gender inequality in favour of the men. This factor generally limits women in every aspect of life, including health and politics; more so because the culture accepts ‘quietness’ as a virtue for women. It is, therefore, not surprising that female participation in the Nigerian politics is low; only the bold can be active and successful in politics but the society condemns females who possess these qualities. Many women, therefore, suffer in silence even when the situations adversely affect them. It is obvious that there are important linguistic issues that need to be addressed in discussions on gender inequality in Nigeria, particularly in the Igbo land.

Sexuality

Sexuality in the patriarchal system is a very important issue due to its implications on gender equality. Traditionally, the husband serves as an authority over his wife and children just as he does over other members of his family. He has power over his wife’s sexuality but the woman has no power over his. A husband determines when and whether or not he would have his wife for this purpose. Culturally, sex for a woman is merely for child-bearing and the man’s pleasure. It is not unusual, therefore, for husbands to abandon their wives for younger girls soon after they have given birth to enough children for the family. The system deems it a woman’s duty to satisfy her husband sexually, whether or not she needs it, enjoys it, or is ready for it. A woman is not expected to ask her husband for sex but she must be ready to give it to him as and when, where, and how he demands it. This is usually a major source of household violence on the woman who may be tired after household chores. In polygamous settings, the men distribute the periods for meeting the different wives. The basis is that within the patriarchal social structure, he owns her and her money/property.

Furthermore, the domination and oppression of female sexuality manifests in other areas. For example, although adultery is a taboo in some Igbo communities, this applies only to women; a wife is not culturally expected to complain about her husband’s adulterous lifestyle. It is still a normal practice in some areas for a husband to bring home his concubine. These extra-marital affairs are so formalized that they have specific names in different communities; they are called uzi in Arochukwu, iko in Ngwaland and enyidiya enyiwayi di ya in Orlu communities. Wives are not expected to talk or discuss such issues. Thus, the statement nwanyi anaghiachuibeya, (a woman does not drive out another woman) is culturally accepted. Also, the statement ebenwasi lo uwa, yahiri (a child is acceptable irrespective of the source) culturally allows men to bring home children born outside matrimony. The patriarchal system, thus, promotes gender inequality, condones immorality and promiscuity amongst the men. A good wife
is one that keeps quiet in such situations and circumstances even when she exposes her
life to danger. When husbands contract infections, the wives become victims. Studies
have shown that women stand a higher risk of being infected and even dying of
HIV/AIDS than men and reports show that a higher percentage of women, particularly
the illiterate class, are HIV positive. It is estimated that approximately 58% of all
Nigerians infected with HIV/AIDS are women (Population Reference Bureau, 2013).

Male-on- Female Violence

Violence against women by men in the Nigerian society may still persist for generations
to come despite different legislations against it. This is so because male-on-female
violence is normal in the patriarchal system. It is usually regarded as a family affair and
the wife cannot make a legal case against her husband on such issues. If a woman makes
such an attempt, she is usually told to take such a matter home and the case is naturally
dismissed with a wave of the hand. In fact, the girl child is trained to bear such violence
and never talk about it; mothers usually advise their female married children not to
discuss violence from their husbands.

Patriarchy and the Economy

The patriarchal system affects every aspect of any environment where it is practiced,
including its economic life in favour of the men. It is so because this system is rooted on
a foundation that promotes gender inequality; it gives men a strong control over
women’s labour and limits their access to socio-economic amenities. As a result, men
generally have an upper hand in the different phases of economic development in
Nigeria, and the Igbo society in particular. The negative impact of the system on women
in the economic perspective is evident in many areas, particularly the two primary
sources of income: agriculture and trading. The agricultural phase is completely
characterized by patriarchy. The patriarchal family structure rests on men’s control of
most or all property, starting with land, the primary economic base. Traditionally,
individual families are normally set up on a patriarchal basis, with the husband and the
father making the key decisions, while the women, with humble obedience, bow to this
male authority. The agricultural or farming phase generally gives women the status of a
labourer. The man marries many wives for cheap labour. Each wife and her children are
given portions to cultivate for the man to sow his seed-yams while the women plant
cocoyam and vegetables. The man becomes a king of yam farmers (Ezeji) and controls
large expanses of land. This adversely affects and still continues to affect both the
general and personal development of women in the country. Consequently, women have
generally remained the poorest of the poor in the society due to these cultural
inhibitions.

Like the agricultural phase, the patriarchal system in Igboland also enhanced the
trading phase. Historically, men travelled away from their homestead and established
trading posts. Women did not have this advantage; they stayed back at home looking
after the children and the family while the men made money which they only grudgingly
gave to the women if and when they liked. It was this situation that gave men an upper
hand in business while the women have remained financially dependent. This also
explains why the political scene in Nigeria is generally occupied by men to the
disadvantage of women. The men have the financial resources needed for successful
political career in Nigeria. The patriarchal system does not encourage women to lay
claim to their success or contributions in the family. Until women are adequately empowered financially, the issue of active female involvement and development in Nigerian politics will remain an illusion.

This section has reviewed the patriarchal social system in Nigeria with a special focus on the Igbo society. The discussion has shown that patriarchy is a structure that subdues the female gender in favour of the males; it is, therefore, discriminatory. Patriarchy is, thus, a social structure that upholds gender inequality to the disadvantage of women. We shall examine the policies and practices on gender inequality and the Millennium Development Goals.

**Gender, Illiteracy and the MDGs**

Gender inequality, high female illiteracy, and the MDGs are intertwined; achieving the MDGs may not be possible in any country without addressing gender issues and female illiteracy. It is for this reason that gender equality and literacy for all have become global issues. Nigeria is a signatory to the Convention on the MDGs and it is, therefore, important to assess gender and female literacy policies and practices with a special focus on the Igbo land. Patriarchy is the root cause of gender inequality and high female illiteracy in many parts of the country. In order to pave way for development, the elements of patriarchy must be dismantled so that both males and females can have equal access to education, health facilities, family and national wealth which will give everyone the chance of survival, fully harness his/her potentials and become free from the constraints of poverty, disease and inequalities.

The issue of low female literacy level in Igboland is traceable to the patriarchal system which for many decades denied females access to Western education in preference for the males. Females were saddled with house chores and the general saying was that ‘a woman’s place is in the kitchen’. Training a woman in the Western education was considered a huge waste to her family since she was going to get married. As far as her society was concerned, she only needed to be trained to take care of her husband and rear children. Traditionally, it was normal and natural for the boy child to attend school while the girl-child was saddled with chores that were sometimes too burdensome for her age. The girl-child for a long period of time remained ‘a fetcher of water and hewers of wood’ while the boy attended school. This is the background and foundation of gender gaps in literacy and education generally. The present generation is still under the influence of her past; it is not unusual for girls from poor homes to be denied access to education in preference for boys, especially in situations where mothers are illiterate. There is no doubt that the patriarchal system is detrimental to the success of the MDGs and development in Nigeria. A literate woman is more likely to embrace reproductive health and avail herself of family planning information that improves her own chance of survival. It is for these reasons that universal basic education is one of the MDGs and achieving it is most desirable.

**Policies on gender inequality within the context of the MDGs**

Gender issues have attracted global attention because of the realisation of the correlation between gender gaps, underdevelopment and the achievement of the MDGs. Gender inequality, within the context of this paper, is defined as a social structure in which a human being is denied or deprived access to socio-economic, political,
educational and other benefits on the basis of his/her sex. At the international scene, there is a general concern for the protection of human rights and dignity with a special focus on gender inequality and other forms of discriminations against women. To this end, many policies have been put together towards eradicating gender inequality and other forms of social ills, particularly against women. Nigeria is a signatory to several international covenants that entrench the principles of equality, fairness and justice. Some of these include: Convention on the Elimination of Discrimination Against Women (CEDAW), Education For All (EFA), and the Millennium Development Goals (MDGs).

Despite the numerous policies and conventions, there is a wide gap between the policies and practice; the gender equality issue in Nigeria is still more of documents that are yet to be implemented. There are views and counter views on the possibility of Nigeria achieving the millennium goals by 2015. This paper focuses on the Millennium Development Goals and the policies that have been put in place towards achieving them in Nigeria. There is a special focus on the effects of the patriarchal system on attaining these goals.

The eight main targets of the MDGs are- eradicate extreme poverty and hunger; achieve universal basic education; promote gender equality and empower women; improve achieve maternal health; combat HIV/AIDS, malaria and other diseases ensure environmental sustainability; develop global partnership for development. At the centre of the MDGs is gender equality, which implies that if gender equity is not achieved, the other goals may not be achieved. It is, therefore, imperative to tackle gender inequality issues if MDGs are to be attained in Nigeria. Gender inequality, like a cankerworm, has eroded every fabric of the Nigerian society which is adversely affecting her development. In spite of these conventions; customary, religious, statutory law and administrative practices continue to discriminate and oppress women in all spheres of life. The issue of gender inequality is traceable to the home, the primary agent of socialization. In the patriarchal Nigerian society, it is entrenched as a norm, right from birth. Some of the manifestations of gender discrimination against women include harsh widowhood practices, female genital mutilation, early girl-child marriage and the deprivations many girls are subjected to in almost every sphere of life.

The discrimination suffered by women on the issue of inheritance is also a clear case of gender inequality. It is a normal practice for men to document the names of their male siblings, often the first male, as their next of kin instead of their spouse but women are expected to naturally document the names of their husbands. There is no doubt that the magnitude of gender inequality and associated discriminations against women is high and detrimental to achieving the Millennium Development Goals. Thus, policies and practices in education, politics and the judicial system will be examined in this study.

Policies and practices in education

The education sector is an area where the issue of the gap between policy and practice on issues of inequality is overwhelming. The importance of education in achieving the MDGs is obvious and it is for this reason that Goal 2 is ‘achieve universal basic education’. Reports at the global level however show that illiteracy has remained prevalent among women, the elderly in rural communities and among the poor. According to the Education For All (EFA) Monitoring Report (2006), women account for 64% of the adults who cannot read or write with understanding globally. This is almost
the same as the 1990 report which fixed it at 63%. Illiteracy keeps women marginalized and is a major obstacle to reducing extreme poverty in a technology-driven world where reading and writing are indispensable for anyone who desires basic rights and opportunities. Women’s literacy is an important factor in ensuring maternal health, reducing child mortality, and combating HIV/AIDS. There is a general correlation between female literacy level and poverty, reproductive health and HIV/AIDS. Generally, the female literacy rate is worrisome bearing in mind the importance of literacy in national development. Literacy, particularly female literacy, is so important for global development that it is given prominence in both the EFA Dakar Goals and the Millennium Development Goals (MDGs). Goal 4 of the EFA is geared towards ‘achieving a 50% improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults’ In spite of these proven facts on the advantages of female literacy studies and reports in Nigeria have shown gender gaps in literacy that are in favour of the males (UNESCO, 2006).

There are, however, interventions from UNICEF, World Bank, and other governmental projects and policies embarked on by the Nigerian government that is geared towards bridging education/literacy gaps between males and females. Some of the literacy agencies include the National Commission for Mass Literacy (NMEC), the Strategy for Acceleration of Girls’ Education in Nigeria (SAGEN) launched by UNICEF and Federal Ministry of Education in 2003, Girls’ Education Project (GEP), joint project of FME, the UK Department for International Development (DFID), and UNICEF was launched in Northern Nigeria in 2004. Although the Girls’ Education Project in particular is reported to have recorded great success, gender gaps in literacy and education generally are still wide. It is still estimated that about 22 million Nigerians are illiterate and out of this 65% are women. Similarly, of the 11 million school-age Nigerian children that are not in school, 62% are girls. The 2006 EFA Report shows that the 1990 adult literacy rate in Nigeria was 48.7%, of this, 59.4% was male while 38.4% was female.

The 2008 World Bank Report indicates that female literacy rate is 48%. This was why the then Minister of State on Education, Kenneth Gbagn, at the 2010 International Literacy Day reported that of the 46% illiterate Nigerians, 60% are women. It is regrettable that in spite of the long exposure to western education, more than 50 percent of Nigerian women are still illiterate. No nation with such low female literacy population is likely to achieve the Millennium Development Goals bearing in mind the adverse impact of illiteracy on development generally. There is no doubt that the high illiteracy level is linked to the patriarchal system which gives preference to the boy child in all areas of life, including education, to the detriment of the girl child.

Policies and practice in politics and the judicial system

Politically, there is a gross under-representation of women at all levels of governance, from the local level to the international level despite the female numerical strength. Despite the politicised 35% female representation in governance, it is reported that only 8% of political positions are occupied by women. The exclusion of women in governance is rooted in patriarchy which assigns them traditional roles and activities within the home holds (Achunine, 2009). It is an incontestable fact that women constitute about half of the projected national population of Nigeria. Available data, however, shows that this numerical strength has never found a corresponding
expression or representation in Nigeria's Constitution. Ezeilo, Udenta and Orakwue (2002) and Otive-Igbuzo (2010) pointed out that the only constitutional guarantee of equality that makes tangible reference to gender is in Section 42(1), "which forbids discrimination on the grounds of origin, sex, religion or political opinion either expressly by, or in the practical application of, any law enforced in Nigeria or any executive or administrative action of government". Chapter 11 captioned, "Fundamental Objectives and Directives: Principles of State Policy" alludes to equality, but this is not gender specific. Section 17(2)(a) guarantees "equality of rights, obligations and opportunities before the law" while Section 17(3)(a) enjoins that "all citizens, without discrimination on any group whatsoever," shall have "the opportunity for security, adequate livelihood as well as adequate opportunity to secure suitable employment." These provisions that protect citizens from discrimination are not gender specific. There are however aspects of the Constitution that discriminate against women. Section 39(3) allows men to confer citizenship on their foreign spouses but does not allow the women such rights. Even the language of law perpetuates male dominance. For instance, the use of the pronoun 'he' when the sex of the person is unspecified and the generic term 'mankind' to refer to humanity in general are obvious examples; these reinforce the patriarchal tradition. In the judicial system, both male and female lawyers including judges and magistrates are addressed in the masculine gender. It is disheartening to note that the judiciary which should be a model for justice and equity discriminates against women in the appointment of judges. Whereas there is a general insistence that female lawyers must show evidence of being in marriage, no such expectation is made on male lawyers. Furthermore, Section 26 of the 1999 Constitution defines Nigerian citizens and how citizenship may be acquired by naturalization and by registration (Ezeilo et al 2002; Otive-Igbuzor 2010).

Unfortunately, the Constitution makes no provision for the process by which non-Nigerian men married to Nigerian women and desire to become Nigerian citizens can achieve this and this has created a gap. Similarly, the issue of "state of origin" for a woman married outside the father's state of origin has remained ambiguous. Only recently, the Abia State Government disengaged from her service, daughters of Abia State of origin living in Abia with their non-indigene husbands. It took a lot of appeal and even blackmail from different quarters before their jobs were restored. Women in this category lack any definitive claim to both their state of birth and state of marriage. Such cases are worsened when marriages sever either through death or separation. In such circumstances, women have been denied their rights to political positions due to the fact that they can no longer claim either their original place of origin or that or their husbands. Women remain the victims of all such and similar discriminatory and retrogressive policies.

Until very recently, women, irrespective of their social class, were not allowed to take people on bail; the situation still persists in many Nigerian police stations till now. Worse still, women were required to get approval letters from their husbands before they could obtain visa or rent apartments while the men required neither their wives’ oral nor written consent. The above issues show that there are obvious gaps between policy and practice with special focus on education, language use, politics and the judiciary. It is obvious that without gender equity in these sectors in particular, attaining the MDGs will remain an illusion. The essence of this paper is to identify gaps
between policy and practice in so that more attention is given to them for the achievement of the MDGs.

In conclusion, it is pertinent to note that until patriarchal structures are dismantled, it may be difficult to achieve gender equity in Nigeria, which implies that development will remain a mirage because the achievement of gender equity is at the heart of development.

Suggestions for improvement

Based on the foregoing the researchers recommend that:

1. All patriarchal structures and norms that adversely affect the achievement of gender equity should be dismantled and laws enforcing equity should be fully implemented if the MDGs are to be attained in South Eastern Nigeria.
2. The different levels of government should domesticate the gender equity laws and ensure that they are enforced.
3. Since the education system is the incubator of human capital development, gender equity should be strictly enforced in appointments at different levels of education, recruitment, enrollment, promotion, access and teacher-learner interaction.
4. Curriculum materials should be gender sensitive and the entire education system including the teachers should be gender responsive.
5. The Constitution of the Federal Republic of Nigeria should be reviewed in order to remove all elements of gender bias.

REFERENCES


Chapter 5

Identification of the Analytical Skill Level of Secondary School Chemistry Students in Imo State of Nigeria

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ABSTRACT

This study was carried out to identify the analytical skills possessed by senior secondary school chemistry students in Okigwe Educational zone II of Imo State, Nigeria. Two research questions and two null hypotheses guided the study. Descriptive research design was adopted for the study with a sample of 200 SS II chemistry students. Modified Enright Powers Analytical Skill Rating Scale (M-EPASRS) and Chemistry Achievement Test (CAT) were the two instruments used for data collection. A reliability coefficient of 0.78 was established by the use of test-retest method using an equivalent sample of 50 students in Owerri zone I educational zone of Imo State. Data was analyzed using Mean, Standard deviation and Independent Student t-test. The findings show that students who possess high analytical skills achieve better results in chemistry and in both; females did better than males respectively. Therefore, as analytical skill increases, achievement also increases. Based on these findings, it was recommended that the government; teachers and professional bodies, like STAN, should create more awareness to students and public on the essence of chemistry students’ acquisition of analytical skills to attain excellence in the field of chemistry.

INTRODUCTION

The role of chemistry in the scientific and technological development of any nation cannot be overemphasized. Its contribution can easily be experienced by people in a developing country like Nigeria. This is as a result of great roles chemistry has been playing in the field of agriculture, health, industries, and education, to mention but a few (Odesina, 2008; Ababio, 2000; Ojokuku, 2010). That is why Olehi (2005) pointed out that for any country to be said to be willing, ready and able to develop, its interest in science subjects must be ascertained. And chemistry being one of the major science subjects taught at secondary school level and even beyond cannot be overemphasized.
(Ndirika, Olorokooba and Usman, 2011). Irrespective of the important roles chemistry has been playing in the growth of a developing nation, like Nigeria, it is sad to note that the performance of secondary school students in chemistry examinations (Internal and External) in recent times is not encouraging. Onwukwe( 2011); Offiah and Akusoba (2008); and Onuekwusi (2011) faulted many factors which include; lack of students’ interest, poor attitude towards chemistry, poor method of instruction, abstract nature of chemistry, being that chemistry is difficult (phobia for chemistry), and class size. Even some chemistry teachers were of the view that it is as a result of the overloaded chemistry curriculum, which they are not meeting up, etc. Nobody seems to consider the importance of skill acquisition and possession among chemistry students which may be an important intervening variable in students’ poor performance over the years. Such variable, like analytical skill level possession of students as it relates to individual students achievement in chemistry was almost a forgotten issue.

Analytical skill in the view of many individuals like (Nwamaradi 2007; Sternberg and Scott 2011; Herv-key 2010,and Uwaleke, 2013) is regarded as a problem solving skill. This is because in their definitions generally, analytical skill is considered to be the basic tool needed in problem solving; such problem is said to be solved effectively well when the prospective problem solver possesses a good analytical skill. Anih (2003) pointed out that analytical skill centered on creative thinking, which is based on the judicious use of one’s intellectual commitment of using this creativity in thinking to guide challenging problems which can be constructed with acquisition and retention of facts and information.

Sternberg and Scott (2011) defined analytical skill as the ability to visualise, articulate and solve both complex and complicated problem and concepts and make decisions that make sense base on available information. Nwamaradi (2007) described analytical skill as an intellectually disciplined process of activity and skillful conceptualizing or believe and action. Enright and Power (1987) as cited in Sternberg (2003), pointed out some basic components of analytical skill which include critical thinking and argumentation; inductive reasoning, generating alternatives; drawing inferences; problem identification and analytical style.

A component of analytical skill such as critical thinking is defined as the ability to understand, analyze, and evaluate arguments (Alexander, 2001). Critical thinking also involves the developing of conclusion (Sternberg, 2003). Sternberg, also pointed out that problem definition and identification which are among the major components of analytical skill, involves the ability to define and set up problems. Other components of analytical skills, such as induction reasoning has to do with the ability to reason from specific instances to more general principle, and analytical style, has to do with the inclination towards analytical or critical thinking (Anusiem, 2006).

The above components of analytical skill will be of vital importance in the teaching and learning of a science subject like chemistry in a developing country like Nigeria, especially, at the secondary school level (Jimoh 2004; Okehi, 2005). This why across Nigeria, with particular reference to Imo State; great emphasis is being placed on industrial, technological development and advancement; as a result, students are being encouraged to take up science related courses. With the science causes offered at secondary school level and beyond, chemistry has been identified as a very important
subject and its importance in the scientific and technological development of any nation has been widely talked about (Adesoji and Olatunbosun, 2008; Uwaleke, 2013).

Furthermore, studies conducted by researchers like Jimoh (2007) and Meece (2011) has shown that some relationship exist between students analytical skill and their academic achievement, though their studies was on mathematics and psychology, but not in chemistry at secondary school level but at the tertiary level. Unfortunately, not much attention to the researchers knowledge has been given to ascertain the level of analytical skill possessed by chemistry students especially at the secondary school level and Okigwe zone II Education zone of Imo state of Nigeria, including ascertaining how this analytical skills contribute to their achievement in chemistry. As a result of the benefit attached to the possession of analytical skill, Sternberg (2003) has propounded a theory on a related area which is known as Triachic theory of intelligence and creativity. In his theory Sternberg described intelligence as the ability to acquire and apply knowledge, skills and creativity involves the use of imagination or original ideas in order to create something. Sternberg further argued that creativity is a form of leadership and leadership has to do with the ability to identify, and clarify problems which have to be solved. Therefore, Sternberg said that in order to solve problems, involves the possession of analytical skill. Thus, the issue of low achievement in chemistry which has been of a great concern to parents, teachers and professional body like the Science Teachers Association of Nigeria (STAN) (Onuekwusi, 2007; Akalonu, 2002 and Njoku, 2007) over the years has not improved irrespective of all the courses of this low achievement in chemistry which have been pointed out by researchers. Which means that the major courses of this low achievement in chemistry have not really been identified notwithstanding all the numerous research studies. However, as a result of the basic components of analytical skill, which if one possesses it, will help him solve problems that needs critical thinking and creativity, therefore if students level of analytical skill will be made known especially in the area of science subject like chemistry at the secondary school level, it may likely contribute towards improving the academic performance of students in chemistry which no solution have been found to it yet.

Therefore, the study attempts to identify the analytical skill level possessed by chemistry students at the secondary school level and Okigwe educational zone II of Imo state of Nigeria/ It will equally examine how this analytical skill contributes to their achievement in chemistry-related courses.

The Objectives and Problem Statement
Chemistry as a science subject plays a vital role in the industrial growth of any nation. It has become a major source of economic development stemming from the processing of petroleum and petrochemical products for industries. These are products of chemistry. Unfortunately what makes the whole system to be worrisome is that understanding chemistry is a challenge to students and many seem not pass the subject during West African Examination Council (WAEC) and Joint Admissions And Matriculation Board (JAMB) examinations. This scenario has now created a big doubt on the possibility of Nigeria growing in the area of technological advancement and health, like other countries of the world. Though some factors has been stated out as the course of this low achievement by chemistry students, yet the situation has not changed. This could be because chemistry teachers and school management were the only areas where their
interest for student’s low achievement has been focused on without considering the students’ themselves. This could be that some students will possess learning skills (like Analytical skill) which will help to enhance their achievement. Therefore, this study is aimed at finding out the level at which students possess analytical skill at the secondary schools, as well as examines how this analytical skill possession by the chemistry students contributes to their overall achievement.

Research Questions

The following research questions were raised to guide this study:

1) What is the level of analytical skill possessed by SS II chemistry students?
2) What is the mean achievement score of SS II students in chemistry?

Hypotheses

The following hypotheses were formulated to guide this study. They were tested at 0.05 level of significance.

1) There is no significant difference between the level of analytical skill possessed by male and female SS II chemistry students
2) There is no significant difference between the mean achievement score of male and female SS II chemistry students

Methodology

The study adopted a descriptive research design which was focused on SS II chemistry students from Government owned secondary schools in Okigwe educational zone II in Imo state. It is aimed at identifying the level at which SS II students possess analytical skill, including an investigation on how the analytical skill possessed by chemistry students contribute to their success or achievement in chemistry. A sample of 200 SS II students drawn from four schools were randomly selected from the 34 government-owned secondary schools in the zone. The Modified Enright-Powers Analytical Skill Rating Scale (M-EPASRS) and the Chemistry Achievement Test (CAT) were used as instrument for data collection which was validated by two experts from chemistry education and measurement and evaluation, the M-EPASRS was used to assess the extent at which students possess analytical skills. It has six sections in each of the sections with an analytical skill trait which comprises of four or five characteristics as the case may be. However, the M-EPASRS has six sections and the scale is a 4-point modified rating scale.

Since it was a four-point rating scale of 4, 3, 2 and 1, the acceptance score was 2.50 and above
\[ \frac{4+1}{2} = \frac{5}{2} = 2.5 \]

Therefore any mean score below 2.50 was considered less able while any mean score above 2.50 was considered as more able.

The CAT is a 20-item multiple choice objective test with four options per item (that is, A, B, C, and D). Each correct answer is 5 marks while each incorrect answer is 0’ marks, thus, the possible highest mark is 100 while the possible lowest mark is 0 marks.
Therefore, students that score below 50 (0-49) were categorized as the low academic achievers while those that scored from 50 marks and above (50-100) are categorized as the high achievers. The reliability of the CAT was established using an equivalent sample of 50 students from Owerri Educational zone I which is outside the area of sample study. After two weeks interval, the sample subjects were re-administered with the same CAT questions and their reliability co-efficient was ascertained to be 0.78 and was accepted to be reliable for this study.

Data collection started after all the 200 randomly selected SSII chemistry students from the four schools have been taught using the same scheme of work/lesson plan for six weeks. On the fifth week, the researcher did revision for them and base on their reactions, responses and questioning, their analytical skill was rated. Then, on the sixth week, they were administered with the CAT questions. Two research assistants who were qualified chemistry teachers with NCE and B.Sc. (Education) assisted the researcher during this process. After all the data collections has been completed, the mean standard deviation and independent student t-test was used for data analysis.

Results
The result of research question one and two were presented in table 1 while the test of the hypothesis was presented in table 2, 3, and 4.

Research Question 1: What is the level of analytical skill possessed by SS II Chemistry Students?

Table 1: Mean Achievement Score and Analytical Skill Level Possession of SS II Chemistry Students

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical skill</td>
<td>2.2433</td>
<td>.8459</td>
<td>200</td>
</tr>
<tr>
<td>Chemistry achievement</td>
<td>59.7250</td>
<td>18.5748</td>
<td>200</td>
</tr>
</tbody>
</table>

From Table 1, the analytical skill level possessed by SS II Chemistry Students is 2.24 which is less than the median score (2.5) which indicates Less Able, because any score on analytical skill that is less than 2.5 is Less Able, while any score above 2.5 is More Able from the rating scale.

Hypothesis 1: There is no significant difference between the level of analytical skill possessed by male and female SS II Chemistry Students.

Table2: The difference between analytical skill possession and achievement of male
and female SS II Chemistry Students

**Hypothesis 2:** There is no significant difference between the mean achievement score of male and female SS II Chemistry students.

Table 3: The difference between the analytical skill level possessed by male and female SS II Chemistry students

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sex</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical skill</td>
<td>Male</td>
<td>100</td>
<td>2.0900</td>
<td>.7819</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>100</td>
<td>2.3967</td>
<td>.8828</td>
</tr>
<tr>
<td>Chemistry Achievement</td>
<td>Male</td>
<td>100</td>
<td>55.9500</td>
<td>17.4613</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>100</td>
<td>63.500</td>
<td>18.9697</td>
</tr>
</tbody>
</table>

Based on this result in Table 3, \( t_{(198)} = 2.60, P < .01 \) level of significance, is less than 0.05 level of significance. On the inspection of the result in Table 2, it reveals that females \( (M=2.40, SD=.88) \) possess higher analytical skill than males \( (M = 2.09, SD=.78) \). Therefore, the null hypothesis is rejected and alternative accepted. This means that there is a significant difference between the analytical skill level possessed by male and female SS II chemistry students in favor of the females.

Table 4: The difference between Chemistry achievement score of SS II chemistry students

<table>
<thead>
<tr>
<th>Variable</th>
<th>t</th>
<th>df</th>
<th>Sig.(2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry achievement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>-2.928</td>
<td>198</td>
<td>.004</td>
<td>-7.5500</td>
<td>2.5783</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>-2.928</td>
<td>196.656</td>
<td>.004</td>
<td>-7.5500</td>
<td>2.5783</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>t</th>
<th>df</th>
<th>Sig.(2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Skill</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variance assumed</td>
<td>-2.600</td>
<td>198</td>
<td>.010</td>
<td>-.3067</td>
<td>.1179</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>-2.600</td>
<td>195.152</td>
<td>.010</td>
<td>-.3067</td>
<td>.1179</td>
</tr>
</tbody>
</table>

From the result in Table 4, \( t_{(198)} = 2.93, P < .004 \) which is less than 0.05 level of significant. On inspection of the result in table 2, it reveals that females performed better than the males in Chemistry achievement \( (M = 63.50, SD = 18.97) \) Vs \( (M = 55.95, \)
SD = 17.46) respectively. Therefore, the null hypothesis 2 is rejected and alternative accepted. This means that there is a significant difference between the mean achievement score of male and female SS II chemistry students in favor of the females.

**Discussion of Results**

The result revealed that there was a significant difference between analytical skill level possessed by male and female SS II students in chemistry (M = 2.09, SD = 78) vs (M = 2.40, SD = 88)

It was also revealed that there is a significant difference between the mean achievement score of male and female SS II chemistry students (M = 55.95, SD = 17.46) Vs (M = 63.50, SD =18.97) respectively in favor of females. This shows that as analytical skill increases, chemistry achievement also increase and vice versa. But on general note, the analytical skill level possession of SS II Chemistry students is low, that is, they are Less Able. (M=2.24, SD = .85) but their achievement is high (M=59.73, SD = 18.57) with females scoring higher than their male counterparts (see table 2)

This present result is in contrary with the research carried out by Fredrick (2008) whose aim is to identify if students analytical skill has a relationship with their achievement in mathematics, his result showed that though gender has no much influence on the analytical skill of students, but that girls had a poor self-confidence in their ability to achieve well in mathematic as most of them (90%) believe that boys are better than them but is not true based on this present study on chemistry (see table 2). However, Pisa (2003) in his study found out that girls are better than boys in both their analytical skill possession and their academic achievement. Pisa’s aim was to investigate on the type of skill needed for students to achieve well in their academic in mathematics in secondary school in Australia. Both Fredric and Pisa carried out a related study but it was on mathematics outside Nigeria, therefore, this study was carried out on chemistry at SS II class on secondary school here in Nigeria to justify their previous findings and from the research above, that of the Pisa (2003) is in agreement with the findings of this present study on chemistry.

**Conclusion**

Possession of analytical skill can be taken as one of the factors that possibly play a significant role on the achievement of students in the area of chemistry. Female students tend to do better than their male counterpart. However, the percentage population of secondary school students in Nigeria and Okigwe Educational zone II, which possess high level of analytical skill, may be higher in females than males. This may be a major reason for the low achievement in chemistry discovered amongst secondary school students in Nigeria. Therefore, secondary school chemistry teachers should endeavour to consider their students ‘level of analytical skill possession during their lesson planning and teaching generally. They can do it by preparing their lesson plan to incorporate active participation of students, as well as consider dropping the use of only lecture method as instructional technique.
Recommendations

Based on the outcome of this study, the following recommendations are made;

1. Teachers who interact with these students should endeavour to know the analytical skill level possession of students and bearing in mind the importance of analytical skill possession to achievement in chemistry subject. Teachers must ensure to put in place well-planned instructional strategies that will help to impart students some level of analytical skill possession which will enhance their achievement in chemistry and life generally.

2. The professional bodies like Science Teachers Association of Nigeria (STAN) and Curriculum Organization Of Nigeria, (CON) should endeavour to implement policies in Education which would involve practical programmes in secondary schools. This will encourage the involvement of both the students and their teachers in the proper use and application of analytical skill in all the science subjects, especially challenging subjects like chemistry.

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Chapter 6

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.

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

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.

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

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.

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

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.

REFERENCES


Chapter 7

The Primary School Teacher and Environmental Education for a Sustainable Future

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ABSTRACT

This study investigates the extent teachers in Anambra state practice environmental education as a tool for a sustainable future. Two research questions guided the study. A multistage sampling technique was used to sample a population of 525 primary school teachers. A 27-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 with schools reflecting genuine commitment to environmental education.

Keywords: Environmental education, sustainable future.

INTRODUCTION

The world today is confronted with several 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. 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). According to UNEP, scientific breakthroughs have occurred in every sphere of life while science and technology have extended the scope for intervention in human life and in nature.
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 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 waterways 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 and 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; attitudinal concerns 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 (Australian 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 environmental awareness and respect for nature increased, 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 the Scottish Environmental Education Council (SEEC, 1996) environmental education takes place through formal and informal education at home, in the community, at work and leisure with a single purpose which is to provide the knowledge skills and attitudes that lead to a committed care for the environment and its 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, and the importance of the quality of life on a global and 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. This means that the education process must include developing knowledge on the environment; guide the development of attitudes and values which influence human behaviour and life styles. According to UNESCO (2002) essential features of environmental education, include an aesthetic appreciation of the natural environment; a sense of belonging to and ownership of the global environment; an awareness of the interdependence of people and nature; individual social responsibility and the need to learn to respect the collective good. UNESCO identified five contexts for developing a whole school approach to environmental education. These areas are as follows:

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, storytelling, 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 worsening global 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. It is imperative to note that the 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 a 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 which 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 of all the public primary school teachers in the twenty one (21) Local Government Education Authorities of Anambra State. The population for the study was five hundred and twenty five (525) primary school teachers, including the head teachers. Multistage sampling technique was employed: 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 major sample. The Environmental Education Strategies Scale (EES) was developed by the researchers. Two experts from the Measurement and evaluation, and Early childhood and primary education fields at 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 (EES) 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.

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

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 storytelling. 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.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Remarks</th>
<th>X</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Making environmental issue a regular topic at school assemblies</td>
<td>1.10</td>
<td>No Extent</td>
</tr>
<tr>
<td>2</td>
<td>Using school notice boards to display environmental work and materials</td>
<td>1.20</td>
<td>No Extent</td>
</tr>
<tr>
<td>3</td>
<td>Inviting representatives of environmental organizations to make presentations and stimulate discussions</td>
<td>0.21</td>
<td>No Extent</td>
</tr>
<tr>
<td>4</td>
<td>Consistently giving environmental messages such as Care of the school building and grounds</td>
<td>3.70</td>
<td>Very Great Extent</td>
</tr>
<tr>
<td>5</td>
<td>Energy efficiency</td>
<td>1.15</td>
<td>No Extent</td>
</tr>
<tr>
<td>6</td>
<td>Recycling</td>
<td>0.13</td>
<td>No Extent</td>
</tr>
<tr>
<td>7</td>
<td>Conservation</td>
<td>0.25</td>
<td>No Extent</td>
</tr>
<tr>
<td>8</td>
<td>Disposal of waste</td>
<td>3.67</td>
<td>Very Great Extent</td>
</tr>
<tr>
<td>9</td>
<td>The school is affiliated to Nigerian conservation foundations club</td>
<td>0.00</td>
<td>No Extent</td>
</tr>
<tr>
<td>10</td>
<td>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 environment</td>
<td>2.10</td>
<td>Small Extent</td>
</tr>
<tr>
<td></td>
<td>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:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Placing door mats at strategic points</td>
<td>3.58</td>
<td>Very Great Extent</td>
</tr>
<tr>
<td>12</td>
<td>Ensuring that rooms, corridors and stairs are clean and in good repair</td>
<td>4.10</td>
<td>Very Great Extent</td>
</tr>
<tr>
<td>13</td>
<td>Providing clean toilets</td>
<td>4.12</td>
<td>Very Great Extent</td>
</tr>
<tr>
<td>14</td>
<td>Making available sufficient litter bins in classrooms, corridors and playgrounds</td>
<td>4.03</td>
<td>Very Great Extent</td>
</tr>
<tr>
<td>15</td>
<td>Encouraging pupils to keep the entire compound litter free</td>
<td>2.76</td>
<td>Great Extent</td>
</tr>
</tbody>
</table>
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 litter 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 the 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 portray 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 which 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 engage in the following: make environmental issues a regular topic at school assemblies, display environmental materials on the notice boards, invite representatives of environmental organizations, give public 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. Despite the fact that the schools have done a good job in making their pupils, teachers and other nonacademic staff aware of environmental issues like general cleanliness 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 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, better protected and managed ecosystems and a safer, more prosperous future for all.

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 projects.
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. Support from the Ministry of Education in all the states is essential in this regard.

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

REFERENCES


Chapter 8

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:

\[
Y_L = f(X_1, X_2, X_3, X_4, X_5, X_6, e) \\
\]

Where:

\[X_L = \text{Amount of loan repaid (N)}\]
\[X_1 = \text{Educational status (Years in School)}\]
\[X_2 = \text{Years of Fishing (Experience)}\]
\[X_3 = \text{Income from non-fishing employment (N)}\]
\[X_4 = \text{Income from fishing (N)}\]
\[X_5 = \text{(Technology adoption) yes = 1 No = 0}\]
\[X_6 = \text{Occurrence of natural disaster}\]
\[E = \text{Error term.}\]

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

Linear Function: \(Y_L = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_6 X_6\)
Semi-log Function: \( Y_b = \ln a + b_1 \ln X_1 + b_1 \ln X_2 + \ldots + b_n \ln X_n \)

Double-log function:
\[ \ln Y_L = \ln a + b_1 \ln X_1 + b_2 \ln X_2 + \ldots + b_n \ln X_n \]

The equations which give the best fit was choose and F- test was used to determine the extent to which the explanatory variables \( X_i \)'s explained the relationship with \( Y_L \) 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.

<table>
<thead>
<tr>
<th>Sources</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Bank</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>NACRDB</td>
<td>22</td>
<td>27.5</td>
</tr>
<tr>
<td>MANR</td>
<td>32</td>
<td>40.0</td>
</tr>
<tr>
<td>RCFA &amp; IFAD</td>
<td>14</td>
<td>17.5</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100</td>
</tr>
</tbody>
</table>

*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.

<table>
<thead>
<tr>
<th>Constraints</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Policies</td>
<td>8</td>
<td>80</td>
</tr>
<tr>
<td>Administrative cost of loan disbursement</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>Inability of Fishermen to provide revised collateral and other valuable documents</td>
<td>6</td>
<td>60</td>
</tr>
<tr>
<td>Inadequacy of credit officers</td>
<td>5</td>
<td>50</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Linear</th>
<th>Semi-log</th>
<th>Double-log</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>-25.4508</td>
<td>-112,8864</td>
<td>0.0541</td>
</tr>
<tr>
<td></td>
<td>(46,6838)</td>
<td>(249,0226)</td>
<td>(0.0466)</td>
</tr>
<tr>
<td>X2</td>
<td>-41.5017*</td>
<td>-838.6769*</td>
<td>0.0451**</td>
</tr>
<tr>
<td></td>
<td>(24.6463)</td>
<td>(451.7528)</td>
<td>(0.847)</td>
</tr>
<tr>
<td>X3</td>
<td>0.6639**</td>
<td>171.2619**</td>
<td>0.041**</td>
</tr>
<tr>
<td></td>
<td>(0.1535)</td>
<td>(57.9159)</td>
<td>(0.0108)</td>
</tr>
<tr>
<td>X4</td>
<td>1.5976**</td>
<td>3444.4709**</td>
<td>0.7557**</td>
</tr>
<tr>
<td></td>
<td>(0.1395)</td>
<td>(564.3846)</td>
<td>(0.0108)</td>
</tr>
<tr>
<td>X5</td>
<td>-729.140*</td>
<td>-457.8171*</td>
<td>-0.1077*</td>
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<tr>
<td></td>
<td>(402,727)</td>
<td>(203.5940)</td>
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<td>(393.2611)</td>
<td>(227.3939)</td>
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<td>R²</td>
<td>0.68</td>
<td>0.38</td>
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<tr>
<td>F</td>
<td>26115**</td>
<td>7.64**</td>
<td>10.94**</td>
</tr>
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</table>

** 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 R² = 0.68 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 shows 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.

REFERENCES


Chapter 9

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, Abakaliki. One research question guided the study while data collected was analysed using the mean and standard deviation. A benchmark 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.
<table>
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<th>D</th>
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<td>Leads to fatigue and drowsiness</td>
<td>198</td>
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<td>16</td>
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<td>792</td>
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<td>564</td>
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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 benchmark 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 benchmark 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.
REFERENCES


Chapter 10

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

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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 affects 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 Vesicovaginal 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 Vesicovaginal fistula (VVF) or lose 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:

1. Provision of a cross-cultural interstate discourse
2. Enacting new laws and amendment of old laws with proper implementation of such laws
3. Litigation
4. Advocacy
5. Education and training
6. 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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Chapter 11
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/herself 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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Chapter 12


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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 research questions and three hypotheses were formulated to guide the study. A cross sectional survey design was used and population/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; illegal drugs significantly influenced their sexual behaviours; and religious beliefs influenced the adolescents’ sexual behaviours significantly. 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, among others.

Keywords: Socio-demographic, Correlates, Sexual, Behaviours, Adolescents, Cross Sectional, Survey.

INTRODUCTION

Socio-demographic correlates of sexual behaviours of the adolescents involve 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 the 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 (Wikipedia, 2005).
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 (Wikipedia, 2005). According to Sharma (2003) 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 the use of alcohol, use of illegal drugs and religious belief system of 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. The authors observed that those adolescents who use illegal drugs are less likely to use condom and more likely to contact sexually transmitted infection. They 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 the proliferation of churches in Imo State where priests preach against immoral activities, including premarital sex. Due to the increase in risky sexual behaviours among the secondary school adolescents, WHO (1994) recommends strongly 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. Thus, individuals need 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 fewer samples will do if the population runs in several thousands. Twenty-eight (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 $\alpha = 0.79$ 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.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Variables</th>
<th>Group</th>
<th>Frequency</th>
<th>Mean</th>
<th>Level of Sexual Behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Alcohol Use</td>
<td>Yes</td>
<td>160</td>
<td>1.88</td>
<td>Inactive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>3100</td>
<td>1.44</td>
<td>Inactive</td>
</tr>
<tr>
<td>2</td>
<td>Illegal Drugs Use</td>
<td>Yes</td>
<td>155</td>
<td>1.60</td>
<td>Inactive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>3105</td>
<td>1.46</td>
<td>Inactive</td>
</tr>
<tr>
<td>3</td>
<td>Religious belief</td>
<td>Catholic</td>
<td>2225</td>
<td>1.47</td>
<td>Inactive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pentecostal</td>
<td>959</td>
<td>1.45</td>
<td>Inactive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moslem</td>
<td>32</td>
<td>1.75</td>
<td>Inactive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pagan</td>
<td>44</td>
<td>1.72</td>
<td>Inactive</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observations</th>
<th>Mean</th>
<th>Known</th>
<th>Z-cal</th>
<th>Z-tab</th>
<th>P(z&lt;=z)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>160</td>
<td>1.88</td>
<td>0.33</td>
<td>9.51</td>
<td>1.96</td>
<td>0.0001</td>
</tr>
<tr>
<td>No</td>
<td>3100</td>
<td>1.44</td>
<td>0.16</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observations</th>
<th>Mean</th>
<th>Known</th>
<th>Z-cal</th>
<th>Z-tab</th>
<th>P(z&lt;=z)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>3105</td>
<td>1.60</td>
<td>0.15</td>
<td>4.38</td>
<td>1.96</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>No</td>
<td>155</td>
<td>1.46</td>
<td>0.18</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4: Summary of ANOVA Procedure to Determine the Influence of Different Adolescents’ Religious Beliefs on their Sexual Behaviours.

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F-cal</th>
<th>F-tab</th>
<th>Pr&gt; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion</td>
<td>5.91</td>
<td>3</td>
<td>1.97</td>
<td>10.95</td>
<td>2.60</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Error</td>
<td>585.81</td>
<td>3256</td>
<td>0.18</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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, loses sense of judgment 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, Muslims 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 and 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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Chapter 13

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

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ABSTRACT

The paper examines the extent to which Technical Vocational Education and Training (TVET) programmes in Nigerian Colleges of Education utilize Labour Market Information (LMI) in developing and implementing TVET programmes and contends that the current labour market perceives fresh graduates from the colleges as not possessing the requisite knowledge and skills for employment in their areas of training and holds pre-service training responsible. Specifically, the paper alludes to the fact that employers of TVET graduates from Nigerian Colleges of Education (just like their counterparts in other subsectors 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 areas of specialization. The paper believes that the 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 paper concludes that for Nigerian Colleges of Education to meet the manpower requirements of the nation, they would require a paradigm shift that would place LMI management and utilization in the forefront of the burner; among others.

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; and that is that graduates of TVET produced in Nigerian educational institutions do not demonstrate 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, Revised 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 programs 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 programs are targeting viable occupations. Labour market information is data, statistics and research about the world of work and the job market (Alberta, 2009). 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 programmes.
in the country. This situation is true not only for TVET skill development programmes but also TVET teacher pre-service production programs 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 programs 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 programs 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 (NCCE Minimum Standards, 2004). 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 2009 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 amounts of relevant world-class hand-on skills are also limited. The effect of the ugly situation on the TVET programs 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 on 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 Fafunwa (1991) argued, poor teachers tend to produce their own kind; thus, a need for effective teacher training curricula to ensure the production of high quality teachers and educational services in this 21st century.

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 of 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 (Abelega, 2010). 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 lying 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 programs 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 Programmes 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 Programmes 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 visits by programme officers, judgment is made about the objectives of the program, 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 Program**
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 programs 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 Programs in the country.

5  
**External Moderation System**

A major consideration in any quality assurance process in education, globally, is the issue of parity. Parity in educational programs 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 programmes or to establish a new institution, such institution must be able to:

(a) Provide a justification for the new program in line with the National Policy on education (NPE Rev 2004);
(b) Indicate sources and projection of students’ intakes;
(c) Provide the curriculum (if the programme 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), therefore, learning what it is and how to use it can help the trainer to train or educate for the 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? Source?
8. Worthwhile strategies for LMI would require that a training regulatory agency like NCCE would:
9. Establish systems to formulate, co-ordinate monitor and evaluate employment
10. Policies being implemented in TVET;
   - Establish Labour Market Information and Statistics System;
   - Promotion capacity building in employment and development policy making and implementation for top officials; and
   - 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. The labour force is 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:
1. How will this general trend impact the local economy?
2. 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:
3. What are they basing their prediction on?
4. Have they missed important information that would have changed their prediction?
5. Is it clear how they moved from the present to the future?
6. Are their predictions believable?
7. 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 the 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 examined 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 programmes in the Nigerian colleges of education. This situation is true not only for TVET skill development programs 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 programs, and use demographic data and labour market trends to make decisions about TVET programme improvement in the colleges of education.

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