ICTL2013
International Conference on Teaching and Learning
August 12-15, 2013
Michael Okpara University of Agriculture, Umudike-Abia State, Nigeria
BOOK OF PROCEEDINGS

Edited by
Jacinta A. Opara, PhD
Forward

Find herewith the Proceedings which is a collection of the papers presented at 3rd International Conference on Teaching and Learning (ICTL2013) organized by African Society for Scientific Research and African Association for Teaching and Learning in cooperation with several partners and collaborating journals in the international community. The conference was held August 12 to 15, 2013 at Michael Okpara University of Agriculture, Umudike-Abia State, Nigeria.

The ICTL series is an academic activity for interested scholars, educators, scientists, technologists, policy makers, corporate bodies and graduate students. The aim of the conference is to diffuse research findings and create a conductive environment for scholars to debate and exchange ideas.

We received more than 120 proposals from 35 different countries from all continents. As a commitment to the vision and mission of academic excellence and integrity, each paper was anonymously reviewed by two members of the editorial sub-committee of the Commission. This book of proceedings contains a selection of the papers presented at the conference.

We wish to express our sincere thanks to the Governing Council, Management, Senate, Staff and Students of Michael Okpara University of Agriculture, Umudike-Abia State, Nigeria for providing the venue and facilities for the conference and for being committed to ensuring the success of the conference.

We thank the management and staff of our institutional partners for their cooperation and support for the project. We express our profound gratitude to all and sundry especially our Special Guests, delegates, reviewers, the media, the Nigerian foreign missions and all the cooperating partners for their contributions in promoting this noble academic event.

Please read on!!!

Jacinta A. Opara, PhD
President, African Association for Teaching and Learning
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<td>Dr. G. O. Anozie</td>
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<td>Assistant, ICT</td>
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THE IMPACT OF TEACHING PRACTICE ON TRAINEE TEACHERS IN THE NIGERIAN TERTIARY INSTITUTIONS: THE NIGER DELTA UNIVERSITY EXPERIENCE

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ABSTRACT

This research evaluates the impact of teaching practice on trainee teachers in tertiary institutions in Nigeria: the Niger Delta University Experience. Questionnaire was used to collect the data; one hundred and twenty (120) students (respondents) from the faculty of education were selected using simple random sampling. The result showed that trainee teachers benefited greatly in participating in teaching practice because they were able to build proper confidence and competence in lesson preparation and developed skills and attitude of a teacher during the exercise. It was also revealed that teaching practice helps trainee teachers to learn how to keep records of assignment and also participating in school activities. Therefore we recommend that government should provide finance in form of stipend for trainee teachers and teachers engaged in teaching practice programme. A proper orientation for trainee teachers should be carried out using efficient means of communication like; seminars, workshops, conferences and discussion. Faculties of education and colleges should organize the exercise very well so as to give the best professional practice to the trainee teachers. The university should appeal to non-governmental organizations like the private sector, individuals and industries to assist in supplementing educational materials and learning resource that would prepare the students.

INTRODUCTION

Okorie (1986) stated that, education is a part of life, which is deliberately controlled and experiences developed according to a conscious plan. According to Emereole (2000), it is usually planned according to the individual and societal needs and the most veritable instrument for change in any society. Therefore, the quality of education provided in any society and the nature of the change affected by that education are both dependable on the quality of teachers and the affected by that education are both dependable on the quality of teachers and the effectiveness of their teachings in schools (Awotua-Efebo, 1999). Kizlik (2007) posits that, education is a means to cooperative dynamic and life long process through which a society deliberately generates knowledge, skills, values and other form of behavior for its survival and sustenance, and transmits these from one generation to another. Asuru (2000) observed that, it is pertinent to note that the individual countries of the world provide education for their citizens for different reasons. According to Adagba (2005), the reasons are the different ways, which these countries believe that they would help the citizens as human being and their country as a Nation.

Akpomi (2010) also stressed that, the Government of Nigeria in her aim to achieve their philosophy of education has therefore set up an implementation committee for the National Policy of Education in 1983, knowing fully that, the important of teaching practice and internship in teaching education can not be overemphasize, the committee therefore recommends: i. Those methods of training teachers need to be rationalized, so that they reflect the Nation’s, Education philosophy, policies and structure. ii. That massive training
of untrained primary school teachers should be done by the method on the job training. Similarly, the selection and training of lead teacher who will provide personal instruction to teacher, trainee and supervise them well. Mann (1995) stressed that, the impact of teaching practice on trainee teachers in tertiary institution has been of interest to researchers, government, teachers and parent as well. Similarly Obagah (2000) defines teaching practice as the performance of the kind of activity that results in learning. Koko (2002) remarked that, teaching practice in most educational institution is the expected terminal behavior of a student teacher who is going through professional course in education.

CONCEPTUAL FRAMEWORK

Mkpandio (2006) observed that, for the past 15 years, scholars have embarked on extensive research in order to adopt teaching techniques to tackle the issues of the differences among individual learners with regard to the social and institutional contexts of teaching in higher education. According to Sipek (1988), and in recent time the theories and methods of research on teaching in terms of understanding and how academics experience teaching. In the light of this, the work of Okorie (1986) has been an improvement on earlier studies as well as noting the lack of research on the associated intention or motives of teachers. The authors have investigated the extent to which university teachers conceptualized teaching in different ways (Koko, 2002). Practice teaching occupies a key position in the programmed of teacher education, it is a culminating experience in teacher preparation (Nnamdi, 2000).

Adagba (2005) stressed that, this exercise provides opportunity to beginning teachers to become socialized into the profession. Ajoku (2003) asserted that, performance during practice teaching provide some basis for predicting the future success of the teacher's outgoing popularity and centrality of practice teaching is an important contributing factor towards the quality of teacher education programmed. Edem (2003) confirmed that, during practice teaching, working with students in schools provide a high degree of emotional involvement of a mostly positive nature. Students teachers feel themselves grow through experience and they begin to link to a culture of teaching. Murray (2007) asserted that, during practice teaching, they feel engage, challenged and even empowered. Amaewhule (1993) reaffirmed that, practical teaching experience is undertaken by students in faculty of education in Universities and Colleges. Ittjer (1998) stressed that, teaching practice is the most vital part of trainee teacher's career training, this is because it is during this practice that the trainee teachers applies the methods, even the philosophy of education which he was taught theoretically in the classroom. He now realizes this professional responsibility as a
teacher and starts to learn how to manage the younger ones who will be left under his control and care.

Edem (2003) also stressed that, teaching practice is a period in teachers in the teacher training institutions and universities are made to undergo a period of internship or apprenticeship within the school system. Just like they would be engineers going for industrial training to gain practical experience of what the job is all about, the trainee medical doctor goes through clinical studies and horsemanship. (Ihekwoaba, 2005). According to Haddad (1994), the teachers are exposing to a period of supervised teaching; this is in line with educational theories which associate learning with doing. For a real teacher to emerge, he must acquire the necessary skill from a master craftsman who is usually an educational. According to Emerole (2000) teaching practice embraces all the learning experiences of student teachers in schools. Ashraf (1999), the term practice teaching is an experience of guided teaching in which the trainee teacher assumes increased responsibility for directing the learning of a group for over a period of time. Imart 2003 confirmed that, also the term practice teaching has three major connotations the practicing of teaching skills and acquisition of the role of a teacher, the whole range of experiences and practical aspects of the course as distinct from theoretical studies practice teaching is the name of the preparation of student teachers for teaching by practical training. Andabai (2011) posits that, it is the practical use of teaching principles, teaching techniques and practical training/practical exercise of different activities of daily school life. Hassan (2000) asserted that, it is a period which provides opportunities under typical school conditions in selected cooperating schools for trainee teachers to secure experience in observing and participating activity in diverse educational activities of teaching in the school.

In March 1987, the American Association of higher education first published “seven principles of good practice in undergraduate education” these seven principles are a meta-analysis of 50 years of research on good teaching principles by Chickenking (1996). Murray (2007) reaffirmed that, they must make what they learn part of themselves, student teacher give assignments to encourage students to apply the concepts learned in the course. iv. good practice gives prompt feedback, knowing what you know and don’t know how to focus your learning in getting started, students need help in assessing their existing knowledge and competence then in classes students need frequent opportunities to perform and receive feedback on their performance. At various points during college, and at its end, students need chances to reflect on what they have learned, what they still need to know, and how the might assess themselves. Lew (2009) further stated that, it helps student teacher to know what type of feedback to expect from their student or learners and how often it will be provided. v. good practice emphasizes time on task, time plus energy equals learning, learning to use one’s time well is critical for students and professional’s alike allocating realistic amounts of time means effective learning for students and effective teaching for faculty. vi. Good practice communicates high expectations; expect more and you will get it. High expectations are important for every one for the poorly prepared for those unwilling to exert themselves, and for bright and well motivated. Expecting students to perform well becomes a self-fulfilling prophecy. vii. Good practice respects diversity talents, experience and ways of learning. Many road lead to learning, different students bring different talents and styles to college, brilliant students in a seminar might be good in practical, students need opportunities to show their talent and learn in ways that work for them. They can be pushed to hear in new ways that do not come so easily (Hassan, 2006).
METHODOLOGY

Data were sourced mainly from the primary sources. The instrument that was used for data collection for the purpose of this study was the questionnaire. The questionnaire is divided into two sections, A and B section, section (A) seeks the personal data of the respondent, while section (B) seeks the consent of the respondent. The data collected for the study was analyzed using the simple percentages.

ANALYSIS AND DISCUSSION

This section deals mainly with the representation and analysis of data collected. The analysis is presented in the form of data classification.

Table 1: What are the benefits of teaching practices to trainee teachers?

<table>
<thead>
<tr>
<th>S/N</th>
<th>QUESTIONS</th>
<th>SA</th>
<th>A</th>
<th>DA</th>
<th>SD</th>
<th>%</th>
<th>REMARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Teaching practice has made me to decide whether or not to take to teaching as a profession.</td>
<td>57</td>
<td>30</td>
<td>16</td>
<td>17</td>
<td>3.3</td>
<td>Agree</td>
</tr>
<tr>
<td>2</td>
<td>Teaching practice developed in me the interest of working with children of school age.</td>
<td>40</td>
<td>60</td>
<td>20</td>
<td>-</td>
<td>2.5</td>
<td>Agree</td>
</tr>
<tr>
<td>3</td>
<td>There is an opportunity of trying out ideas and theories in a practical classroom situation.</td>
<td>37</td>
<td>38</td>
<td>18</td>
<td>27</td>
<td>3.3</td>
<td>Agree</td>
</tr>
<tr>
<td>4</td>
<td>One has the opportunity of communicating and interacting closely and sympathetically with children of school age.</td>
<td>72</td>
<td>48</td>
<td>-</td>
<td>-</td>
<td>1.6</td>
<td>Disagree</td>
</tr>
<tr>
<td>5</td>
<td>Teaching practice has made trainee teachers to master professional skills.</td>
<td>80</td>
<td>40</td>
<td>-</td>
<td>-</td>
<td>1.6</td>
<td>Disagree</td>
</tr>
<tr>
<td>6</td>
<td>Teaching practice has made trainee teachers learn how to plan, prepare and present their lesson topics.</td>
<td>70</td>
<td>30</td>
<td>8</td>
<td>12</td>
<td>3.3</td>
<td>Agree</td>
</tr>
<tr>
<td>7</td>
<td>Teaching practice has exposed one to the problems and prospects of the teaching progression.</td>
<td>50</td>
<td>45</td>
<td>25</td>
<td>-</td>
<td>2.5</td>
<td>Agree</td>
</tr>
<tr>
<td>8</td>
<td>Teaching practice helped trainee teachers in understanding of the principles of child development and growth.</td>
<td>43</td>
<td>50</td>
<td>27</td>
<td>-</td>
<td>2.5</td>
<td>Agree</td>
</tr>
<tr>
<td>9</td>
<td>Teaching practice helped trainee teacher to broaden their knowledge of the subject matter.</td>
<td>60</td>
<td>50</td>
<td>10</td>
<td>-</td>
<td>2.5</td>
<td>Agree</td>
</tr>
<tr>
<td>10</td>
<td>Teaching practice has help one to perfectly use instructional materials when teaching.</td>
<td>50</td>
<td>60</td>
<td>10</td>
<td>-</td>
<td>2.5</td>
<td>Agree</td>
</tr>
<tr>
<td>11</td>
<td>Teaching practice act as a resource centre to the school.</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>30</td>
<td>3.3</td>
<td>Agree</td>
</tr>
<tr>
<td>12</td>
<td>Trainee teachers adequately control their classroom with assistance.</td>
<td>30</td>
<td>40</td>
<td>30</td>
<td>20</td>
<td>3.4</td>
<td>Agree</td>
</tr>
<tr>
<td>13</td>
<td>Teaching practice has made trainee teachers to observe the different features of school curriculum at work and how each contributes to learning.</td>
<td>60</td>
<td>50</td>
<td>5</td>
<td>5</td>
<td>3.3</td>
<td>Agree</td>
</tr>
<tr>
<td>14</td>
<td>Teaching practice has help trainee teachers to be familiar with school records and the complex set of rules and regulations.</td>
<td>70</td>
<td>15</td>
<td>10</td>
<td>25</td>
<td>3.3</td>
<td>Agree</td>
</tr>
<tr>
<td>15</td>
<td>Teaching practice has helped one to pass the teaching requirement to quality as teachers.</td>
<td>30</td>
<td>20</td>
<td>45</td>
<td>25</td>
<td>3.3</td>
<td>Agree</td>
</tr>
<tr>
<td>16</td>
<td>Teaching practice has helped trainee teachers to acquire those valuable personality attribute associated with outstanding teacher.</td>
<td>50</td>
<td>35</td>
<td>5</td>
<td>30</td>
<td>3.3</td>
<td>Agree</td>
</tr>
<tr>
<td>17</td>
<td>Teaching practice has helped one to gain valuable insight into him with regard to assessing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Trainee teachers see teaching practice as a vital factor in preparing students for future teaching assignment.

<table>
<thead>
<tr>
<th>S/N</th>
<th>QUESTIONS</th>
<th>SA</th>
<th>A</th>
<th>DA</th>
<th>SD</th>
<th>%</th>
<th>REMARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td></td>
<td>40</td>
<td>55</td>
<td>9</td>
<td>16</td>
<td>3.3</td>
<td>Agree</td>
</tr>
<tr>
<td>19</td>
<td>Trainee teachers develop their own way of working effectively with children and colleagues.</td>
<td>45</td>
<td>47</td>
<td>28</td>
<td>-</td>
<td>2.5</td>
<td>Agree</td>
</tr>
<tr>
<td>20</td>
<td>Teaching practices has made trainee teachers to gain general experience in academic profession.</td>
<td>46</td>
<td>35</td>
<td>20</td>
<td>19</td>
<td>3.3</td>
<td>Agree</td>
</tr>
</tbody>
</table>

Source: Field data (2013).

From Table 2, we can see that, out of 120 responses collected from the respondents, questions 1, 2, 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, have above the cut off point of 2.5 which the respondents agree to the research questions, while questions 4 and 5, disagree to the research questions. Therefore, from this analysis we can conclude that trainee teachers derive great benefit in participating in the teaching practice exercise.

Table 3 indicates that, question 22, 24, 25, 26, 27, 28, 29, 30, have above the cut off point of 2.5 which the respondents agree to the research questions, while questions 21 and 23 disagree to the research questions. Therefore, from this analysis it indicates that, trainee teachers face challenges in their place of training.

CONCLUSION AND RECOMMENDATIONS

Teaching practice has been found to be very beneficial in the course of this research work because, it provides an opportunity for the trainee teachers to teach and increase their professional competence. The result showed that trainee teachers benefited greatly in participating in teaching practice because they were able to build proper confidence and competence in lesson preparation and developed skills and attitude of a teacher during the exercise. It was also revealed that teaching practice helps trainee teachers to learn how to keep records of assignment and also participating in school activities. Therefore we
recommended that the government should provide finance in form of stipend for trainee teachers and teachers engaged in teaching practice programme. A proper orientation for trainee teachers should be carried out using efficient means of communication like; seminars, workshops, conferences and discussion. Faculties of education and colleges should organize the exercise very well so as to give the best professional practice to the trainee teachers. Institutional resource centers of the various institutions should be adequately equipped and expanded enable every trainee teacher participates at least once or twice in micro-teaching exercise as a way of exposing them to practice teaching. The university should appeal to non-governmental organizations like the private sector, individuals and industries to assist in supplementing educational materials and learning resource that would prepare the students.

REFERENCES


Chickenking, (1996), principle of good teaching practice in
graduate education. Port Harcourt, Nigeria.


Obagah (2000), Student application of knowledge of the subject matter. Owerri: Nigeria.


THE CAUSES OF STUDENT FAILURE IN NATIONAL EXAMINATION AND THE ADOPTED SOLUTION IN NIGERIA

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ABSTRACT

In this paper, the study of students’ failure in National examination, the Cause of the failure and the proposed solution in Nigeria Educational system are welcome. This is to address the massive failure recorded in GCE, WASSCE, NECO, NABTEB, JAMB and other examination body in Nigeria from 2005 to 2011. The statistical data’s analyzed are samples Collected from different examination rating at different location on the factors that contribute to student’s poor performance in National examination in Nigeria. Also samples are collected from individual online, analyst rating, standard board rating and Local rating. The experimental procedure were analyzed and validated on Pentium IV, 2.5GB RAM, 40GB Hard disk and Microsoft Excel package.

KEYWORDS: Examination, Failure, Student, Performance, National, Massive, Public, Private, Poor.

1. INTRODUCTION

Examination may not naturally be the best in testing student IQ, Moral, Study performance but it is necessary and recommended for student Excellence, Promotion and Brain building after a long academic teching, lecture, tutoring and testing. The National examination board in Nigeria has come out to say that student performance in National examination is dropping tremendously when compared to other countries outside Nigeria. The performance of students in the last WASSCE conducted in 2011 produced massive failure when the result was released online, the same goes with GCE. The NECO board has come out to say that about 90% of the students failed the 2011 NECO result released and the percentage in 2010 was about 78% to 84% failure. The minister of education Prof. Rukayat Ruffy has lamented and blames the students, the teachers and the government as part of the causes to the massive failure in national examination conducted in Nigeria. There are massive brain drain and performance dropping in the results obtained from those exams conducted in Nigeria. The massive failure could be traced to so many factors which may not have been addressed between 2005 to 2011. There are literature updates to this effect:

Dike and Adebayo [1] established that one million students failed WAEC Exam. They reported that out of 1,540,250 candidates that wrote the May/June 2011 WASSCE conducted by WAEC, 31% made five credits including English language and Mathematics and 81,573 results were withheld while Awosiyan [2] discovered that 60% pass English, Math: As WAEC releases 2011 GCE results. He reported that about 226,658 candidates, representing 60.86% obtained credit and above in Mathematics in November/ December 2011 WAEC. 226,188, Representing 59.82%, obtained credit and above in English Language.

Agande [3] pioneered mass failure in WAEC, NECO: Reps to conduct public hearing. He reported that Abuja-worried by the poor performance of students in public examinations like WAEC and NECO, the house of representative on Tuesday resolved to conduct an investigation in order to unearth the course of the poor performance while Dr. Otunba [4] pioneered WAEC upgrade 2011/ 2012 SSCE Result. In the report, WAEC has out of consideration following the intervention by various governmental and non-
governmental bodies decided to upgrade the scores of candidates who participated in her 2011/2012 May/June WASSCE across West Africa. Furthermore, Ogundare [5] implemented WAEC records fair Nov/Dec WASSCE results 2011/2012. He reported that out of the total 404,863 candidates who sat for the exam, 176,484 candidates (representing 45.6%) obtained a minimum of credit pass in 5 subjects including English and Mathematics while Dike [6] implemented exam fraud: Education minister canvasses for 10 years ban on offending schools. He reported that the mass failure by students in WAEC AND NECO, the federal government had put in place measure to check the effect. A 10 year ban on any school found wanting during the conduct of public exam would serve as a deterrent to others.

2. PROBLEM

This section highlight the general problems that could lead to students’ massive failure recorded in National Examination conducted in Nigeria by WASSCE, GCE, NABTEB, NECO, NECO-GCE and other exams from the period of 2005 to 2011.

2.1. THE REGISTRATION OF UNDER AGE STUDENT IN EXAM

The National examinations conducted for senior school leavers are not meant for students below 18 years. About 48% of the students registered for WASSCE, GCE, NECO, NABTEB, and JAMB are mostly from 14 – 17 years. These under age students are not matured enough, both in stature, brain, and mode of assimilation, thinking, body build and in moral to face examinations such as WASSCE, NECO, GCE, NECO-GCE, NABTEB etc. As these students are registered, they produce poor performance in results. The registration of underage students can not help matter; they would rather cause massive failure in National examination. If nothing is being done on this matter, the failure recorded would persist.

2.2. TELEVISION MEDIA FACTOR

Broadcasting is a means that should educate, promote cultural status, increase moral standard, provide vital information to people and the surrounding. About 60% of the television programs on the average are occupied with unpleasant music, immoral home videos, politics, unhealthy cartoons and disasters around the world. Little or none is being telecast on student’s moral, socio-cultural programs, brain tiz programs, Educative teaching, and Learning and Educative drama in Nigeria. But unfortunately, what the media is concerned about is how to make money. Children and students learn fast on what they see, learn, perceive and hear from the television media. As these wrong telecasts are ongoing, the students would rather not read their book, carry out home work, study and provide solution to assignment in school. By so doing national examination is affected and the final results produced massive failure.

2.3. EXAMINATION MALPRACTICES

Examination malpractices carried out in schools, colleges, exam centers, and universities and around the nation are big factors to be worried about. About 51% of private and public schools and colleges in the country are involved in such act since 2005 to 2011. The more students don’t read and they fail, they look for other alternatives. They smuggle in prepared answers, text books, micro-chips and also pay invigilators, teachers, supervisor’s money in form of bribe. About 53% of the teachers, staff, students and principal of public and some private school and colleges are involved in such act. There has been a loud cry by the government, minister of education, teachers, missionaries and other bodies on this matter. As these malpractices are ongoing, students are less prepared and massive failure increases.

2.4. INTERNET FACTOR

Internet has advantage and disadvantage on students and youth who are writing and preparing for national examination. About 46% of our youth are aware of social network such as facebook, youtube, twitter, google etc. A countless number of them engage in such act after school, some bring in handset (phone) in class in order to brows internet when teacher is teaching. By so doing they lost concentration in class without achieving anything. Imagine a 12 years old student in possession of 600 dollar handset in class.
Automatically, this kid would be carried away by these web facilities as the teacher is teaching and at the end of the day; they perform poorly with massive failure. Internet is a factor that also encourages poor performance in GCE, NECO, JAMB, NABTEB, and NECO-GCE in Nigeria.

2.5. UNSOUND TEACHER AND TUTOR

“You can’t give what you don’t have”. This is a popular saying in schools, colleges and universities. An unsound teacher or tutor would produce unsound student and unsound results in national examination. The managements of public and private school preferred unsound teachers because their monetary demands are very low. Many of tutorial centers are not fit for teaching but still students patronize them before the period of examination. The same goes with colleges and schools, countless number of them have untrained teachers who can not prepare students for WASSCE, GCE, and NECO etc. As these unsound teachers, lectures and tutors are patronized; they help students to produce bad results in national exams. This is one factor that causes student failure in national examination.

2.6. GOVERNMENT UNDERFUNDING OF EDUCATION

It is the right of the government to fund education. But in Nigeria, we have less funding for education. Each year, about 11% or less is allocated to education in Nigeria. The government in Nigeria has failed in money allocation. The public school is much more affected by this under funding. Navigating through public schools, you would found out that there are no good chairs and desk, no marker board, no good toilet, No water supply, No enough teacher, no ventilated environment, Unstructured building, no electric supply, leaking roof and no welfare packages. When all these amenities are not available, automatically, it would affect students thinking ability, assimilation, and students’ preparation for exam. That is why students in public schools records low performance in national examinations each year.

2.7. UNEDUCATED PARENT PROBLEM

The level of brilliancy in a child is measured by the amount of proper education and training acquired. When a child is brilliant, about 60% of its brilliancy comes from his or her educated parent. When parents are not educated, the level of brilliancy in that child or student would drop, the thinking ability would reduce. The transfer of moral, education and brilliancy always flow from the parent to the child or student. Majority of uneducated parent do not send their children to school and if they do, they send them to bad schools where the student thinking ability, creativity and assimilation drops and automatically, produce bad results in national examinations. In most cases, uneducated parents produced uneducated student.

2.8. UNDERAGE STREET HAWKING AND BEGGING

The level of street begging and hawking in Nigeria, is as a result of poverty in the family. As we navigate across Nigerian roads and streets, we would notice underage children begging for arms. About 53% of them hawk to survive. Instead of the students to be in school, they rather go hawking and street begging. Majority of them are abused and could affect their performance in school. These students under this act perform badly in national examinations because their brain have been stigmatized and abused. Many of them end up as prostitute, taut, hoodlums and garage boys. At the cause of all these, they perform poorly in exam and they join the massive failure recorded in exam.

3. SOLUTION

This section highlight the proposed solutions that would solve these problems mentioned above. When these solutions are implemented, the massive failure recorded in national examination from GCE, NABTEB, WASSCE, NECO, JAMB etc would be eliminated.

3.1. ERADICATION OF EXAMINATION MALPRACTICES

The more examination malpractices are being patronized, the more our educational system depreciates. Examination malpractice is a disaster that has eaten up the mind of all the key players in education. The
eradication of these menaces from our system should be encouraged. The implementation of these listed points below would help eradicate examination malpractices in Nigeria.

I. The examiners in charge of setting questions should keep it secret the kind of questions sets for the exams.

II. Question papers printers or manufacturers should be thoroughly checked to prevent paper smuggling from the control room.

III. Only trust worthy staffs should be asked to handle question papers.

IV. Invigilators, teachers and supervisors should be sacked, if found guilty of examination malpractice.

V. Parent should not be allowed to pay bribe or settlement to principal, teachers and for question paper leaks.

VI. The government should introduce online national examination to all the exam bodies across the country.

3.2 ADOPTING FREE EDUCATION IN PUBLIC SCHOOLS

As we have it in other developed countries, free education systems should be introduced in all Nigeria public schools. The three tiers of governments should adopt free education, to reduce boarding on parents who can’t afford to educate their children. This free education should cut across the 9-3-4 educational systems practiced in Nigeria. The public school should be given education packages, free books, free lunch, free writing material and uniform. When education is free, students would have sound mind to read, study and prepare for examination. When free education is established in public school, be reassured that the massive failure recorded in GCE, WASSCE, NECO, JAMB etc would disappear for ever.

3.3. ERADICATION OF INFERIORITY COMPLEX BETWEEN PUBLIC AND PRIVATE SCHOOLS

The comparism between public and private school should be eradicated. About 45% of parents send their children and students to private school believing that private school students are better of than students in public schools. This should not be so. The students in public schools should not be underrated to their counterpart in private schools. The government, NGO’s, parents and private establishment should help to eradicate this inferiority complex existing between public and private schools. All hands should be on desk to promote the same unity, teaching, tutoring, mentoring and prevent comparism. The more we inform public students that they have equal chances with students in private school, the more they would want to prove better in performance, which would finally replicate better results in national examination in Nigeria.

3.4. ADOPTING SOCIAL-EDUCATIVE PROGRAMS ON THE MEDIA

The media plays a big role in educating students for better performance in examinations. Adopting social educative programs on the media such as television, radio, handset (phone) and in software packages etc would go along way in promoting sound mind and sound brain in students. Social-educative programs like quiz competition, interschool debate, science and engineering drama, educative cultural drama, epic, creative art, seminars, youth training program, children/student modeling, interschool beauty competition, examination ethics etc should be broadcast. When all these fact are adopted on the media, it would automatically lunch the students into performing excellently in national examination which would eliminate student failure in exam.

3.5. FUNDING OF EDUCATION BY GOVERNMENT

The best way to enjoy education is when education is funded by the government and private owners. It is the total duty of federal government and state government to fund education in Nigeria. In other developed countries, about 45% to 52% are allocated to education. There is a popular saying that “If you train a child, you built a nation”. So, funding a child education is building a nation. Basic and social amenities are needed in the smooth running of education, such as textbook, furniture’s, buildings, clean water, payment of school fees and exam fees for GCE, NECO, WASSCE etc and students welfare packages should be provided by the government through budgetary allocation of up to 40% and not the usual 11% or less
allocated in past years. As this high funding is implemented, it would eliminate the massive failure recorded in national examination.

3.6. THE USE OF NEW TEACHING AIDS AND METHODS

Students in a class, have different ways of assimilating lectures and teachings which have being taught. A teacher, lecturer or tutor should be able to use the newest teaching method that would aid adaptation in class and understanding of topics. Teaching aids like flow charts, flip charts, projection systems, marker board, puzzle box, diagrams, internet, conference video, sound systems (audio) etc should be encouraged. The teachers, lecturer and tutors should used all these aids to capture 92% of the students attention in class and afterward. The implementation of such teaching aids and methods would help the students to perform excellently in national examination (GCE, JAMB, WASSCE, NECO etc). With this implementation, massive failure would disappear and be eliminated.

3.7. TRAINING AND RE-TRAINING OF TEACHERS

“No one is an island of knowledge”. This is a popular saying in academic field. Every human brain gets to a certain state in life and start to depreciate gradually. A teacher, lecturer and tutor need to get more and more teaching method and technique through reliable training and re-training courses that would catapult the teachers both old and new into the training program. Innovation and Ideas would be encouraged and also teaching model and ethics would also be applied from the training courses. As these teachers acquired the rightful training and re-training ideas and methods, they would automatically impact the students with the right knowledge that would see them through in national exams (GCE, WASSCE, NECO, JAMB etc) conducted nation wide.

3.8. ADOPTING STUDENTS MENTOR AND WELFARE PACKAGE

Parents play a big role in training their students for better performance. “The way you lay your bed is the way you will lay on it”. Parents should mentor their ward or students in school and also provide welfare package for their upkeep. The parents should provide enough packages that would make the student balance well in class and not to feel hungry. “A hungry man is an angry man”, a popular saying in English language. When these are implemented, the students would remain focus and be corrected when ever they are off track by their older students in higher class, who also serve as mentor to them and finally, it would reduce poor performance obtained in national examination in Nigeria.

4. RESULT AND DISCUSSION

This section highlights the results obtained from the analysis conducted on the percentage level of the causes of student’s failure in national examination such as GCE, WASCE, JAMB, NABTEB, NECO etc from 2005 to 2011 in Nigeria.

Table 1. The validation table for the percentage level of the causes of student failure in national examination in Nigeria.

<table>
<thead>
<tr>
<th>S/N</th>
<th>YEAR</th>
<th>UT (%)</th>
<th>FG (%)</th>
<th>EM (%)</th>
<th>IF (%)</th>
<th>UP (%)</th>
<th>TM (%)</th>
<th>US (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2005</td>
<td>65</td>
<td>82</td>
<td>68</td>
<td>40</td>
<td>63</td>
<td>42</td>
<td>32</td>
</tr>
<tr>
<td>2</td>
<td>2006</td>
<td>63</td>
<td>80</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2007</td>
<td>61</td>
<td>75</td>
<td>63</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2008</td>
<td>57</td>
<td>70</td>
<td>58</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2009</td>
<td>53</td>
<td>67</td>
<td>56</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2010</td>
<td>50</td>
<td>61</td>
<td>54</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>2011</td>
<td>48</td>
<td>55</td>
<td>51</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 1. Represents the percentage validation table for the causes of student’s failure in national examination. In the percentage level of unsound teachers, there was a rapid decrease from 65% in 2005 to 48% in 2011. In the percentage level of under funding of education by the government, in 2005; it was 82%, in 2008; we have 70% and then later dropped to 55% in 2011.

Further more, in the percentage level of examination malpractices; there was 2% increase difference from 2005 to 2006 and 63% in 2007 then dropped to 51% in 2011 meanwhile, the percentage level of internet factor was increased from 40% in 2005, 56% in 2009 and then 63% in 2011.

In the percentage level of television media factor; there was a rapid increase from 42% in 2005 to 65% in 2011 while in the percentage level of underage students registered in national examination; there was increased from 32% in 2005, 40% in 2007 and then 60% in 2011.

Figure 1. The validation pie chart of the percentage level of the causes of student’s failure in GCE, WAASCE, NABTEB, JAMB, NECO etc.
Figure 1. Represents the validation pie chart on the percentage causes of student’s failure in national examination. In the chart, the average percentage of the level of unsound teacher was 17%, 21% on average represents under funding of education by government, 17% represents examination malpractices on the average, 10% represents internet factor on the average, 16% represents uneducated parents on the average, 11% represents television media factor on the average score and finally, 8% represent underage students registered in national examination.

Figure 2. Represents the validation line graph on the percentage causes of student’s failure in national examination. In the chart, the blue line, the brown line, the red line, the green line, the light blue line, the pink line and the light brown all represents the general performance level at different rating below 100% which rate the causes of student’s failure in national examination conducted in Nigeria.

5. CONCLUSION

Within the context of this paper, we have analyzed and validated the results obtained from samples collected from different quarters. The results have shown to be efficient, authentic and effective. The proffered solution was robust and when implemented would eliminate and eradicate the causes of student’s failure in national examination such as GCE, WAASCE, NECO, JAMB, NABTEB etc across the federation. The future paper expected includes; the re-structuring of post UTME systems in Nigerian university and the effect of educational systems from 6-3-3-4 to 9-3-4 systems in Nigeria.

REFERENCES


THE EFFECTS OF GENRE-BASED INSTRUCTION ON ESP LEARNER’ READING COMPREHENSION
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Abstract
Despite the important role the genre-based instruction as a novice approach to teaching on tertiary level, little research has been done on its application in ESP learners’ reading comprehension. Furthermore, the actual implementation of this approach and its outcomes on enhancing learners’ reading comprehension have not yet been fully explored, this study aimed to investigate the effects of genre-based instruction on ESP learners’ reading comprehension. The participants of the study included 116 junior and senior B.S students (both males and females) at Islamic Azad University of Kordestan, majoring in biology. Participants were randomly assigned into 2 groups of control and experimental. The instructors taught the experimental group (genre-group) based on genre and the control group (non-genre-group) based on the traditional method of teaching ESP, prevailing in Iranian universities. To meet the aim of the study, the instructors administered one 30-item proficiency test of English and two 30-item standard tests of English reading comprehension to the participants. The results of the reading comprehension test, analyzed through t-test and independent samples test suggested teaching based on genre had a significant role in enhancing ESP learners’ reading comprehension ability and the descriptive and inferential statistics showed learners improved significantly in reading comprehension compared with that of non-genre-group.

Keywords: Genre-Based Instruction, Genre Analysis, Genre move, ESP, Reading Comprehension.

1. INTRODUCTION
The term genre was first introduced in the area of English as Specific Purpose (ESP) and has been defined and discussed from different viewpoints. Freedman and Medway (1994) has defined ‘genre’ as written texts that are primarily literate, entirely defined by textual regularities, in form and content, fixed and immutable, and classified into neat mutually exclusive categories and subcategories. Chandler (1997) states the term genre is generally used in rhetoric, literary theory, media theory, and more recently linguistics, to refer a distinctive type of text. According to Richards and Schmidt (2002), “a genre can be defined as: a type of discourse that occurs in a particular setting, that has distinctive and recognizable patterns and norms of organization and structure, and that has particular and distinctive communicative functions” (p. 224).

Since the publication of Swales’ “Genre Analysis” in 1990, more than two decades ago an increasing attention has been given to the concept of genre and its application in language teaching and learning. This has led to two prominent movements in the teaching and learning of languages, namely, English for Specific Purposes (ESP) and Systemic Functional Linguistics (SFL). Previous studies carried out in ESP domain have generally reported positive effects of genre-based teaching for non-native
English speakers (Hyon, 2001); however, some have reported limitations. Johns (1997), for instance, puts forward the advantages of using what she calls a “socioliterate approach” to teaching reading and writing in developmental university composition for language minority students. She notes that one writing task using this approach, a letter to the university president, was particularly successful.

In the area of genre and second language reading instruction, schema research has demonstrated positive outcomes of teaching genre structure on reading recall and/or comprehension (Carrell, 1985). Furthermore, Hyon (2001) found that students who were interviewed immediately after an EAP genre-based reading course reported paying greater attention to rhetorical features in texts than before the course, as well as improved reading confidence and speed.

Flowerdew (2002) states there are two major approaches to genre theory: a text-based approach and a situation-oriented approach. In the case of text-based approach there is a focus on analyzing and describing textual patterns of different genres. In a situation-oriented approach of genre theory, according to Chen (2008), the focus is on the dynamic and evolving nature of genre and seeks a description of the situational contexts in which writing takes place. In another genre categorization according to Derewianka (1990) there are six main genres concerning their primary social purposes: (1) Narratives which tell a story and usually aim to entertain; (2) Recount which tell what happened; (3) Information Reports which provide factual information; (4) Instruction which tell the listeners or readers what to do; (5) Explanation which explain why or how something happens; (6) Expository texts which present or argue a viewpoint. Also various texts, according to Cometorich (2009), are classified into different genres based on the following characteristics:

1) The purpose of communication or social function which refers to the reasons why we speak or write or create the text,

2) The organization structure of the text or generic structure which implies the text organization or text arrangement, and

3) Language features or lexical grammar which are such things as the grammar, vocabulary and connectors that we use.

According to Torok and Waugh (2006) “Freedman and Medway (1994), two well-known American scholars in the New Rhetoric school, give their view that context determines the shape of genre: situation, motive, substance, and form play a part in defining genre, but the whole is greater than and different from the sum of these parts” (p.520).

As a new approach in language teaching, there are still some vague issues in genre-based language teaching concerning learners’ reading skill. For instance, it is not clearly realized to what extent the covered genres in class affect learners’ comprehension of the reading materials; therefore, it is desirable to assess learners’ comprehension of texts through using pretest and posttest to find out whether they have made any progress. This study attempts to investigate the effects of GBI on ESP learners’ reading comprehension.

2. GENRE-BASED INSTRUCTION(GBI)

Although there has been considerable research on Genre-Based Instruction (GBI) since 1985, little has dealt with the effects of GBI on learners’ reading comprehension. When encountering a new academic genre, a student is faced with the task of learning how to read the texts produced within it. Reading comprehension can be viewed as a component to gain
a fuller awareness of the different genres, but it should also be noted that sometimes it is an end in itself. Most researches on GBI have been carried out on writing skill and the description of the textual forms and linguistic features of specific genres. However, the current study intends to show it is useful to help learners become aware of the textual regularities of a genre, instructors need to go beyond just analyzing the textual features of the text for learners and they have to assess their learners’ comprehension of the texts. GBI has been also referred to as teaching language based on results of genre analysis. According to Swales (as cited in Osman, 2004) genre analysis is the study of how language is used within a particular setting and according to Bhatia (as cited in Osman, 2004) it is concerned with the form of language use in relation to meaning.

Based on the model by Cope and Kalantzis (as cited in Osman, 2004), there are four stages in GBI including modeling, guiding, practising and finally independently writing the genre.

There are three main approaches to genre theory: 1) The Australian Genre Approach, 2) The New Rhetoric Studies, and 3) English for Specific Purposes. Each of these approaches has its specific view regarding the way in which genres should be taught. For instance, according to Master (2005) the American New Rhetoric position is that genre specifications should not be taught explicitly. The Australian School of Systemic Functional Linguistics, on the other hand, believes that genre specifications should be explicitly taught. Master (2005), further adds ESP practitioners are inclined to use the Australian notion of genre to all non-English-speaking students, including those in academic and professional contexts, leading to accusations in some quarters that the teaching of genre specifications suppresses creativity, and raising the issue of whether genre teaching is ultimately a scaffold or a straitjacket.

Genre-based instruction mostly makes use of the theory of Systemic Functional Linguistics (SFL). Michael Halliday (1985), the SF linguist, proposed the relationship between the use of language and the social environment. He claimed a systematic relationship between social context and text. He showed the internal organization of language corresponds to the external context of situation.

According to Nunan (1999) GBI approach has been confused with its more popular counterparts the “product approach” and the “process approach”. The former involves imitating, copying, transforming models provided by the teacher and emphasizing the error free final product, and the latter focuses on the process of producing a piece of writing from the prewriting stage to the revising state to the final writing regardless of the time it takes. Genre-based instruction, according to Badger and White (2000), is actually an integration of the product approach and the process approach which results in a process-genre approach.

Learning in genre-based instruction is basically about working with the significant parts of different text types. According to Miller (1984) learning a genre is not just learning linguistic forms and conventions, but also it is learning how to participate in the actions of a community. This type of instruction is based on this concept that genres are specific to particular cultures and remind the instructors that their students may not share this knowledge with them and making them go beyond syntactic structures, vocabulary, and composing to incorporate into their teaching the ways language is used in specific contexts.

According to Tuan (2011) in this approach, any student who wants to be successful in communicating in a particular English-language discourse community needs to be able to produce texts which fulfill the expectations of their readers in regards to grammar, organization, and content.
3. METHODOLOGY

3.1 Participants

This study was carried out on tertiary level students studying for a B.S. in biology in Sanandaj Azad University. The research population included all the junior and senior students studying for a B.S. degree in biology at the time of the study. The participants were selected among 116 male and female junior and senior students. Through using a proficiency test, 60 homogeneous students were chosen in terms of their reading comprehension ability. These 60 students were randomly assigned to a control group of 30, and an experimental group of 30.

3.2 Instrumentation

3.2.1 Proficiency Test

In this study, to have a homogeneous group, the instructors administered a proficiency test of English developed by Cambridge Michigan ECCE. As the purpose was to match the participants in terms of their reading ability, just the reading section of the test was included. The test entailed three reading passages. It took about 35 minutes. The first passage, followed by 6 multiple-choice items; the second, 11 multiple-choice items, and the last had 13 items. The proficiency test was administered to choose the more homogeneous students out of the population and to put them randomly into experimental and control groups (See Appendix A).

3.2.2 Pre-test and Post-test

The instructors administered two standard tests of English reading comprehension adopted from Preliminary English Tests (PET) developed by Cambridge University. One of them was used as a pre-test and the other as a post-test. Only the reading section of these tests were used because the aim was to test the participants in terms of their reading ability.

Both pre-test and post-test were divided into two sections: 1) General English and, 2) Specific English. The general English section included a reading comprehension passage followed by 5 multiple-choice items and 1 cloze-test with 10 multiple-choice items. The specific section contained two reading comprehension passages each followed by 5 multiple-choice items (See Appendices B & C).

3.3 Procedure

A pilot study aimed to clarify the procedures implemented for the study was conducted to determine the reliability of the instruments developed for the study. Fifteen learners, having the same level of proficiency and randomly selected from the target population of the study, were recruited to go through the same procedures of data collection for the present study. Clear understanding of the purposes of the study among the participants was observed and the amount of the allotted time for each test proved to be sufficient.

The study was conducted at Biology Faculty of Sanandaj Azad University. The participants formed two reading classes that were held in two 90-minute sessions a week during one month. The researchers taught the control group through the traditional method which is prevalent in this university just like other universities in Iran, and the researchers taught the experimental group through genre-based instruction. A strong effort was made to treat both the experimental group and the control group the same, except for the difference in teaching method.
All the data were collected within 2 months. Although two different methods of instruction were practiced, both groups were taught the same book, namely, English for the students of Biology 3, published by SAMT publications and written by Dr. Hossein Farhady.

As already mentioned, the aim of the study was to examine how genre-based instruction improves ESP learners’ reading comprehension. Therefore, genre-specific strategies were taught to the students. The two teaching procedures utilized are explained below:

### 3.3.1. Traditional Method

The traditional method taught by the researchers is primarily based on an analytic approach, which begins with words’ definitions and translations then analyzes the words into different parts of speech to teach them. By the use of words, the students can discern the relationship between reading and their own language well. The ordinary process of teaching a lesson in such classes is that the instructor usually starts the lesson by explaining the meaning of the new words or by eliciting the meaning of the new words in Persian. Then, s/he asks a student to read some parts of the reading and helps them to translate those parts into Persian. After finishing the reading, the instructor explains the grammatical structures of the reading. Finally, students have to do the exercises after each reading and read their answers to the class accompanied by translating every sentence into Persian. After that, the instructor corrects students if they are wrong. Sometimes, the students do the exercises as homework for the next session.

### 3.3.2. Genre-based Method

Two common types of texts, which are used more in academic settings are expository and narrative texts. According to Weaver and Kintsch (as cited in Haria, 2010), generally, narrative texts are written to entertain, but expository texts are written to communicate new information or knowledge. In other words, expository genres are designed to inform, report, and describe. They have a variety of structures and textual elements. They also make use of charts, maps, graphs, diagrams, photos, reading guides, etc.

As the plethora of texts in ESP, especially in basic sciences such as biology fall in the category of expository genre, so the five common text structures or organizational structures of expository genre was explicitly explained to the learners. First of all, the instructors explained the expository genre to learners and introduced them its five text structures such as descriptive, sequence, cause/effect, compare/contrast and problem/solution. Second, the instructors explained each of these patterns of expository genre to learners in terms of their description, cue words (signal words), and graphic organizer. The explanations presented to the learners are outlined in the following table:

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Description</th>
<th>Cue Words (signal words)</th>
<th>Graphic Organizer</th>
</tr>
</thead>
</table>

Table 1 Five text structures or organizational structures of expository genre
| Description | The instructor describes a topic by listing characteristics, features, attributes, and examples | - for example  
- characteristics  
- for instance  
- such as  
- is like  
- including  
- to illustrate |
| Sequence | The author lists items or events in numerical or chronological sequence, either explicit or implied | - first  
- second  
- third  
- later  
- next  
- before  
- then  
- finally  
- after  
- when  
- since  
- now  
- previously  
- actual use of dates |
| Comparison | Information is presented by detailing how two or more events, concepts, theories, or things are alike and/or different | - however  
- nevertheless  
- on the other hand  
- but  
- similarly  
- although  
- also  
- in contrast  
- different  
- alike  
- same as  
- either/or  
- in the same way  
- just like  
- just as  
- likewise  
- in comparison  
- where as  
- yet |
| Cause and Effect | The author presents ideas, events in time, or facts as causes and the resulting effect(s) or facts that happen as a result of an event. | - if /then  
- reasons why  
- as a result  
- therefore  
- because  
- consequently  
- since  
- for  
- so that  
- hence  
- due to  
- thus  
- this led to |

Following these explanations, one sample of each of these genres was given to the learners to work on in pairs or small groups. Learners’ tasks were to identify each genre and analyze it in terms of its cue words and draw its graphic organizer.

In addition, KWL comprehension technique which is used for enhancing reading comprehension of SLLs, developed by Donna Ogle in 1986, was taught and explained to learners. This technique aims to enable teachers to access the prior knowledge of students and to help students develop their own purposes for reading expository text. In acronym
KWL, “K” stands for helping students recall what they “Know” about the subject, “W” stands for helping students determine what they “Want” to learn, and “L” stands for helping students identify what they “Learn” as they read. (See Appendix D).

3.4. Design

In the present study which has an experimental method, both groups of control and experimental took two standard reading comprehension tests one as a pre-test and the other as a post-test. The control group received the instruction through a traditional method and the experimental group received a genre-based instruction. The conducted treatments in this study are summarized in table 3.2:

<table>
<thead>
<tr>
<th>Treatment 1</th>
<th>Group 1 (Control)</th>
<th>Pre-test</th>
<th>- GBI</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment 2</td>
<td>Group 2 (Experimental)</td>
<td>Pre-test</td>
<td>+ GBI</td>
<td>Post-test</td>
</tr>
</tbody>
</table>

Note on Table 3.2
1) - GBI stands for teaching based on no Genre-Based Instruction or Traditional Method.
2) + GBI stands for teaching based on Genre-Based Instruction

3.5. Data Analysis

Following the administration of the pre-test and post-test, in order to test the research hypothesis and answer the research question, two independent sample tests for the pre-test and post-test were run to investigate the relationships between genre-based instruction as an independent variable and enhancing ESP learners’ reading comprehension as a dependent variable.

In order to make sure that the participants were at the same level in terms of general language proficiency, the reading comprehension section of a version Cambridge Michigan ECCE was administered to all the participants (n=116). The proficiency test consisted of thirty items each was given one point and no negative scores was considered for wrong answers. Table 3 shows the results.

Table 3 The descriptive statistics of the Cambridge Michigan ECCE Proficiency Test

<table>
<thead>
<tr>
<th>Total N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Valid N</th>
</tr>
</thead>
<tbody>
<tr>
<td>116</td>
<td>20</td>
<td>29</td>
<td>24.3000</td>
<td>2.70780</td>
<td>60</td>
</tr>
</tbody>
</table>

Table 4 The statistics for the central tendencies of pre-test and post-test

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>N Variables</td>
<td>60</td>
<td>60</td>
</tr>
</tbody>
</table>
In Table 4, the statistics of pre-test and post-test are described in terms of the number of variables and missing which are 60 and 0 respectively. The mean for the pre-test is 17.93 and for the post-test is 19.53. The median for the pre-test and post-test are 17.50 and 19.00. The standard deviation of pre-test is 4.86 and that of post-test is 4.28. The pre-test variance and range are 23.65 and 18.00 and for the post-test these numbers are 18.38 and 18.00. The minimum and maximum of numbers in pre- and post-test are 10.00 and 28.00 respectively.

### T-Test

In Table 5, the control and experimental groups are compared in terms of their mean, which in control group is 17.83 while in experimental group is 18.033; their standard deviation, which is 4.42 in control group and 5.34 for the experimental group, and the standard error mean of .80 for the control group and .97 for the other.

Based on the t-test for the independent samples test the researcher hypothesized that the language proficiency level of the control and experimental groups in pre-test scores seem to be different.

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test scores</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Group</td>
<td>30</td>
<td>17.8333</td>
<td>4.42628</td>
<td>.80812</td>
</tr>
<tr>
<td>Experimental Group</td>
<td>30</td>
<td>18.0333</td>
<td>5.34005</td>
<td>.97495</td>
</tr>
</tbody>
</table>

In Table 6, the independent samples test for pre-test scores are shown:

<table>
<thead>
<tr>
<th>Groups</th>
<th>Levine's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Pre-test scores</td>
<td>1.530</td>
<td>.221</td>
</tr>
<tr>
<td></td>
<td>Equal variances assumed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td></td>
</tr>
</tbody>
</table>
According to the Table 6, which summarizes the t-test statistics in pre-test, the significance is .22 and it is more than the .05 (p>.05), therefore the two variances are equal. Also based on the amount of Sig. in t-test Table (Table 6) which is .87 and it is more than .05 (p>.05), the assumed hypothesis, which states that the language proficiency level of the control and experimental groups in pre-test scores seem to be different, is rejected. The results of Levine’s test shows that there are no meaningful differences between the pre-test scores of both control and experimental groups and the two groups are nearly equal regarding their language proficiency level in pre-test scores. The rate of significant difference in control and experimental groups is only .20 which is regarded as a trivial difference and has no meaningful difference.

**T-Test**

Table 7 the group statistics for the post-test

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-test scores</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Group</td>
<td>30</td>
<td>18.233</td>
<td>4.20741</td>
<td>.76816</td>
</tr>
<tr>
<td>Experimental Group</td>
<td>30</td>
<td>20.833</td>
<td>4.02649</td>
<td>.73513</td>
</tr>
</tbody>
</table>

In Table 7, the control and experimental groups are compared in terms of their mean, which in control group is 18.23 while in experimental group is 20.83; their standard deviation, which is 4.20 in control group and 4.02 for the experimental group, and the standard error mean of .76 for the control group and .73 for the other. Based on the t-test for the independent samples test hypothesized that regarding the treatment or the two various teaching methods, the obtained scores of the post-test from the control and experimental groups seem to be different.
According to the Table 8 which summarizes the t-test statistics in post-test the significance in Levine's Table is .67 and it is more than .05 (p>.05), so the variances are equal. Based on the amount of significance in the t-test table which is .01 and it is less than the meaningful level of .05 (p<.05), the assumed hypothesis, which states regarding the treatment or teaching based on genre, the obtained scores of the post-test from the control and experimental groups seem to be different, is confirmed. In other words, it can be deducted the teaching method based on genre enhances ESP learners’ reading comprehension since there is a meaningful difference between the obtained scores of control and experimental groups in post-test. The experimental group which has been taught through the genre-based instruction has gained a higher mean in post-test than the control group, which has been taught through a traditional method.

4.DISCUSSION
The present study attempted to investigate the effects of genre-based instruction on ESP learners’ reading comprehension. The finding of the present study supports some previous studies carried out in ESP domain and reported positive effects of genre-based teaching for
non-native English speakers (Hyon, 2001; Henry & Roseberry, 1998). John (as cited in Hyland, 2007), for instance, puts forward the advantages of using what she calls a “socioliterate approach” to teaching reading and writing in developmental university composition for language minority students. She notes that one writing task using this approach, a letter to the university president, was particularly successful.

Furthermore, Hyon (2001) found that students interviewed right after an EAP genre-based reading course reported paying more attention to rhetorical features in texts than before the course, as well as improved reading confidence and speed, this in turn, supports the finding of this study to some extent.

Contrary to the findings of present study, some other studies in the literature report different results regarding the explicit teaching of genre features. For instance, according to Hyland 2004 (as cited in Ribeiro, 2008) genre pedagogy, is criticized for being static and decontextualized based on the claim that the teacher is not able to reproduce in class the culture and contexts by which texts are shaped.

5. CONCLUSION

This study aimed to answer the question of the effects of genre-based instruction on Iranian ESP learners’ reading comprehension.

With respect to the research question, the effects of genre-based instruction on ESP learners’ reading comprehension was checked and the analysis of the related data resulted in significant findings and indicated there was a positive relationship between teaching based on genre and enhancing learners’ reading comprehension.

Based on the results of the scores of control and experimental groups in pre-test reading comprehension it was revealed that there is no significant difference in the learners’ reading comprehension. After the treatment both groups were taught based on two different methods of teaching, the results of descriptive statistics showed the experimental group performed better in post-test reading comprehension.

Therefore, it can be concluded that teaching ESP learners based on the principles of genre-based instruction has a significant effect on enhancing learners’ reading comprehension.

5.1. Pedagogical implications

The findings of this study may offer some pedagogical implications for instructors, material developers and syllabus designers.

One of the prominent implications for instructors is that they can teach related genres in their classes through teaching them explicitly and using pertinent techniques such as KWL to enhance ESP learners’ reading comprehension instead of resorting to just translating from English to Persian. The obtained results from the present study also can help instructors to teach the reading comprehension-based textbooks designed for Iranian ESP learners through a more purposeful and contextualized setting along with more interaction with the instructor and the other learners.

The important implication for material developers and syllabus designers will be that the rigid format of current ESP textbooks which are dictated by the official center for materials in humanities, say, SAMT should be reviewed to provide the learners with texts not just being replete with technical terms without providing learners with opportunities to use these
terms in realistic tasks and situations. Material developers should equip textbooks with more pictures, diagrams, and graphs which are to a great deal neglected in SAMT books.

Furthermore, genre-based approach can play an important role in designing syllabuses and developing materials based on the specific texts which learners are faced with more, in real situations and in higher levels. Material developers and syllabus designers should improve the quality of materials and textbooks with a close consideration of the characteristics of different genres regarding the learners’ field of study.

5.2. Suggestions for further research

This study was an attempt to investigate the effects of genre-based instruction on Iranian ESP learners’ reading comprehension. Regarding the findings of this study, the following areas are worthy of further investigation and are suggested as the starting point for further studies for those who are interested in conducting research in the area of genre-based instruction:

1. This study was carried out with both male and female participants; other studies can be conducted with male and female participants in separate groups to make the difference between the two genders clear.

2. This study was carried out with senior and junior university students at intermediate level of proficiency. It is suggested that other researchers investigate the effects of genre-based instruction on ESP learners’ reading comprehension at different proficiency levels.

3. In this study, among various genres, the expository genre, which is used more in ESP textbooks, was explained and taught to the learners. It is suggested that other types of genres and their effect on reading comprehension be investigated for further research.

4. The age of participants in this research was limited to the third and fourth-year university students. It is suggested to carry out the same study on students at different ages.

REFERENCES


Haria, D. P. (2010). The Effects of Genre-Specific

APPENDICES

Appendix A: A sample of Cambridge Michigan ECCE Proficiency Test

Name: ........................, Major: ........................
Date: ........................, Time: 35 Min

Cambridge Michigan ECCE (Reading) Difficulty level: B2 / advanced

Part (1) Read the text and then answer questions 1-6

Everybody loves to play board games sometimes, but it is surprising to know how long this pastime has been in existence. Some of the earliest board games are over five thousand years old. The oldest is probably Senet, an Ancient Egyptian game which has been found in burials from before 3000BC. The game involves an element of luck, and so it was thought by the Ancient Egyptians that those who won the game were protected by the Gods. For this reason, games of Senet were often buried alongside the body in the grave, to be used on the dangerous journey to the afterlife. The game can also be seen on a number of paintings in tombs. The actual rules are unknown, although some historians have proposed rules which are used in the Senet sets available today.
The Royal Game of Ur, also known as the Game of Twenty Squares, is another ancient game which dates back to the First Dynasty of Ur, in 2600 BC Mesopotamia. It was played with two sets of seven markers, one black and one white, and three four-sided dice. Although the ancient rules are unknown, a stone tablet has been found which depicts a reliable record of how the game was played in 177-176 BC.

Both Senet and The Royal Game of Ur are probably predecessors to the game backgammon, which itself has a long history. The game of Nard, which existed in Iran around 3000BC, used two sets of fifteen counters, four dice and same board as the one used in backgammon today, although the initial starting positions and rules are different. Similar games were played in Ancient Rome and India.

**Part (2)** You and your family are interested in animals and wildlife. You are visiting a new area and are looking for things to do. Read the questions at the bottom of the page, and then look at the 5 advertisements for the answers.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cranesbridge House Safari Park and Attractions</strong>&lt;br&gt;as featured on Zoology Planet’s African Cats’ series&lt;br&gt;House and Gardens: $13.00 adults, $6.00 children&lt;br&gt;Gardens only: $6.00 adults, $3.00 children&lt;br&gt;House, Gardens and Safari: $20.00 adults, $12.00 children&lt;br&gt;Maze, Pirate Ship, Park Train, Butterfly House and Steamboat extra&lt;br&gt;Special All-inclusive Day Ticket Available&lt;br&gt;House, garden and attractions open all year round, Tues – Sun, closed Mondays. 10.00-5.00&lt;br&gt;Safari open March-October&lt;br&gt;Call 05778 0945783 to find out about:&lt;br&gt;• School visits&lt;br&gt;• Up-coming events</td>
<td><strong>Kingsmarsh Wetlands</strong>&lt;br&gt;A 300 hectare conservation area.&lt;br&gt;An astounding array of wildlife including swans, flamingos and ducks.&lt;br&gt;<strong>Feed the rarest goose in the world!</strong>&lt;br&gt;<strong>Get muddy in the Bog Zone!</strong>&lt;br&gt;<strong>View our feathered friends in our 20 hides!</strong>&lt;br&gt;<strong>Take a guided walk with our experts</strong>&lt;br&gt;<strong>Try a Land Rover safari or Canoe expedition!</strong>*&lt;br&gt;$10 adults and $5 children&lt;br&gt;Or why not...&lt;br&gt;Become a member and enjoy unlimited days out and wetland centres throughout the state, and receive our bi-monthly Waterworld magazine?&lt;br&gt;Open every day except national holidays&lt;br&gt;*additional charges apply</td>
</tr>
</tbody>
</table>
Kirby Wildlife Park
Set in 200 acres of parks and gardens.
Home to a huge collection of mammals, reptiles and birds
Visit our website to:
-watch our live webcams
-adopt an animal
-book an educational visit
Adults $12.00, children and senior citizens $8.00
* charges apply
Discounts available for groups of 10 people and over.

Why not get involved?
- Experience work as an animal keeper for a day (ages 18 and over)*
- Get hands-on experience with the animals (ages 6 and over)
(choose from: penguins, lemurs, giant tortoises or tapirs)*

Summer opening:
Every day except Wednesdays
(March-September)
Winter opening:
Thursdays to Sundays (October - February)
10.00 – 5.00pm

Elvenwood Country Park
A 500 acre Woodland Conservation area
Feed the farm animals in the Petting Zoo
Adventure Playground (under 16s only)
Caravan and Campsite
Cafeteria with Local Produce
Miniature woodland railway

Seasonal Events
Meet Santa! - Winter Craft Market! - Ice Skating!
Ask us about our Children’s Party package
Entry: Adults $6, Children $3. Attractions extra.
Open Wed - Sun, 9am-5pm excluding national holidays.

Lulworth Lakes
A beautiful and tranquil nature reserve situated on the River Wylde.

Comprehensive visitors centre with information of the insects and flowers of the area.

Bird Hides

Toilet facilities available.
Open all year round, free of charge.
Coarse Fishing available. Please call 0478 488377 for permit prices.

Part (3) Read the text and then answer the questions underneath.

<table>
<thead>
<tr>
<th>Kirby Wildlife Park - Keeper Experience Information Pack</th>
</tr>
</thead>
<tbody>
<tr>
<td>Due to the large number of inquiries sent to the park from young people interested in working with animals, Kirby Wildlife Park has set up the unique ‘Keeper Experience’ package. This unique experience is only available at a handful</td>
</tr>
<tr>
<td>A typical day</td>
</tr>
<tr>
<td>9.15 Arrival</td>
</tr>
<tr>
<td>9.30 Health and safety briefing</td>
</tr>
<tr>
<td>10.00 Apes and Monkeys</td>
</tr>
<tr>
<td>While cleaning out the enclosure you will find out about</td>
</tr>
</tbody>
</table>
of zoos and wildlife parks in the country. The fantastic experience is available to anyone over the age of 18 who is reasonably fit. We regret that for health and safety reasons, participants who are pregnant, in a wheelchair or suffering from immune suppressant illnesses cannot take part. It is also essential that all participants have a current tetanus vaccination. The participant will work with one of our full-time keepers on a one-to-one basis, not as part of a large group. This enables you to get a real hands-on experience, ask as many questions as you like, and get a day that is really tailored to your interests. Activities will include feeding, mucking out and preparing food. More importantly, you will learn about the different techniques used at our site to ensure the happiness and well-being of our animals. Participants will receive a complimentary entrance ticket for one family or friend to enter the park. Other guests accompanying the participant will need to purchase their own tickets at the normal price. Guests will have access to the park at the usual park opening time of 10am and will not be able to take part in any Keeper Experience activities. Volunteers will receive a gift pack and certificate as a souvenir of the day. A packed lunch is also provided. Volunteers also receive a 20% discount from our animal adoption scheme and any purchases made at the gift shop and on-site restaurant on the same day. **What to bring** Since most of the work you will do will be outside, make sure you bring warm clothes, and bring waterproofs in case of rainy weather. Since many of the animal pens are muddy and therefore slippery, it’s important to wear sturdy boots with good grips on the soles. Other protective clothing will be provided on the day. **Booking and cancellation** The Keeper Experience is available on Mondays, Wednesdays and Fridays throughout the year, except during school vacations at Easter, Christmas and summer, and must be booked at least two weeks in advance. Full payment must be made at the time of booking.
Appendix B: Pre-test

Name: .............................. Major: ..............................
Date: .............................. Time: 35 Min

Part A. General English

You are going to read a magazine article about an author.

For questions 1-8, choose the correct answer A, B, C, D. Mark your answers on the answer sheet. (There is only one possible answer.)

'A good book for children should simply be a good book in its own right.' These are the words of Mollie Hunter, a well-known author of books for youngsters. Born and bred near Edinburgh, Mollie has devoted her talents to writing primarily for young people. She strongly believes that there is always and should always be a wider audience for any good book whatever its main market. In Mollie's opinion it is essential to make full use of language and she enjoys telling a story, which is what every writer should be doing. 'If you aren't telling a story, you're a very dead writer indeed,' she says.

With the main job of a writer being to entertain, Mollie is really an entertainer. 'I have this great love of not only the meaning of language but of the music of language,' she says. This love goes back to early childhood. 'I have told stories all my life. I had a school teacher who used to ask us what we would like to be when we grew up and, because my family always had dogs, and I was very good at controlling them, I said I wanted to work with dogs, and the teacher always said "Nonsense, Mollie dear, you will be a writer." So finally I thought that this woman must have something, since she was such a good teacher - and I decided when I was nine that I would be a writer.'

This childhood plan is described in her novel, A Sound of Chariots, which although is written in the third person is clearly autobiographical and gives a picture both of Mollie's motivation and her struggle towards its achievement.

Thoughts of her childhood brought thoughts of the time when her home was still a village with buttercup meadows and strawberry fields - sadly now covered with modern houses. 'I was once taken back to see it and I felt that somebody have lain dirty hands all over my childhood. I'll never go back,' she said. 'Never.'

To this day, Mollie has a lively friendship to children, which is reflected in the love she has for her writing. 'When we have visitors with children the adults always say, "If you go to visit Mollie, she'll spend more time for the children." They don’t understand that children are much more interesting friends. I have heard all that the adults have to say before. The children have something new.'

Read the text below and choose the correct word for each space. For each question, mark the correct letter A, B, C or D on your answer sheet. (There is only one possible answer.)

Deep Sleep

Deep sleep is important for everyone. The actual (6)........ of sleep you need depends (7)......your age. A young child (8)........ to sleep ten to twelve hours, and a teenager about nine hours. Adults differ a lot in their sleeping (9)......... For most of them, seven to eight hours a night is (10)..........., but some sleep longer, while others manage with only four hours.
For a good night, having a comfortable (11).........to sleep is very important. Also, there should be (12)........ of fresh air in the room. A warm drink sometimes helps people to sleep, (13).............. it is not a good idea to drink coffee immediately before going to bed.

(14)...........you have to travel a very long distance, try to go to bed earlier than usual the day before the (15)......... . This will help you to feel more rested when you arrive.

Part B. Specific English

Read the following text and choose the correct answer A, B, C or D for questions 18-23 on your answer sheet. (There is only one possible answer.)

Pure and Applied Science

Science is one of the greatest achievements of mankind. It was born in the gradual collection of knowledge about nature and has been developed by thousands of different scientists. Each scientist has added more knowledge to build on the knowledge of the past, and many scientists have developed theories, concepts and classifications in order to organize that knowledge. Thus, science is a cumulative body of organized knowledge about the natural world.

There are two main branches of science: pure and applied. The goal of pure science is to discover the relationships which exist among the objects and events in the universe. In trying to explain natural phenomena, the pure scientist develops theories, which are then tested by means of observation and experiment. When they are sufficiently validated, these theories become the principles of science. In other words, the goal of a pure scientist is to find out the laws of nature. What he learns may later turn out to be useful. But his goal is only knowledge, not usefulness. In biology, for instance, discovering the life cycle of a rare species of insect is an example of the work of pure science.

Applied science, on the other hand, has a different goal even though it uses the same method as pure science. The goal of applied science is to apply the laws of pure science to the practical problems of life. An applied scientist is interested in the usefulness of his knowledge. Determining which stage of an insect's life cycle causes the most damage to crops is an example of the work of an applied scientist of agriculture.

Read the passage below and answer the questions 24-30 on your answer sheet. (There is only one possible answer.)

Cereals as a Main Food Source

Cereals are the support of life to civilization. Around 70 percent of the world's harvested acreage of about thousand million hectares is devoted to growing cereals. They are the direct source of much additional food when converted to meat, milk, eggs, and other animal products.

The true cereals are all members of the grass family, the Gramineae. The fruit they produce is a grain called caryopsis, a type of fruit in which the ovary wall turns hard and durable, combining with the single seed. The major cereal crops are rice, wheat, maize, barley, rye, various millets, and a few other species.

There are a number of reasons why cereals have become man's main source of food. Most of them are yearly, or are at least adapted to cultivation as once-a-year, permitting facility in cropping. Like other grasses, cereals adapt well to a variety of soils, climates, and ways of controlling. They are also relatively efficient in gathering the sun's energy, changing it into usable food substance. In addition, they are generally strong and are not plagued by unusually large numbers of diseases and pests. Above all, the grain is a small package of stored energy, properly harvested, easily cleaned and managed, and suitably stored without need for artificial drying.
Rice, wheat and corn are the world's three major cereals, all about equally important in terms of world production. Rice is the main source of substance for tropical populations; it is grown mostly on flood plains or where the land can be seasonally covered with still water. Wheat is mainly grown on lands that were naturally prairies, too harsh, cold, and windy for maize. Maize is a crop that grows best with ample warmth and moisture; it is widely used as a summer year-long in areas where general farming is practiced.

Appendix C: Post-test

Name: …………………, Minor: …………………
Date: …………………, Time: 35 Min

Part A. General English

Read the text and questions below. For each question, mark the correct letter A, B, C or D on your answer sheet. (There is only one possible answer.)

Ainsley Harriott

I have always been a bit of an entertainer and played a funny man. I was a part-time comedian for years, so I learned how to stand in front of audiences. It made me sure of myself. I like being liked and I love making everyone smile.

I've lived in London all my life and have just moved to a larger house with my wife Clare and our two children Jimmy and Madeleine. We spend a lot of time just singing and dancing around the house. I grew up with music because my dad is the pianist, Chester Harriott, who is still playing, by the way. My working day is divided between television and writing cook books, though TV takes most of my time. I spend about five days a fortnight working on the cooking programmes I appear in. I eat all sorts of things at home but I only buy quality food. When I'm cooking, I experiment with whatever in the fridge - it's good practice for my TV series.

I'm a football fan and enjoy going to matches, but I'm a home-loving person really. I don't like going to the pub but we do go out to eat about twice a month. There's nothing better than a night at home playing with the children. I rarely go to bed before midnight. Late evening is when fresh thoughts on cooking usually come to me, so I often write or plan my programme then. When I eventually get to bed, I have no trouble sleeping.

Choose the word that best completes each blank. Mark the correct letter A, B, C or D on your answer sheet. (There is only one possible answer.)

Sign language

When you wave to a friend, you are using sign language. When you smile at someone, you mean to be (6) ………. When you put one finger in front of your (7) ………. , you mean, "Be quiet."Yet, people in different countries may use different sign languages.

Once an Englishman was in Italy. He could (8) ………. a little Italian. One day while he was walking in the street, he felt (9) ………. and went into a restaurant. When the waiter came, the Englishman (10) ………. his mouth, put his fingers into it and took them out again and moved his lips. In this way, he (11)………. to say, "Bring me something to eat." But the waiter brought him a lot of things to (12) ………. first tea, then coffee, then milk, but no food. The Englishman was sorry that he was not able to tell the waiter he was hungry. He was (13)………. to leave the restaurant. When another man came in and put his hands on his stomach. And this sign was (14) ………. enough for the waiter. In a few minutes, the waiter brought him a large plate of bread and meat. (15) ………. , the Englishman had his meal in the same way.
Part B. Specific English
Read the following text and choose the correct answer A, B, C or D for questions 16-30 on your answer sheet. (There is only one possible answer.)

Energy from the sun

Energy is defined as the ability or capacity to do work. Nearly all the energy used by man is derived from the sun, either directly or indirectly, in the form of heat rays or light rays. Solar energy provides the light and warmth necessary for all animal and plant life upon the earth. The sun's light is essential in the process of photosynthesis, in which chlorophyll-bearing cells transform radiant energy from the sun into the chemical energy of carbohydrates. These carbohydrates serve as the basic substance in the food materials of plants and also the animals which consume plants.

The light and heat energy derived from fuel also comes indirectly from the sun. Coal was made by the pressure of rocks on vegetation which died millions of years ago. That vegetation grew with the aid of sunlight, from which carbohydrates were formed. Petroleum is another form of stored solar energy. Plants, together with the animals which fed on them, died millions of years ago, and their remains were pressed under the rocks in the earth. These dead animal and vegetable remains formed petroleum, from which gasoline and oil are now obtained.

Electrical energy is also obtained indirectly from solar energy; for example, it can be derived from the power of water falling down a mountainside. The sun's heat first causes water to evaporate from the surface of the earth. This water vapor rises, condenses on cooling, and falls upon mountains in the form of rain or snow, which later flows down the mountainsides in rivers. The electrical energy generated by windmills is also derived from the sun because all winds result from the uneven heating of different parts of the earth's surface by the sun.

Thus, it can be said that the sun is the source of nearly all our energy and that in the absence of the sun's heat and light, no life could exist on the earth. 191

Read the passage below and answer the questions 21-25 on your answer sheet. (There is only one possible answer.)

Plant diseases

Crop plants are subject to many diseases that can reduce production and quality. The study of plant diseases—that is, the science of plant pathology—includes some insufficiency diseases caused by an imbalance in plant nutrients; most plant diseases are, however, caused by micro-organisms which live as parasites on plant hosts. A parasite which is the casual factor of a disease is called a pathogen.

The three main groups of microscopic plant pathogens are fungi, bacteria, and viruses.

**Fungi.** Fungi are the pathogens that cause the most damage to the greatest number of crops. Fungal infection spreads quickly from one host plant to another mainly by means of spores, which are the reproductive elements in fungi and which are comparable to the seeds in flowering plants. Vast numbers of tiny spores are produced by fungi and are spread by means of wind, water, and insects. Most parasitic fungi go directly into plant tissue to obtain their food. Common fungal diseases resulting in large crop losses are various types of blights on crops such as potatoes and various types of smuts and rusts on crops such as cereals.

**Bacteria.** Pathogenic bacteria enter plants only through natural openings, such as stomata, or through open wounds. Once inside the plant, they reproduce very rapidly.
Insects are an important factor in the sending of bacterial disease, including various blights on fruit trees.

**Viruses.** Although many non-parasitic species of fungi and bacteria are known to exist, all known viruses are parasitic on plant or animal hosts. Viruses are commonly sent by insects, especially aphids; they usually enter plants through wounds caused by insect feeding or other means. Viral disease called mosaics which may infect potatoes or other crops, are characterized by a spotted pattern of yellow and green areas on plant leaves. Many viral diseases, however, are difficult to distinguish because they affect the plant in a general way by mild growing or yellowing and a reduced production.

**Appendix D: KWL Chart**

<table>
<thead>
<tr>
<th>What I Know</th>
<th>What I Want to Know</th>
<th>What I Learned</th>
</tr>
</thead>
</table>

Name: ............................ Date: ............................

Topic: ............................

ENHANCING SOCIAL NETWORK STATUS AND EMPOWERMENT OF RURAL NIGERIAN WOMEN THROUGH NON-FORMAL EDUCATION

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Abstract

The study examined the extent participation in non-formal education programmes improved social networking and empowerment of rural women in Nigeria. One research question and one hypothesis guided the study. Survey research design employing stratified random sampling was used to sample 1668 rural women from Enugu and Plateau States who participated in the Women for Women International’s Non-formal Education programme, out of which 1558 responded to the study. Questionnaire was used for data collection. The questionnaire was face validated by experts in the field of education, a reliability co-efficient of 0.76 was obtained using cronbach alfa method of determining internal consistency of instrument. The research question was answered using mean and grandmean while the hypothesis was analysed using t-test statistics. The result revealed that participation in non-formal education programmes improved social network status and empowered rural women in Nigeria. Significant differences existed in the mean response of rural women in Enugu and Plateau states on the extent participation in non-formal education programme improved their social network status. It was recommended among other things that Renewing Women’s Lifeskill education programme should be inculcated into women education programme of the National Policy on Women Education in Nigeria

Keywords: Empowerment, Social Networking, Enhancement, Non-formal Education and Rural Women

Introduction

Enhancement in this study means improving rural women’s social network status for their empowerment emphasizing what rural women are gaining through participation in organized non-formal education programmes. In this study also, rural women are women who live in the rural areas of Nigeria, most of them do not have formal education, engages in economic activities that hardly earn them and their families a decent living, have poor health, do not participate in decision making in their families and lack group cohesion. The need to empower women became necessary because of the wide gender
gap between men and women globally. Women in many cultures the world over are being cheated, discriminated against and relegated to the background, yet they constitute a greater percentage of the human population worldwide (Kristf and Wudun, 2009). This situation results in social and economic backwardness of women in the society. The realization of these problems has led to the convening of various international conferences for women in the 20th century. These conferences were held in Mexico 1975, Copenhagen 1980, Nairobi 1985, Rio 1987, Vienna 1993, Cairo 1994 and the Beijing women’s conference of 1995. The outcome of these conferences gave rise to taking measures aimed at reversing the ugly trend. United Nations (1995) encouraged all national and international development agencies, policy makers, international organizations and non-governmental organizations to include women’s empowerment measures in their programmes. These measures focus among other things on:
- Encouraging women to acquire education both formally, non-formally and informally.
- Eliminating all forms of discrimination against women etc.

In Nigeria, considerable efforts have been made by government as well as non-governmental agencies to implement programmes aimed at the advancement of women. Such programmes like the Better Life for Rural Women’s Programme, Family Support Programme, Family Economic Advancement Programme, and most recently the Women for Change Initiative of the wife of the Nigerian President, Dame Patience Jonathan. However, with these programmes in place, the potentials of women particularly rural women are still not fully actualized. Azikiwe (1997) in Zuofa 2008) asserted that social norms, poor incentives, poverty, ignorance and cultural institutions against women in most societies in developing nations are barriers to the advancement of women. In order to encourage women and help them to understand the need to assert their rights in the society, women need power to participate in societal affairs, hence the need for empowerment.

Women empowerment according to Arikpo, Eze and Taiwo (2006) is giving women access to power over social-cultural, psychological and economic situations. Explaining on the concept of women empowerment Mendel-Anonevo (1995) categorized it into four namely: cognitive, psychological, economic and political. The cognitive component of women’s empowerment includes women’s understanding of their conditions of subordination and causes of such subordination. The psychological components include the development of a feeling that women can act upon to improve their conditions. The economic component requires that women be able to engage in productive activities that will allow them some degree of autonomy and the political component which implies ability to organize and mobilize for change. Women empowerment process therefore must involve not only individual awareness, but collective awareness and action. In the context of this study, women empowerment is a process whereby rural women create social networks both within and outside their communities.

Women for Women International (WFWI) (2009) described social network as a range of support groups and together they form a life safety net to protect individual within the group. WFWI stated further that social networks allows individuals to share ideas, resources and information as well as help to support and protect each other and solve their problems collectively. Individually, women have the ability to acquire knowledge
and awareness about their rights, women can advocate for and make changes in their families and communities, however, when many women come together in solidarity to advocate for common needs and desires, their roles are amplified and can carry more weight than a single woman’s voice alone (Ukwuuba, 2012). This implies that one woman can change anything, but many women can change everything. Groups and organizations are one of the principal means through which women participate in the life of the society (Karl, 1995). While rural women are poorly represented in the power structure, they have learned to use their avenue to turn their aspiration into actions, thus they frequently form majority of community and grassroots organization and play leading roles in movement for social change. Karl stressed further that women’s participation in grassroots organizations is increasingly recognized as critical to their empowerment and as a way for them to help shape their lives.

It has been observed that education is the most effective tool for empowerment of women (Olaleye, 2008). This is true because majority of Nigerian rural women are non-literate (Aderionye, 1997). Igbo (2008) identified non-formal education (NFE) as one of the programmes of adult education which is most probable for empowerment of women, while defining NFE as education or training outside the formal school system. NFE connotes a planned educational activities or training outside the formal school system for any category of people for the purpose of raising their consciousness regarding their social situation and their standard of living (Ngwu, 2006). Many reports demonstrated that NFE and other organized interventions given to rural women in their various groups have noteworthy results in their empowerment. WFWI (2009) observed that rural women in NFE programmes were able to move about beyond the limits of their household. WFWI stated further that women who had never stepped out of their homes, hardly took part in learning activities outside their home environment now participates in study tours, exposure visits and interactive sessions within learning centres which influence them greatly. Each learning forum brought them out from the village exposing them to alternative ways of being and rural women participation in NFE activities has also exposed them to interact with other women, share ideas and form groups to work collectively to protect them in the patriarchal society (Pants, 2005). Pants further stated that most of these women now take leadership roles in their various social groups and this had increased their confidence.

In a study conducted in rural Bangladesh on the effect of NFE rural credit scheme on empowerment of rural women, Hashemi, Riley and Schuler (1996) observed that rural women who participated in the programme have identity outside their families. The programme gave them socially legitimate reason to move about and to associate with one another in public places and meetings, increased their mobility and visibility exposed them to new ideas and helped them to become more confident and more skillful at interacting in the public sphere. In a similar view, Clark and Gakuru (2002) assess rural women’s participation in NFE group activities as an assistance that is indeed supportive in their achievement of personal goals, self confidence, new health behaviour, increased income and increased involvement in family and community activities. When women interact with others outside their families, they share ideas and learn from each other. Empowerment of women is not just an attribute of their robust financial resources, but it is also a function of their membership of organizations and the ample opportunity they have to try new social behaviour.
In as much as there are reports that social networking among women enhances empowerment, researchers like Davis (1996) and Reardon (1995) indicated that there is low networking among rural women in most developing nations. This situation has spurred many international, organizations and non-governmental organizations to organized NFE learning programmes for women particularly rural women in developing countries like Nigeria. Such organizations like United Nations Development Programme, United Nations Funds for Education of Women (Unifem), World Health Organization (WHO). Others include Development Education Centre (DEC) and Women for Women International (WFWI).

The quest to empower rural women motivated WFWI to educate Nigerian rural women through its NFE programme titled “Renewing women’s life skill Education (Renewls)”. WFWI is an International Nongovernmental Organization that provides learning empowerment programmes for rural women in Nigeria and other developing nations. The Renewls education programme learning package runs for twelve months and combine right awareness education and vocational skills training. The Renewls learning programmes were launched specifically to ensure that rural women who participated in the programme would have sustainable income, maintain good health, participate in decision making and have improved social network status. WFWI has been educating rural women in two states of Nigeria, Enugu and Plateau states through the Renewls education programme. The Nigerian country director of WFWI made a number of reports which no independent assessor known to these researchers has confirmed, that over 23,000 rural women who participated in the programme in the two states were empowered. In the light of this development, this study was carried out to determine whether participation in Renewls education programme enhanced social network status and empowered rural women in Nigeria.

**Purpose of the Study**
The purpose of the study was to determine how participation of Renewls education programme enhanced social network status and empower employment of rural women in Nigeria. Specifically, the study determined the extent to which;

Renewls education programmes improved the social network status of rural women in Nigeria.

**Research Question**
To what extent has Renewls education programme improved the social network status of rural women in Nigeria

**Hypothesis**
In the course of this study a hypothesis was tested at .05 level of significance and an appropriate degree of freedom:
There is no significant difference in the mean response of rural women in Enugu and Plateau states on the extent to which Renewls education programme improved their social network status.

**Method**
The design of the study was survey research design because it concentrated on discussing events as they were without any interference on what was observed. The
The population for the study was 16,659 rural women who graduated from the programme from 2007-2010. 10,484 from Enugu State and 6,175 from Plateau State. The researcher used stratified random sampling technique to obtain a sample size of 1,668 out of which 1,049 were from Enugu State and 619 from Plateau State.

The instrument for data collection was a 12-itemed four point scale response option questionnaire, with a response format of very great extent (VGE), great extent (GE), low extent (LE), very low extent (VLE) and a numerical value of 4, 3, 2 and 1 respectively. The instrument was validated by three experts in the field of education, one from measurement and evaluation and two from Adult education. Based on their comments, some items were reconstructed. The reliability of the instrument was determined using Cronbach’s alpha formula and internal consistency reliability coefficient of 0.76 was obtained. The questionnaire was administered to the Renewls programme graduates during their monthly group meetings in their various communities with the help of trained research assistants. The questionnaire served as an interview schedule where respondents experience difficulty in reading and writing. Only 1,568 completed questionnaire were returned for analysis.

The research question was analyzed using mean and grand mean, while the hypothesis was tested using t-test statistics at 0.05 level of significance. The decision rule was as follows: Any item with mean 2.50 and above was accepted which shows that Renewls education programme improved the social network status of rural women in Nigeria to a great extent; while those below 2.50 were not accepted, which indicates that the programme improved the social network status to a low extent. Where the calculated t-value was equal to or greater than the critical value of t, the null hypothesis was rejected, but if less than the critical t value, it was not rejected.

**Results**

The results of the data analysis were presented in tables according to the research question and hypothesis.

**Research Question**

To what extent does Renewls education programme improve the social network status of rural women in Nigeria?

<table>
<thead>
<tr>
<th>S/N</th>
<th>ITEMS</th>
<th>X</th>
<th>SD</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I now belong to a social group in my community</td>
<td>2.95</td>
<td>0.94</td>
<td>G.E</td>
</tr>
<tr>
<td>2</td>
<td>I now discuss with elders and leaders of my community</td>
<td>2.72</td>
<td>1.04</td>
<td>G.E</td>
</tr>
<tr>
<td>3</td>
<td>I now have access to sources of loan through my social group</td>
<td>2.85</td>
<td>1.04</td>
<td>G.E</td>
</tr>
<tr>
<td>4</td>
<td>I am now opportune to make new friends</td>
<td>2.76</td>
<td>1.05</td>
<td>G.E</td>
</tr>
<tr>
<td>5</td>
<td>I now share experience, ideas and opinion with other women outside my community</td>
<td>2.85</td>
<td>1.06</td>
<td>G.E</td>
</tr>
<tr>
<td>6</td>
<td>I have visited different places outside my community</td>
<td>2.89</td>
<td>1.05</td>
<td>G.E</td>
</tr>
<tr>
<td></td>
<td>I can now express myself before other women, outside my community.</td>
<td>3.00</td>
<td>0.94</td>
<td>G.E</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------------------------------</td>
<td>------</td>
<td>------</td>
<td>-----</td>
</tr>
<tr>
<td>8</td>
<td>I am now protected from any impending harm by my social group.</td>
<td>2.87</td>
<td>0.95</td>
<td>G.E</td>
</tr>
<tr>
<td>9</td>
<td>I now discuss women’s rights through social group</td>
<td>2.82</td>
<td>1.01</td>
<td>G.E</td>
</tr>
<tr>
<td>10</td>
<td>I now belong to different co-operative societies in my communities.</td>
<td>2.49</td>
<td>1.02</td>
<td>LE</td>
</tr>
<tr>
<td>11</td>
<td>I now have access to women empowerment agencies.</td>
<td>2.76</td>
<td>1.08</td>
<td>GE</td>
</tr>
<tr>
<td>12</td>
<td>I have advised other women on the importance of education particularly for the girl-child.</td>
<td>2.86</td>
<td>1.03</td>
<td>G.E</td>
</tr>
<tr>
<td>Grand Mean</td>
<td></td>
<td><strong>2.82</strong></td>
<td>1.02</td>
<td>G.E</td>
</tr>
</tbody>
</table>

The table shows that a grand mean of 2.82 was obtained. This is an indication that participation in the Renewls education programme has generally improved the social network status of rural women in Nigerian to a great extent.

**Testing of Null Hypothesis**

There is no significance difference in the mean response of Enugu State and Plateau State rural women on the extent Renewls education programme has improved their social network states.

**Table 2:** t test analysis of significant difference between the mean ratings of rural women in Enugu and Plateau States on the extent Renewls education programme has improved their social network status.

<table>
<thead>
<tr>
<th>Location of Rural Women</th>
<th>n</th>
<th>X</th>
<th>SD</th>
<th>df</th>
<th>t-cal</th>
<th>t-critical</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enugu State</td>
<td>1030</td>
<td>2.99</td>
<td>0.98</td>
<td>1556</td>
<td>6.19</td>
<td>1.96</td>
<td>Reject HO</td>
</tr>
<tr>
<td>Plateau State</td>
<td>528</td>
<td>2.65</td>
<td>1.05</td>
<td>252</td>
<td>1.96</td>
<td>1.05</td>
<td></td>
</tr>
</tbody>
</table>

The table shows that the calculated t-value is 6.19 and the critical value of t was 1.96. Since the calculated value of t was greater than the critical value of t, the null hypothesis was rejected. This implies that significant differences exist in the mean ratings of rural women in Enugu and Plateau states regarding the extent to which the Renewls education programme has improved their social network status.

**Discussion of Findings**

The findings from the research question revealed that Renewls education programme has improved the social network status of rural women in Enugu and Plateau states. Rural women in the two states from the findings now participate in social activities, make new friends both within and outside their communities, share ideas and express themselves. This findings are in line with the earlier views of Pants (2005), Clark & Gakuru (2002) and Hashemi Riley & Schuler 1996- that participation in NFE programme made rural women interact with women outside their families, share ideas and form
groups to work collectively to protect themselves in a patriarchal society. It also assist in women’s achievement of personal goals, self confidence, new health behaviour, increased income and increased involvement in family and community activities. However, the impact of the programme on belonging to different cooperative groups was of low extent. This was evidenced in the mean rating of item 10 which is 2.49. Invariably, in as much as rural women participate in group activities; they may be restricted to one or two which may be within the WFWI social network.

The result from the null hypothesis listed at 05 level of significance showed that significant difference exist in the mean ratings of rural women in the two states on the extent to which participation in Renewls education programme has improved their social network status. The finding may be as a result of civil unrest religious and cultural factors in the Plateau state. Women’s social activities in most parts of Plateau states were restricted due to civil unrest in the area, unlike their counterpart in Enugu State who were not restricted by any barrier. This was in agreement with the earlier findings by Davis (1996) which revealed the existence of low social networking among rural women in Northern Nigeria. This implies that in as much as rural women in both states participates in Renewls education programmee their level of acquired social network status varies.

**Conclusion**

The findings show that participation in Renewls education programme has improved the social network status of rural women in Nigeria. However, the mean ratings of rural women from the two states studied on improved social network status differed significantly due to religious/cultural factors and civil unrest. The findings from this study invariably indicate that improved social network status for empowerment of rural women can be achieved through non-formal education.

**Recommendations**

Based on the findings of the study, the following recommendations were made:

1. The Renewls education programme should be adopted as a means of implementing government policy on adult and non—formal education; and ensure that rural women in all the communities in Nigeria participates in the programme to facilitate the realization of the third Millennium Development Goal, which emphasized gender equality and women’s empowerment.

2. NFE programmes that can break the excesses of culture and tradition are necessary for positive development of both men and women in the community.

3. Renewls education programme should be inculcated into women’s education curriculum as presently stipulated in the National policy on women education in Nigeria.

**References**


RESTRUCTURING DISTANCE EDUCATION IN NIGERIA USING INFORMATION TECHNOLOGY

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ABSTRACT
The closure of University satellite campuses on the 24th August 2001 by the Federal Government Confirms the shabby nature of Distance Education in Nigeria. Distance Education though set up to help solve educational problems, if not properly handled will exacerbate poor quality instruction and contribute to educational problems. Application of computer network services in DE will help enrich the programme and enhance qualitative education. This paper explores the concept and problems of DE in Nigeria and examines the feasibility of the application of Information Technology to it, speculating how the integration of IT may enhance the quality of the learning experience.

INTRODUCTION
Distance education can be defined as an educational process in which a significant proportion of the teaching is conducted by someone removed in space and or time from the learner. (Perraton, & Tsekoa, 1987). One very common feature of distance education is the difference in geographical location of the teacher (instructor) and the learner. At inception, distance education met hostility from education establishment but today many countries seeking public demands for more schools and more teachers have embraced it. It was given a new status and public recognition by the establishment of open universities, starting in Britain in 1969. This venture has extended to over 25 other countries including Nigeria. These universities offer their own degrees and use a combination of media to teach their students.
Distance education has proved its worthy in areas where traditional schools, colleges and universities have difficulties in meeting demand it has proved useful for three main reasons: they make it possible to reach students who cannot get to a college; the students lend themselves to part-time education so that they are not taken out of the work force in order to study. Secondly, they appear to allow economies, in part by avoiding the need for new buildings including housings for students. Thirdly as a result of the above they have been used in rich and poor countries to provide a general education and to improve pedagogical
skills, to overcome the barriers of distance and to serve as part of a regular system of continuing education.

In addition to offering education to workers on a part-time basis, it offers opportunities to students in very remote areas who cannot get to a school or a campus where distance education brings in resources from outside, it can help overcome problems of local national isolation.

Despite its advantages, distance education presents some particular difficulties, which need to be faced if it is to play a major role in educational development. The first concerns feedback and face to face support for the learner. Learning at a distance can be a cold, dispiriting, lonely and difficult activity, if there is no tutor nearby to help with difficulties in the text, a correspondence course can seem impossibly difficult. Also if there are no other students with whom to share difficulties it can make one narrow sighted (Latchem et al 1999). If there is no mechanism for feedback, then learning can become a one-way process, in which the teacher’s or correspondence course’s knowledge is all-important and the student’s of no account. And, if the isolated student has to wait of weeks or even months for a response to written work, then he or she is less likely even to complete the course.

Another problem is about money. Distance education makes economic sense because resources are put into the careful writing, editing and production of teaching materials instead of into the employment of face – to – face teachers. Such projects become economically viable only if there are enough students to share the production costs of materials. Where there are few students, they will not justify the cost of production of good courses. The purposes of this paper is to expose the condition of distance education in Nigeria and show it can be restructured using information technology.

MEANING OF DISTANCE EDUCATION

Over the years, many educators have defined distance education in varied ways. These definitions have some elements in common which goes to explain the meaning of terminology. Dohmen, (1967) are cited by Keegon 1996 defined it thus; Distance Education is a systematically organized form of self-study in which student counseling, the presentation of learning material and the securing and supervising of students’ access is carried out by a team of teachers, each of whom has responsibilities. It is made possible at a distance by means of media, which can cover long distance. The opposite of distance education is direct education or face-to-face education, a type of education that takes place with direct contact between lecturers and students.

Moore, (1973) presented a definition thus: Distance teaching may be defined as the family of instructional methods in which the teaching behaviours are executed apart from the learning behaviours including those that in a contiguous situation would be performed in the learner’s presence, so that communication between the teacher and the learner must be facilitated by print, electronic, mechanical or other devices.

Moore, repeated this definition without modification in 1977.

Holmberg, (1977) defined it thus:
The term distance education covers the various forms of study at all evels which are not under the continuous, immediate supervision of tutors present with their students in lecture rooms or on the same premises, but which nevertheless, benefit from the planning, guidance and tuition of a tutorial organization.

Garrison & Stale, (1987) defined it thus: Distance Education implies that the majority of education communication between (among) teacher and student(s) occurs non-continuously. It must involve two-way communication between (among) teachers and student(s) for the
purpose of facilitating and supporting the educational process. It uses technology to mediate the necessary two-way communication.

Moore, again in 1990 says distance education is all arrangements for providing instruction through print or electronic communications media to persons engaged in planned learning in a place or time different from that of the instructor or instructors.

Lane, & Portway, (1994) as cited by Keegen (1996) defined it thus: The term distance education refers to teaching and learning situation in which the instructor and the learner or learners are geographically separated and therefore, rely on electronic devices and print materials for instructional delivery. Distance Education includes distance teaching – the instructor’s role in the process – and distance learning – the student’s role in the process.

Perraton, Creed & Robinson (2002) defined distance education as an educational process in which a significant proportion of the teaching is conducted by someone removed in space and or time form the learner.

Analysis of these definitions leads to the recognition of certain common elements that depicts the meaning of distance education. The separation of teacher and learner is fundamental to all forms of distance education whether they are print-based, audio/radio-based, video/television-based, or computer-based. This separation differentiates distance education from all forms of conventional face-to-face direct teaching and learning. The structuring of learning material and the linking of these learning materials to effective learning by students through an educational organization differentiates distance education from private study, learning from interesting books or cultural television programs.

Distance education therefore means a systematically organized form of self study in which the student(s) receives instruction from the course booklets, or radio, or television or computer or a combination of these media. The geographical location of both instructor and the students usually differ and there is absence of face-to-face interaction between the instructor and the students.

DISTANCE EDUCATION IN NIGERIA

The awareness of distance education in Nigeria dates back to the 1930s. In 1933, the first sets of graduates were recorded from the University of London. Since then, the establishment of distance education in Nigeria has been on the increase. The University of Lagos in 1974 made the first concerted and conscious effort to establish DE unit in Nigeria, with the name Correspondent and Open Studies Institute (COSIT). Sir Tony Dodds who came on secondment from the International Extension College in UK headed the maiden experiment. This institution made use of mainly print medium or course texts, audiotapes and radio broadcast through the Federal Radio Corporation of Nigeria (FRCN) for instruction. This innovation died as a result to two pronounced factors; the cease of free radio broadcast when FRCN went commercial in 1978 and the cease of Federal funding via NUC the sponsor of the programme in 1989.

The Nigeria Teacher’s Institute (NTI), a single mode institution established in 1976 was another bold step in the area of DE in Nigeria. Furthermore, in 1983, another single mode University called National Open University was established. Though it was closed down, later it merged with the University of Abuja to form the nucleus of the centre for Distance Learning and Continuing Education. Apart from these institutions, almost every university in Nigeria runs some form of distance education in their various satellite campuses all over the Federation.

The main medium for course delivery in these distance education centers in course booklets/handouts, which are planned, produced and distributed by the lecturers. In the Nigeria context, distance education is more like the conventional institutions in that there is
face-to-face interaction between the students and their lecturers at the study centers. The only significant differences is that lectures are fixed outside office hours mostly in the evenings and weekends. Also their lecturers are employed on a part-time basis from around the study centers. Most often than not these lecturers have far less qualifications and wealth of experience than those in parent universities to ensure conformity with standards in the parents universities. This probably gave room to a lesser quality of education in these centers.

Though enrolment into distance education in Nigeria is high there’s a big question are regards the quality of education that exist there. The satellite campuses were more like revenue generation base for the parent universities than an avenue for providing qualitative education. As a result, the federal government on Wednesday 29th August, 2001 ordered the closure of University satellite campuses in the country.

APPLICATION OF INFORMATION TECHNOLOGY IN DISTANCE EDUCATION

Information technology is the application of science to information related problems. It is currently influencing every facet of the society and education is not left out. The possession and accessibility of information has become matters of personal importance. Thus information technology is influencing every field of endeavor. It is a term frequently applied to a broad area of activities and technologies associated with the use of computers in communication; but generally it implies the application of computers to store, retrieve, process and disseminate data, (Raiston et al, 2000).

There is an on going fusion between computer technology and telecommunication and this has transformed the whole world into a “global village”. People can now easily get in touch, see or speak to one another and exchange information in multimedia, electronically, from any point on the globe to another. Information technology if applied in distance education will make the programme richer and ensure a higher quality of education. In distance learning, there are two basic needs: distribution of teaching materials and stimulation of learning by means of one way or two-way communication. The development of computer links is beginning to blur the distinction between distribution and teaching. It is possible, through an internet connection, both to distribute materials to learners electronically rather than physically and to teach them, by means of a computer program, or engage in dialogue with them by e-mail or computer conferencing (Perraton, et al 2002).

There are a number of computer network services that can be used in restructuring distance education in Nigeria to ensure uniformity in quality. Among these services are:

- Internet Service :- The various applications of the internet could be seen in the following: E-mail, Facsimile, Electronic Bulletin boards, Databases, File Transfer etc.
- Telephone
- Radio
- Television
- Teleconferences
- Compressed Video conferencing
- Teleprocessing

Internet

This is a network of the networks linked by several layers of protocols. It uses the internet protocol to route digital packets of information across a multiplicity of networks
and communication media in an efficient and generally reliable manner. Instructors and students in distance education can browse for information via the internet.

**Electronic Mail (E-MAIL)**

This is an internet-based electronic substitute for the conventional post office. In other words, it is the transfer of a message in electronic form from one computer user to another, usually over a network. A user name and password are required to get into the “mail box”. The implication is that instructors could send their lecturers or messages to their students in distance education via e-mail and vice-versa. It demands that every student registers and has e-mail address.

**Facsimile (FAX)**

Internet users having facsimile (fax) machines can receive or send fax via the internet. It is possible for a fax message to be converted to e-mail if the recipient has not a fax machine or prefers e-mail. It is also possible for non-internet users that have fax machine to receive fax message, via the internet provided the sender requested for this service. This provides a good communication system for both the teacher and the learner.

**Electronic Bulletin Boards**

The bulletin board service (BBS) is the electronic equivalent of the ordinary notice board. It is just like public bulletin boards. You can post and read messages, which can be personal or otherwise. The difference is that all the messages are electronic and you need a microcomputer, telephone connection and the electronic bulletin board’s telephone number. The board’s number connects you to a computer that receives and posts messages. This is a good communication link in distance education.

**Databases**

Databases in which specialized information of educational value are stored can be exchanged between the instructors and learners via the internet. Database on the internet can give educational information on radio or television programs to distance education students.

**File Transfer**

Any kind of computer file can be sent via the internet from one internet user to another.

**Telephone**

For the instructors to facilitate the smooth running of the distance education programs they could use telephones connected to the computers. For instance, in cases where the teachers need to inform the students of the changes in the course outline, telephone could be very useful. Already in industrialized world, distance-teaching institutions have set up telephone conferences to link students and have taught them through computer networks (Perraton, 1993). Telephone line and a modem are required to get hooked to the internet.

**Radio**

Teachers of distance education programs could deliver their lectures or make announcements through the radio to reach students in a particular area. This method has the disadvantage of students not asking questions on the subjects taught.

**Television**

Like in radio, teachers could teach their lectures and make announcements to reach students in a particular area.
Teleconferencing

This is an improvement of the conventional one-to-one telephone conversation. In this system, numerous people may be simultaneously connected by means of closed circuit television so that discussion can take place even though they do not meet. There are three types of teleconferencing namely;

- Audio conferences: an audio conference uses standard telephone lines to transmit voices to and from the parties in the conference.

- Compressed videoconference: Compressed Digital Video (CDV) transmits live video and audio simultaneously over special telephone lines called Integrated Services Digital Network (ISDN). In video conferencing you can meet face-to-face with your colleagues, or conduct course and seminars without travelling across the state or country. CDV makes your meetings come live by bringing your associates into your meeting room. You can see, hear and converse with others located hundreds or even thousands of miles away, and with the addition of a graphics camera you can view text and graphics. Text and graphics can be transmitted with a document camera to distance learning students.

In America, recent research on distance learning programs shows that distance learning is made possible through videoconferencing (Peterson, 2001). According to him, the National Aeronautics and Space Administration (NASA) uses information technology to provide students with a connection to the “real-world” not only through the Internet and e-mail but also through “face-to-face” video conferencing discussions.

NASA has also been found to
- Share data and knowledge by answering students questions directly.
- Offer helps to students in designing and completion of projects and develop problem-solving skills.
- Support the transformation of the learning environment through innovative, technology enabled opportunities.
- Provide a bridge to digital learning – an education approach that integrates technology connectivity, content and human resources.

By this videoconferencing medium, the teacher is able to receive feedback from the learner, which helps him to improve content and presentation to the learners.

Computer conferences: In computer conference, the keyboard messages are used, that is, the participants use keyboarding from their distant location. They do not hear or see each other.

Teleprocessing

Teleprocessing refers to a form of online processing in which users at remote workstations are able to access a central computer to store, retrieve or process data. Institutions organizing the distance education programs can enter a query at a workstation, causing the computer to search its files and send the retrieved information to the institution.

Nigeria being a developing nation her DE can use print to present materials, the mail (physical or electronic) to distribute it, and face-to-face tutorial sessions (as through videoconference) for feedback and dialogue. This way, one can ensure that all the learners get the same learning materials, share the same lecturers and the quality of the program will be same all over the nation.

ENVISAGED PROBLEMS
Some problems are likely going to militate against the effective use of Information Technology in distance education. These include the following:

- Non-availability of funds: Our tertiary institutions are poorly funded; as a result the acquisition of computer and other telecommunication will not be easy.
- Irregular supply of electricity: This has become a persistent problem in Nigeria and thus will affect the effective use of information technology.
- Lack of trained personnel in Information Technology: Experts in computer technology are very few. This will no doubt hinder effective use of information technology in distance education.
- Poor NITEL services: NEPA, NITEL services are not reliable and this will hinder effective use of telephones and e-mail in distance education. GSM lines, which are more reliable, are more expensive to use.

SUGGESTIONS

The following are some suggestions to help make distance education effective.
- A national body should be set up to man distance education in Nigeria. This body should see to the drawing of the curriculum for the various levels, employment of teachers and provision of admission to interested candidates.
- The teachers in distance education should be sent to computer training. The federal government should sponsor this training.
- Teachers in distance education should design instruction effectively.
- The federal and state governments should acquire and provide computers to all levels of education in Nigeria. At the University level, students must have mastered the computer operations in diverse areas.
- The federal government should bring down the cost of net – work connections in Nigeria.
- The federal government should do all within their powers to ensure regular supply of electricity. The privatization of NEPA, I believe will help solve this problem.

CONCLUSION

Distance education with all its benefits is a welcomed venture, in the Nigerian situation, there are a lot of lapses as regards uniformity in the content and mode of instruction leading to quantitative and non-qualitative education. However, application of information technology will help over-come these problems and greatly improve the quality of instruction.

REFERENCES

Eastmond, Dan (2000) Realizing the Promise of Distance education in low technology countries in Educational Tech. Research and Development 48(2) pp 100-111
Moore, M. (1990) “Background and Overview of Contemporary American Distance Education in Contemporary Issues”. In American Distance Education. New York: Pergamon

Petersen, H & Teskoa, K. (1987) *Distance Education in the challenge of scale educational development in the small states of the commonwealth*, Edited by Bacchus Kazim & Brock Colin. London: commonwealth Secretariat Publisher.


STATUS OF THE QUALITY OF TEACHING AND LEARNING MATHEMATICS IN NIGERIAN COLLEGES OF EDUCATION

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Abstract

The standards prescribed by the National Commission for Colleges of Education (NCCE) for teaching and learning Mathematics in Colleges of Education in Nigeria can be said to provide the prescribe condition that Mathematics education should have in the colleges in terms of quality. This study investigated factors limiting the quality of Mathematics Education in selected colleges of education in Nigeria with a view to providing the actual condition of Mathematics education in them. Data on the factors limiting the quality of Mathematics Education was gathered through facebook interview with 109 lecturers teaching Mathematics in the selected colleges. Rating-scale items were also administered to two hundred (200) students from some of the colleges to collect data on the typical learning activities they have experienced during Mathematics lessons. The study discovers that, in respect of facilities and modes of teaching, there are considerable differences between the prescribed condition of Mathematics Education portrayed in the NCCE minimum standards and the actual one depicted by the findings made. The paper recommends provision of adequate resources for Mathematics Education and professional development for Mathematics lecturers, among others.

Keywords: Mathematics Education, Quality of Teaching and Learning of Mathematics, Prescribed Condition of Mathematics Education, Actual Condition of Mathematics Education Facilities for Teaching Mathematics, Modes of Teaching Mathematics.

Introduction

Mathematics education is important for all citizens of a nation because it helps them to be interested in and understand the world around them, be engaged in the discourses of Mathematics, etc. The prescribed condition of Mathematics Education as portrayed in the standards prescribed by the National Commission for Colleges of Education (NCCE) for teaching and learning Mathematics education in colleges of Education in Nigeria needs to be
compared with the actual condition on the ground to enable all the stakeholders in this sub-sector of tertiary Education to understand or appreciate the current status of the quality of Mathematics Education in the nation’s College of Education. This study was made to find out factors limiting the quality of Mathematics Education as well as the typical learning activities which students have experienced during Mathematics lessons in some selected colleges of Education in Nigeria. This is done with a view to findings out the actual condition of Mathematics education in the colleges in relation with the prescribed condition depicted in the national curriculum provided by the NCCE. However, the scope of the study is confined to facilities and mode of teaching aspects of the ideal picture of Mathematics education contained in the NCCE minimum standard for Mathematics.

Methodology
A stratified random sampling procedure was used to draw a sampled of 109 lecturers and 200 students. Data on the factors limiting the quality of Mathematics education was gathered through facebook interviews with 109 lecturers teaching Mathematics in the selected colleges. Rating-scale items were also administered to two hundred (200) students from the Cross River State College of Education, Akamkpa and the Federal College of Education, Obudu, to collect data on the typical learning activities they have experienced during Mathematics lessons.

Descriptive statistics, namely frequency tables and percentages were used in analyzing the data generated thorough Facebook interviews and the rating-scale items and open-ended questions administered to students.

Factors Leading to Quality Teaching and Learning of Mathematics
Research shows that all students can learn Mathematics when they have access to high-quality Mathematics teaching and are given sufficient time and support to master a challenging curriculum (Burris, Heubert, & Levin, 2006; Campbell, 1995; Education Trust, 2005; Griffin, Case, & Siegler, 1994; Knapp et al., 1995; Silver & Stein, 1996; Slavin & Lake, 2008; and Usiskin, 2007, all cited in National Council of Teachers of Mathematics, 2012).

Quality teaching and learning of mathematics has been and will continue to be of major concern to scholars in the field as well as other people whose areas of specialization require some application of mathematics education. This concern is what probably led Sullivan and Mousley, (1994) to conduct a study in which 125 teacher educators and experienced teachers were asked to respond to fixed-format and open-response items on aspects of mathematics teaching. Based on the findings of the study, the researchers were able to develop a model for quality teaching of mathematics. The model, which has six components, is presented in the diagram below:
It could be seen from the diagram that some relationship exist between the six components of quality teaching of mathematics, for example, Building Understanding, facilitates the other components, namely, organizing for learning, nurturing, engaging, communicating and problem solving.

Looking at the factors which make Singapore to topmost in K-12 Mathematics education, Ahuja (2006) identified the key features contributing to Singapore’s success, they include:

a. Students’ high educational aspirations and positive attitude towards mathematics,
b. World-class facilities in all schools;
c. Safe school environments;
d. Alternative mathematics framework and special assistance for slow learners;
e. Gifted educational program
f. Excellent textbooks, and

g. Competent and dedicated mathematics teachers.

Another factor is the basic philosophy of streaming reflected in the Singapore Ministry of Education’s mission statement:

Every child must be encouraged to progress through the education system as far as his ability allows. Advancement must always depend on performance and merit to ensure equal opportunity for all (MOE, 2003 in Ahuja, 2006).
Furthermore, there are several opportunities in Singapore for students with varying abilities to attend night tuition classes organized by various associations and private companies. As for the mathematics teachers, features contributing to Singapore’s success in mathematics education include:

a. a lighter workload for new teachers;
b. the mentoring of new teachers by more experienced teachers;
c. common teacher’s rooms with individual desks to work at;
d. well-informed and well-structured guides, worksheets and lesson plans;
e. a lot of cooperation and sharing among teachers within schools, neighbourhoods and at the national level;
f. the availability of manipulative software and computers;
g. most Singapore teachers make an effort to attend meetings, workshops, and conferences during the year; and
h. teachers generally incorporate a variety of methods in teaching mathematics such as assigning theme-based projects and using diagrams and models.

Colleges of education in Nigeria as well as other institutions offering Mathematics can certainly borrow a leaf from the components of the developed model for quality teaching of mathematics and also from the factors leading to high quality mathematics education in Singapore.

The Prescribed condition for Mathematics Education in Nigeria Colleges of Education

This paper adopts the standards prescribed by the National Commission for Colleges of Education (NCCE) for teaching and learning mathematics education (NCCE, 1997);

1. Philosophies: The philosophy of the Nigeria Certificate in Education (NCE) Mathematics is inspired by the desire to help students become intellectually informed in mathematics ideas, notations and skills for logical reasoning, scientific enquiry and for the pursuit of techno-scientific education. There is a need to produce non-graduates but well-groomed and qualified professional teachers of mathematics for Basic Education levels.

2. Facilities:
   a. classroom; at least three(3) lecture rooms and a lecture theatre
   b. laboratory: there must be a fully air-conditioned mathematics laboratory with mini micro computers of not more than ten students per one, an overhead projector or multimedia projectors
   c. workshop; there must be a mathematics workshop where students can make their own instructional materials
   d. staff offices: the comfort of teaching staff must be taken into consideration. Ideally, there should be an office per lecturer, equipped with bulletin boards, book shelves, visitors’ seat and standard furniture.
   e. The Head of Department should have an office; furnished with accessories. There should also be an office for the supporting staff i.e. typists and clerks
   f. There must be current and relevant textbooks and journals to cover all the areas of the subject

3. Personnel:
   a. Academic; A minimum of eight (8) academic staff are specifically required for the NCE mathematics Programme. All the academic staff must have an Educational
background with a minimum of second class lower Bachelor of Education degree in Mathematics or Post Graduate Diploma in Education and a second Class Lower (Honours) Degree in Mathematics

(b) Non-Academic: Computer Technical Data Operator

(c) Library Assistant/Attendant, Laboratory Assistant/Attendant, Typist/Secretary, Office assistant

4. **Mode of teaching:** Lecturer, Tutorials, Problem-solving, seminar, Demonstration, Drill, Experimentation, Excursion, Discovery Method, Laboratory Method and etc. Discovery method and laboratory work should be emphasized.

This study was focused at facilities and mode of teaching aspects of the prescribed condition for mathematics education contained in the NCCE minimum standard for Mathematics.

**Result of the Study**

This section presents the data obtained from the 109 lecturers and 200 students sampled for the study. This data gives the actual condition under which mathematics education is provided in the selected colleges of education.

The lecturers were asked what factors limited the quality of Mathematics teaching in their schools. Table 1 contains their responses to this question.

<table>
<thead>
<tr>
<th>S\No</th>
<th>Factor</th>
<th>Sub factor</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Resources:</td>
<td>Inadequate resources</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inadequate mathematics budget</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poor access to a laboratory for teaching science</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inadequate equipment</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poor access to computers</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No access or inadequate access to a laboratory assistant</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inadequate Mathematics curriculum resources</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Computer network is not reliable</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inadequate Mathematics software</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>School and Syllabus constraints</td>
<td>Very large class size</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>School constraints such as timetabling, interruptions and lack of support from the school administration or teachers.</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics teaching is constrained by the NCCE curriculum.</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Student Factors:</td>
<td>Poor student behavior, attitude or welfare problems.</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Students’ inadequate literacy skills or lack of support for students with learning difficulties.</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Teacher Factors:</td>
<td>Teachers have inadequate time for reparation, reflection and collaboration.</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teachers lack the knowledge and skills to teach Mathematics or lack professional development.</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>There is inadequate time for teaching mathematics and/or too much content to cover</td>
<td>9</td>
</tr>
</tbody>
</table>
in the available time.
Insufficient time.
Mathematics teachers have poor attitudes towards teaching and are unwilling to change.

Community support: Lack of community support for Mathematics teaching and learning

*Source:* Facebook Survey

For the resource factor, as indicated in the table, the most frequent factors identified by the lecturers, which limit the teaching of Mathematics in the selected colleges of education are inadequate resources and budget for mathematics education. As for school constraint, while poor attitude and learning behavior are the most frequent student factor inhibiting mathematics education in the Colleges.

Table 2:
Report students’ responses to items dealing with the typical learning activities that occur in mathematics classrooms

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items dealing with the typical learning activities</th>
<th>Never</th>
<th>Once a semester or less</th>
<th>More than once a semester</th>
<th>Nearly every lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In my mathematics class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I watch the teacher do an experiment</td>
<td>3%</td>
<td>3%</td>
<td>33%</td>
<td>61%</td>
</tr>
<tr>
<td></td>
<td>We do experiments by following instructions.</td>
<td>24%</td>
<td>13%</td>
<td>20%</td>
<td>43%</td>
</tr>
<tr>
<td>2</td>
<td>In Mathematics we need to be able to think and ask questions</td>
<td>3%</td>
<td>20%</td>
<td>37%</td>
<td>40%</td>
</tr>
<tr>
<td>3</td>
<td>My mathematics teacher</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tells me how to improve my work</td>
<td>26%</td>
<td>25%</td>
<td>39%</td>
<td>32%</td>
</tr>
<tr>
<td></td>
<td>Gives us quizzes that we mark to see how we are going.</td>
<td>23%</td>
<td>23%</td>
<td>37%</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>Marks our work and gives it back quickly.</td>
<td>19%</td>
<td>26%</td>
<td>20%</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>Makes it clear what we have to do to get good marks</td>
<td>10%</td>
<td>18%</td>
<td>22%</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>Uses languages that is easy to understand</td>
<td>7%</td>
<td>20%</td>
<td>31%</td>
<td>42%</td>
</tr>
<tr>
<td>4</td>
<td>During Mathematics class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>We have enough time to think about what we are</td>
<td>14%</td>
<td>31%</td>
<td>40%</td>
<td>15%</td>
</tr>
</tbody>
</table>
As the table shows, 65% of the students reported that they watched their teachers doing experiments while 43% carried out experiments by following instructional during almost all lessons. Only 17% of the students stated that their lecturers marked and returned their work in nearly every lesson. Of the two hundred students, 37% related that they became bored during lessons more than once in a semester. The table also indicates that only 9% of the students used computers during the lessons while only 23% use the internet to source information in nearly every lesson.

The lecturers were also asked to name the most important ways by which the teaching and learning of mathematics could be improved in the colleges. Most of them mentioned more than one approach. The approaches mentioned by the teachers are presented in Table 3.

### Table 3:

**Approaches to improving the quality of Mathematics Teaching**

<table>
<thead>
<tr>
<th>S\No</th>
<th>Factor</th>
<th>Sub factor</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Resources:</td>
<td>Mathematics needs a large budget or more resources</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Better and more relevant curriculum resources</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Better access to computer, softwares, information technologies</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Student Factors:</td>
<td>Students need better attitude to Mathematics.</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Students need</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Students need better literacy standards or more support for students with learning difficulties.</td>
<td>23</td>
</tr>
<tr>
<td>3</td>
<td>Teacher Factors:</td>
<td>Need more time for planning, reflection and collaboration or reduced teaching loads</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Need for more professional development.</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Teaching-Learning</td>
<td>Need smaller classes.</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Factors:</td>
<td>The Mathematics program needs more practical work.</td>
<td>3</td>
</tr>
</tbody>
</table>
Need more appropriate assessment e.g. assess less content.
Need better student behavior management systems in schools.
Need more student-centered learning.
Need less content in the Mathematics curriculum.
Need more community support for teaching mathematics.
Students need to rate mathematics as being more important than they do now.
No improvement is needed.

As the table shows, the most frequently mentioned approaches to improving the teaching and learning of Mathematics were more time for planning, reflection, and collaboration with colleagues, mentioned by twenty-two (22) lecturers; professional development, mentioned by twenty-two (22) lecturers; and small class sizes, recommended by fifteen (15) lecturers.

**Discussion of Results**

Facilities and mode of teaching are the aspects of the prescribed condition for mathematics education contained in the NCCE minimum standard for Mathematics, which needs to be compared with actual picture shown by the three tables presented above. The ideal in terms of the facilities required for mathematics education include at least three (3) lecture rooms and a lecture theatre, a fully air-conditioned mathematics laboratory with mini micro computers of not more than ten students per one, an overhead projector or multimedia projectors and a mathematics workshop where students can make their own instructional materials also required are an office per lecturer, equipped with bulletin boards, book shelves, visitors’ seat and standard furniture, an office for the Head of Department; furnished with accessories and an office for the supporting staff. There must also be current and relevant textbooks and journals to cover all the areas of the subjects to the ratio of one student to ten books. A departmental library is also needed.

When we look at Table 1 which shows the factors limiting the quality of teaching and learning Mathematics in the selected colleges, we see the problems of inadequate resources and budget for Mathematics education. Other problems are large classes, that is, admission of many students which prevents the colleges from having ideal lecturer – students and students – books ratios. The needs for a large budget or more resources for Mathematics education, the needs for smaller classes and better access to computers, software information technologies, which were among the approaches recommended by the lecturer for improving Mathematics education (see table 3) also reflect the problem of shortage facilities needed for quality teaching and learning of Mathematics in the colleges.

On the mode of teaching, the ideal picture speaks of the use of Lectures, Tutorials, problem solving, Seminar, Demonstration, Drill, Experimentation, Excursion, Discovery, Method Laboratory Method, etc. It further stresses that discovery method and laboratory work should be emphasized. When references is made to Table 2 containing typical learning activities that occur in Mathematics classrooms, it could be seen that 65% of the students reported that they watched their teachers doing experiments while 43% carried out experiments by following instructional during almost all lesson. 24% related that they have never conducted any experiment despite the inclusion of experimentation among the modes
of teaching Mathematics. Of the two hundred students included in the study, 37% related that they became bored during lessons more than once in a semester. This boredom could be as a result of frequent use of lecture method instead of using other methods as well. In fact, the table also indicates that only 9% of the students used computers during their lessons while only 23% use the internet to source information in nearly every lesson. The need for smaller classes and better access to computers, which were among the approaches recommended by the lecturers for improving Mathematics education (see Table 3) also indicate that certain methods of teaching and learning Mathematics, such as discovery and laboratory methods could be adopted only if these needs were met.

Conclusion
Based on the findings of this study presented in Table 1, 2 and 3 and the discussion on them, it could be concluded that there are considerable differences between the prescribed condition for Mathematics education portrayed in the NCCE minimum standards in respect of facilities and modes of teaching, and the actual condition depicted by the findings of this study.

Recommendations
In line with the major findings of this study it is recommended that adequate resources for teaching and learning Mathematics education in Nigerian college of Education should be provided through collective efforts of all tiers of government and community members. Secondly professional development for Mathematics lecturers should provided by the colleges and other agencies like the NCCE and the Tertiary Education Tax Fund. Third, more time for planning, reflection, and collaboration with colleagues’ especially through workshops as well as the use of small sizes convenient for lecturing should be given consideration. Lastly, incentives should be provided to attract larger numbers of quality lecturers and students to the teaching and learning of Mathematics, and to retain experienced lecturers in the classroom.

References


ABSTRACT

This research study focused on the relationship between socio-economic status (SES) of parents and students’ achievement in mathematics at the senior secondary school level in Rivers State, Nigeria. The ex-post facto research design was adopted for this study, since already conducted mathematics test scores of the students were retrieved and used for the analysis. Furthermore, data were elicited through the socio-economic status (SES) and students’ achievement in mathematics questionnaire (SESASMQ). This questionnaire has twelve (12) question items related to socio-economic status (SES) and students’ achievement in mathematics. A population of 10,120 students were involved in the study out of which 4510 were chosen for the sample using the Yarrow Yamen’s formula. The data were analyzed using the Z – test static, means and simple percentage. The findings were that to a low extent socio-economic status (SES) of parents related to students’ achievement in mathematics. However, the hypothesis testing showed that there is a significant relationship between socio-economic status (SES) of parents and students’ achievement in mathematics. Based on these findings, recommendations were made.

Key words: Socio-economic status parents, students, mathematics achievements, senior secondary schools.

Introduction:

This research study focused on the socio-economic status (SES) of parents and students’ achievement in mathematics at the senior secondary school level in Rivers State, Nigeria. Incidentally, there is a widespread interest in improving the levels of mathematics achievement in schools. Though economic benefits abound, it is also argued that there are also social benefits tied to improving access for larger numbers of young people to post-school education and training. The interest in raising levels of achievement in mathematics has led to a focus in identifying the range of factors that shape achievement in mathematics. Such major factor to be considered in this study is the socio-economic status (SES) of parents.

In our research context, socio-economic status (SES) is a term used to summarize a variety of factors, including parental education and occupation, that influence student performance. Simich-Dudgeon and Weimstein – Shr (2004) found that other socio-economic characteristics (e.g. Parents education, income, median age, home ownership, number of
children) taken into consideration, students are more likely to succeed academically if their parents actively support their learning. They outlined the socio-economic roles of parents in students’ achievement as below:

(i) Provide a home environment that support children’s learning needs.
(ii) Volunteer in schools as aides or in other roles.
(iii) Monitor children’s progress and communicate with school personnel.
(iv) Tutor children at home to reinforce work done in school.

In addition, Sticht and Weinstein – Shr (2005) found that children’s achievement in school was directly correlated with the mother’s level of education as mother is usually the first teacher. Furthermore, the mother’s role of constructing conversations; talking about books and pictures in those books, telling bedtime stories, reading aloud, and asking questions are important steps towards developing the child’s literacy skills.

Weinstein – Shr (2005) cites research that shows how parents – child interaction affects students’ learning and how such interaction is especially valuable where literacy in a foreign language is new to both parent(s) and child. Arguably because the family is a crucial resource for making sense of a new life in a new setting, its basic economic, social and psychological needs should be reflected in designing ways to help learners achieve mathematical and scientific proficiency and power.

However, in PISA (2003), SES is measured by an index that includes information describing family structure, parental education and occupation. Parental labour market participation and whether a student’s family has specific educational and cultural possessions at home. An earlier analysis of PISA (2000) results which focused mainly in literacy found that students from higher socio-economic families tended to show stronger literacy skills. The same result was found for PISA (2002), in which students from families with higher socio-economic status also tended to perform better in students’ achievement in mathematics. Does an aggregate of these views connote the fact that the socio-economic status (SES) of parents play a centre-stage role in the achievement of students especially in mathematics? What is the problem of low achievement in mathematics at the senior secondary school level in Rivers State, Nigeria?

THE PROBLEM
Odubina (2001) posited that mathematics is the pivot around which the whole essence of living revolves and the basis for scientific and technological take – off. Yet, Ahiakwo (2006) found that the performance of various levels of students has decelerated over the years with that of Nigerian children quite remarkable. Furthermore, the Chief Examiners Report of results of our public examinations (WAEC, 2001-2009) had shown markedly a decline in the percentage of passes in mathematics. Earlier Ibebuike (1986) noted that many students even as far back as their primary school time, do not take interest in mathematics to a meaningful degree and this has led to a continuous general poor performance in the subject. Does that suggest a likely relationship between the socio-economic status of parents and students’ achievement in mathematics at the senior secondary level in Rivers State, Nigeria? To what extent is this relationship? This research study is poised to investigate this phenomenon.
THEORETICAL BACKGROUND

The term socio-economic status (SES) of parents in relation to this study is a concept demanding utmost attention. It deals with parents’ education, income come, median age, home ownership, number of children etc. Furthermore, Bojuwoje (2000) noted that Nigerian parents (especially the educated ones) are known to be in the habit of dictating career choices to the students. These parents he stressed need assistance of a counseling nature in developing appropriate skills in parents-child interaction. Sjogen (2002) found that parental formal education is another factor influencing occupational choice of the student. He posited that youths from poorly educated parents are sensitive to economic incentives since they are to a greater extent attracted to occupations with high rates and high return to education.

Adesemowo and Adenuga (1998) had earlier noted that educated parents were more concerned about their children than the uneducated ones. This might be as a result of their levels of education which have exposed them to series of information about life generally.

Echeche (2000) noted that development of interest in occupation starts from the home. He stressed that the occupation of the individual’s parents and other key figures in his/her family influences the occupational choice of such an individual.

Smith and Cheung (2004) conducted a study in the Philippines primary school children and found that home support for education from the parents had shaped the school attainment of their children. Several studies have explored the relationship between socio-economic status (SES) of parents and students’ achievement in mathematics in China, India, Kenya, Nepal, the Philippines and Thailand.

However, comparing Canada with other countries, differences in socio-economic status had a smaller impact on students’ achievement. Furthermore differences in socio-economic status among Canadian students’ also were smaller than in most countries. In the same vain, parental occupation may also influence how students perceive the value of mathematics learning environment at home. Examining this further, if occupation is considered as an indicator of parental skill use it appears that students whose parents worked in occupations with greater skill requirements also performed better in mathematics.

Critically examining the PISA (2002) results, students whose parents were in professional or managerial occupations were found to have higher mathematics achievement than others. In other words, students whose parents had occupations that specifically required strong mathematical skills – that is physical mathematical and engineering science professionals tended to have highest mathematical scores than other students. It was also observed that students whose officials, executives occupational category that include legislators, senior officials, executives and managers in fact performed almost one proficiency level lower than students whose parents worked in the mathematics – intensive occupational group.

Mburza (2003) asserted that research had shown that parents of Nigerian secondary school students being largely illiterates are scarcely capable of reading well informed decisions about the future of their youths. This ever – so – often, it is the parents own misconceptions of the nature of work rather than the demand on the employment market that provides many youths with the prime stimulus to select occupation.
The programme for international student assessment PISA (2005) contended that “parents play an important role in their children’s learning. Aside from being actively involved in their children’s education, parents also provide a home environment that can affect learning. Furthermore, parents serve as a model for learning, determine the educational resources available in the home and hold particular attitudes and values towards education. Although it is difficult to examine the home environment of each student, the educational attainment and occupation of parents serves as an indicator of the values and resources with which parents create this environment.

PISA (2005) carried out a study on Canada as a whole and found that the average mathematics series students whose parents had high school or less were significantly lower than the average scores of students whose parents had college or university education. For example, one parent with a university degree compared to those whose parents had no more than high school education was about two-thirds of the proficiency level.

Findings revealed that there is a positive relationship between the educational level of the parents and student performance in mathematics. However, there was also a considerable overlap in the performance of students from difficult educational backgrounds. Infact, many students whose parents had a university degree.

In the Nigerian context, Ali (2003) stated that “there is evidence to show that parents’ education has the strongest influence in students’ choice of career, thereby influencing achievement in mathematics. Corroborating this view, Sjogen (2002), Sharma (1997) and Onoyase (1996) contended that the home environment exerts a significant influence on students’ educational aspirations.

Hence, this study is poised to determine the relationship between socio-economic status (SES) of parents and students’ achievement in mathematics with a special focus on Rivers State, Nigeria. This is with the view to filling the gap in literature and contribute to requisite knowledge in mathematics education.

The method
The ex-post facto research design was adopted for this study because it seeks to investigate an existing phenomenon regarding students’ achievement in mathematics. The population of the study consisted of 10,120 senior secondary II Students in Rivers State, Nigeria. However, the sample size of 4,510 for the study was selected by using the Yarrow Yamen’s formula. The research instrument is the socio-economic status (SES) and students’ achievement in mathematics questionnaire (SESASAMQ). To elicit data from the respondents the instrument was constructed using the following scale:

1. Very High Extent (VHE) = 4
2. High Extent (HE) = 3
3. Low Extent (LE) = 2
4. Very Low Extent (VLE) = 1

The respondents were free to indicate () in the column against each of the items as it applied to them. A decision cut off point of 2.50 was adopted. Any item or component in which the
respondents have a mean score of 2.50 and above was regarded as a high extent while a mean score below 2.50 was regarded as a low extent.

Descriptive and inferential statistics were adopted for this study. In the descriptive statistics mean ($\bar{X}$) variance ($\delta^2$) and standard deviations ($\delta$) were computed and tables constructed. Deductions made from results on these table formed the answers to the research question. To test the hypothesis, the Z – test statistic was applied to compare the means of the SES and achievement in mathematics. The 0.05 level of significance was adopted with the degree of freedom as $df = N_1 + N_2 - 2$.

Table1: Distribution of population of 10,120 senior secondary II Students in Rivers State, Nigeria.

<table>
<thead>
<tr>
<th>S/N</th>
<th>LOCAL GOVT. AREA</th>
<th>NO. OF SCHOOLS</th>
<th>POPULATION OF STUDENTS (SS 2)</th>
<th>SAMPLE OF STUDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Abua/Odual</td>
<td>11</td>
<td>440</td>
<td>209</td>
</tr>
<tr>
<td>2.</td>
<td>Ahoada-East</td>
<td>12</td>
<td>480</td>
<td>218</td>
</tr>
<tr>
<td>3.</td>
<td>Ahoada-West</td>
<td>13</td>
<td>520</td>
<td>226</td>
</tr>
<tr>
<td>4.</td>
<td>Akuku-Toru</td>
<td>8</td>
<td>320</td>
<td>177</td>
</tr>
<tr>
<td>5.</td>
<td>Andoni</td>
<td>10</td>
<td>400</td>
<td>200</td>
</tr>
<tr>
<td>6.</td>
<td>Asari-Toru</td>
<td>8</td>
<td>320</td>
<td>177</td>
</tr>
<tr>
<td>7.</td>
<td>Bonny</td>
<td>13</td>
<td>520</td>
<td>226</td>
</tr>
<tr>
<td>8.</td>
<td>Degema</td>
<td>12</td>
<td>480</td>
<td>218</td>
</tr>
<tr>
<td>9.</td>
<td>Eleme</td>
<td>6</td>
<td>240</td>
<td>150</td>
</tr>
<tr>
<td>10.</td>
<td>Emohua</td>
<td>19</td>
<td>760</td>
<td>262</td>
</tr>
<tr>
<td>11.</td>
<td>Etche</td>
<td>19</td>
<td>760</td>
<td>262</td>
</tr>
<tr>
<td>12.</td>
<td>Gokana</td>
<td>12</td>
<td>480</td>
<td>218</td>
</tr>
<tr>
<td>13.</td>
<td>Ikwere</td>
<td>13</td>
<td>520</td>
<td>226</td>
</tr>
<tr>
<td>14.</td>
<td>Khana</td>
<td>22</td>
<td>880</td>
<td>275</td>
</tr>
<tr>
<td>15.</td>
<td>Obi/Akpor</td>
<td>16</td>
<td>640</td>
<td>246</td>
</tr>
<tr>
<td>16.</td>
<td>Ogu/Bolo</td>
<td>3</td>
<td>120</td>
<td>92</td>
</tr>
<tr>
<td>17.</td>
<td>Okrika</td>
<td>6</td>
<td>240</td>
<td>150</td>
</tr>
<tr>
<td>18.</td>
<td>Onuma</td>
<td>3</td>
<td>120</td>
<td>92</td>
</tr>
<tr>
<td>19.</td>
<td>Ogba/Eghema/Ndoni</td>
<td>15</td>
<td>600</td>
<td>240</td>
</tr>
<tr>
<td>20.</td>
<td>Opobo/Nkoro</td>
<td>3</td>
<td>120</td>
<td>92</td>
</tr>
<tr>
<td>21.</td>
<td>Oyigbo</td>
<td>4</td>
<td>160</td>
<td>114</td>
</tr>
<tr>
<td>22.</td>
<td>Port Harcourt</td>
<td>15</td>
<td>600</td>
<td>240</td>
</tr>
<tr>
<td>23.</td>
<td>Tai</td>
<td>10</td>
<td>400</td>
<td>200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>253</strong></td>
<td><strong>10120</strong></td>
<td><strong>4510</strong></td>
</tr>
</tbody>
</table>

Results and discussion

Research Question: To what extent does socio-economic status (SES) of parents relate to students’ achievement in mathematics?
Table 2: Analysis of the opinions of students on socio-economic status of parents and students’ achievement in mathematics.

<table>
<thead>
<tr>
<th>S/N</th>
<th>QUESTION ITEMS</th>
<th>VHE (4)</th>
<th>HE (3)</th>
<th>IE (2)</th>
<th>VLE (1)</th>
<th>TOTAL</th>
<th>MEAN ($\bar{X}$)</th>
<th>Percentage Rating (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To what extent does your fathers’ position in the office influence your learning of mathematics?</td>
<td>451</td>
<td>564</td>
<td>2593</td>
<td>902</td>
<td>4510</td>
<td>2.13</td>
<td>53.25</td>
</tr>
<tr>
<td>2.</td>
<td>To what extent does your living in a government reservation area make you achieve better grades in mathematics?</td>
<td>226</td>
<td>350</td>
<td>2852</td>
<td>1082</td>
<td>4510</td>
<td>1.94</td>
<td>48.44</td>
</tr>
<tr>
<td>3.</td>
<td>To what extent does the income of your father influence your achievement in mathematics?</td>
<td>677</td>
<td>1398</td>
<td>1691</td>
<td>744</td>
<td>4510</td>
<td>2.45</td>
<td>61.25</td>
</tr>
<tr>
<td>4.</td>
<td>To what extent does the occupation of your father influence your achievement in mathematics?</td>
<td>361</td>
<td>451</td>
<td>2548</td>
<td>1082</td>
<td>4510</td>
<td>2.04</td>
<td>51.00</td>
</tr>
<tr>
<td>5.</td>
<td>To what extent does the occupation of your mother influence your achievement in mathematics?</td>
<td>316</td>
<td>451</td>
<td>2650</td>
<td>1093</td>
<td>4510</td>
<td>1.99</td>
<td>49.75</td>
</tr>
<tr>
<td>6.</td>
<td>To what extent does your father’s qualification influence your achievement in mathematics?</td>
<td>259</td>
<td>406</td>
<td>2706</td>
<td>1139</td>
<td>4510</td>
<td>1.95</td>
<td>48.75</td>
</tr>
<tr>
<td>7.</td>
<td>To what extent does your mother’s qualification influence your achievement in mathematics?</td>
<td>282</td>
<td>530</td>
<td>2402</td>
<td>1226</td>
<td>4510</td>
<td>1.95</td>
<td>48.75</td>
</tr>
<tr>
<td>8.</td>
<td>To what extent does the medium age of your parents influence your achievement in mathematics?</td>
<td>203</td>
<td>361</td>
<td>2740</td>
<td>1206</td>
<td>4510</td>
<td>1.90</td>
<td>47.50</td>
</tr>
</tbody>
</table>
9. To what extent does your father’s ownership of a home influence your achievement in mathematics?

10. To what extent does the number of children at home influence your achievement in mathematics?

11. To what extent does the culture of your parents influence your achievement in mathematics?

12. To what extent does your father driving you to school in an official car influence your achievement in mathematics?

Group mean Rating (x) = 2.02 50.5

Table 2 above, revealed that the summary result of the total opinion of students on the relationship between socio-economic status of parents and students’ achievement in mathematics was 2.02 indicating a percentage of 50.5. However, the decision rule says that the mean of the scale used is 2.50, making any score below 2.50 to show “a low extent”. Therefore the score 2.02 with a percentage rating of 50.5 shows to “a low extent socio-economic status (SES) of parents relate to students’ achievement in mathematics.

Hypothesis Testing
H₀: There is no significant relationship between the socio-economic status of parents and students’ achievement in mathematics.

Table 3: Z-ratio test of significant relationship between the socio-economic status of parents and students achievement in mathematics.

<table>
<thead>
<tr>
<th>Variables</th>
<th>X</th>
<th>Sd</th>
<th>N</th>
<th>df</th>
<th>P</th>
<th>S. Error</th>
<th>Z-cal</th>
<th>Z-Crit</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-economic status (SES)</td>
<td>50.5</td>
<td>4.89</td>
<td>4510</td>
<td></td>
<td>0.05</td>
<td>0.084</td>
<td>-17.34</td>
<td>&gt;1.96</td>
<td>Reject</td>
</tr>
<tr>
<td>Students’ achievement in mathematics</td>
<td>54.09</td>
<td>14.79</td>
<td>4510</td>
<td>9018</td>
<td>0.228</td>
<td>0.084</td>
<td>&lt; -1.96</td>
<td>OR</td>
<td>H₀</td>
</tr>
</tbody>
</table>

The result on table 3 showed that the calculated values of Z is – 17.34 which is outside the acceptance region of 1.96 and -1.96, at the degree of freedom 9018 at the 0.5 level of significance. Since the calculated values of Z falls outside the acceptance region, we reject
the null hypothesis that there is no significance relationship between the socio-economic status of parents and students’ achievement in mathematics. Hence there is a significant relationship between the socio-economic status of parents and students’ achievement in mathematics.

Conclusion:
From the analysis of data and the discussion of findings the following conclusions were made:

(i) There is a significant relationship between socio-economic status (SES) of parents and students achievement in mathematics.

(ii) Parents who possess an occupation with greater skill requirement like engineering are likely to influence their children to learn mathematics. However, these results were corroborated with earlier results from Canada, the Philippines, Nepal as indicated in the recent literature reviewed.

Recommendations
Considering the findings, discussions and conclusions, the following recommendations were made:

1. Since, the problem of study was the poor performance of students in mathematics at the senior secondary school level in Rivers state, Nigeria, parents should not blame government, teacher of mathematics and WAEC personnel alone, but look inward at home by helping students provide textbooks, workbooks, and ensure home task are properly done by the students.

2. Since socio-economic status of parent (SES) was significantly related to students’ achievement in mathematics, the researcher recommends that parents should actively support the learning of their children, in such ways as monitoring children’s progress and communicating with school personnel, tutor children at home to reinforce work done in school and acting as volunteer in schools as aides or in other roles.

REFERENCES


PISA (2002). Programme for student Assessment for student achievement in mathematics, Educational Matters Hong Kong.


Sharma, F. (1977). Predicting the adult earning capacity of minors, America. The economic Ltd.


Abstract
Entrepreneurship education constitutes a vital curriculum instrument which could be employed in addressing issues and problems which lead to Economic Development in Africa. As most of our tertiary education grandaunts currently appear to be marginalized in the scheme of socio economic and developmental endeavours in this continent, entrepreneurial skills germane for generating self-employment could be explored as a very good alternative to wage employment. This line of thought could go a long way, not only in arresting the soaring unemployment rate in the Africa but could also contribute in enabling African countries overcome or solve a number of problems or issues which are at stake in the course of our march towards sustainable development. This paper does claim to be conclusive but presents important issues for careful reflection, to provoke discussion on the discourses on the relevancy of entreprenership education to economic development of Africa. The paper is not empirical but it is located in sound knowledge and careful observation within African economic development in a global world as viewed by the writer. The paper raises issues around entrepreneurship education and economic development in Africa. Thus it has examined the concept of entrepreneurship education and its relationship economic development particularly in this age of globalization in Africa. It equally analyses the entrepreneurship role in contending Socio-economic development in African countries and made some recommendation on how to utilise this variable to make African Educational system achieve its Socio-economic aims and objectives and make African Countries grate in the nearest future. Methodically, the paper is a product of careful observation and reflections on direct participation in Higher education production and conclusion from studies in the fields of entrepreneurship education and human values in Africa.

Introduction
The challenges confronting Africa in the task of achieving the developmental goals presented in the foregoing strategic socio-economic plans Like MDGs bear seriously on the problem of implementing all the objectives intrinsic in them so that Africa could be portrayed as being on the verge or threshold of attaining sustainable development in all its ramifications. For education, programmes to be employed as fundamental instruments in achieving the foregoing developmental goals, they must necessarily be efficient. In particular, if these programmes are to serve as vital equipments for capitalizing on the human resources and capacity-building assets needed
for achieving the variegated objectives and goals, we need a re-orientation. We require educational programmes that have to be tailored at recreating the necessary socioeconomic and political values considered critical to the growth and consolidation of the continent’s democracy. Umar,(2008) recounted these values thus: honesty, transparency, cooperation and the rule of law, respect for the dignity of labour, discipline, industry, self confidence and moral courage. Umar endorses that these values are at the root in the tasks involved in the empowerment of individuals and enabling the generality of the people in a given populace in recognizing the vitality of education as a necessary foundation for life-long learning and human development on which an individual can build systematically further levels and types of education and training.

It has, therefore, become vital that new courses and programmes be deliberately introduced into our various schools’ curriculum in order to revitalize them with a view to educating and or reeducating the country’s womenfolk. It is submitted here that the foregoing values and the empowerment structures needed for overcoming our gender issues and problems for sustainable development in this 21st century must necessarily be compatible with the essence of human capacity-building assets and skills required in the display of organizational and management practices needed for developing Nigeria’s natural resources and managing the natural environment in a most productive manner. Thus, one of such programmes and or courses which could be explored and employed in grooming and producing human resources characterized by a number of the aforementioned values and skills and who could constitute the pillars for achieving the goals of economic development in Africa for sustainable development is entrepreneurship education.

Entrepreneurship education, according to Ozoro (2003), is expected to develop in the recipients the needed skills for self-reliance and easy adaptation in the world of work, thus producing not job seekers but job creators and employers of labour. Ozoro submits that this type of education emphasizes the dignity of labour, encourages diligence, proper means of gaining prosperity and of solving economic problems; it stimulates and encourages creativity, equips the school leaver with skills for earning a living. However, Akanbi (2002) cautions that entrepreneurship education should be seen as a short term enterprise. She stresses that it has to be given on the perspective that the recipient will benefit from it and use it to become self-employed and self reliant apart from being productive in work and human affairs.

The place of entrepreneurship programmes in the task of enabling our populace, particularly our tertiary education graduates, achieve the goals and objectives of African economic development is not merely an issue of classroom delivery of subject matter or content alone; it also embraces and places a good degree of premium on the employment of requisite methods and knowledge structures including a display of a number of skills for achieving the objectives and goals established in African economic development. These skills, according to Akanbi (2002), are designed to enable Nigeria, among others, tackle her socio-economic issues and problems, particularly in terms of enabling our graduates gain awareness and embrace a number of developmental assets that are rooted in the following: (a) acquisition of human resources and capacity-building skills ;(b)Promotion of human dignity and equality (c) promotion of peace, democracy and democratic governance; (d) Promotion of environmental stability and sustainability; (e) technological development and the necessary skills’ acquisition; (f) natural resources
Entrepreneurship Education examined vis-à-vis the challenges of Socio-economic Issues and Problems in the task of Sustainable Development in 21st Century Africa.

Edomareniiye (2010) reflects that entrepreneurship education can be viewed as the aspect of education and learning that can create in the learner a kind of behavior that emphasizes initiative-taking, the organization and re-organization of social and economic mechanisms and situations to practical account, and the acceptance of risk or failure. As a process of creating incremental wealth, entrepreneurship education helps the entrepreneur to bridge the gap between science and the market place by creating new enterprises and bringing new products and services to the market (Hisrich and Peters, 2007). These entrepreneurial activities significantly affect the economy of any nation by building the economic base and providing jobs for all cadres of people (Edomareniiye, 2010). African generally has reference for an utilitarian traditional education, yet our tradition relies more on practical service than on mental cultivation.

Ekanam (2003) elaborates further that entrepreneurship education provides the process by which new organization can emerge into existence and therefore constitutes a human creative act that builds something of value from practically nothing. He also conceptualizes entrepreneurship education as the education that initiates into an individual the capacity for organizing, operating and assuming risks for a business venture. It is dynamic, risk-taking, creative and growth oriented behavior which involves the use of a variety of resources to create wealth. Ovakomo (2008) opined that entrepreneurship education involves the identification of general characteristics of entrepreneurs and how the potential entrepreneur can be trained in management for long-term/long time survival of effective performance; it, therefore, becomes imperative, according to these scholars, that entrepreneurship education should be integrated into the curriculum of all institutions of learning to equip all classes of students irrespective of gender differences and divergences with relevant skills, acute business knowledge, self-confidence and other attributes necessary for self-reliance and national survival.

Thus entrepreneurship education, among other functions, is designed to enable individuals overcome and counter all forms of challenges and issues which derive from gender stereo-typing, neglect and discrimination; it cuts across and constitutes an antidote for barriers militating against human development and advancement. It endorses the emergence of bold ventures that transcend tribal sentiments, ethnic affiliations and religious groupings. Entrepreneurship education is asking the individual, whether a male or a female, the following questions amongst others: (a) what is your mind-set? (b) are you preparing to go the extra mile to seek the “golden fleece”? (c) can you work very hard in spite of your circumstances? (d) are you narrow-minded or parochialistic in your life-style? (e) are you prepared to cultivate the spirit of excellence? (f) are you ingenious and diligent in your sentiments?

The issues involved in the foregoing reflections cut across gender affiliations, and therefore need to be capitalized upon so that the individual could make success of entrepreneurship education. The criteria recounted above do not require heavy investment or heavy capital outlays. The individual, male or female, could start from almost nothing; he or she only requires the strong will, the ingenuity and iron-character to
make things happen socio-economically. These lines of thinking could assist our nations to overcome the problems and issues which bear on economic development and therefore contribute enormously in the tasks intrinsic in achieving African’s developmental goals for sustainability as contained in Nigerian vision 2020.

However, a number of key issues must necessarily be put in place for enhancing entrepreneurship education, particularly if it is to be explored and employed for addressing socio-economic problems for the attainment of sustainable development in the 21st century Africa. The following criteria are important:

(a) There is need for the establishment of the necessary framework for entrepreneurship education to thrive and become sustained
(b) Entrepreneurship education has to be integrated within the framework of our national curriculum from the grassroots level to the tertiary level.
(c) Government has to institute frameworks for translating policy commitments into concrete resources and tangibles.
(d) We need to develop schemes for determining adequate indicators and mechanisms for monitoring progress in the entrepreneurship education process.
(e) There is a need for the government to establish entrepreneurship pilot schools which are designed to cater for the “workmanship- interests” of students and learners in spite of gender differences.
(f) There is a need for the government to raise awareness and dissemination of genuine practices in entrepreneurship programmes; these awareness programmes and campaigns should be geared at “waging war” against gender discrimination and gender stereotyping.
(g) There is a need for instituting programmes and educational processes which are designed to favour links between schools and businesses including business consortiums.
(h) There is need also in providing specific training to school teachers and making teaching materials and resources available; these training programmes have to capitalize on exposing these teachers to teacher-management designs in the context of organizational set-ups and or requirements
(i) Government has to institute modalistic and processes for stimulating cultural changes that will help to define, explain and promote entrepreneurship education; the modalities and processes must be geared at cutting across gender differences and at the same time militating against gender differences and gender stereotyping.
(j) Government should endeavour to build achievement motivation into teaching and learning situations in order to bridge gender inequality gap, and counter gender discrimination and gender stereotyping as done in many European countries (Edomarenije, 2010).

Contending with 21st Century Socio-Economic development Challenges through Entrepreneurship Curriculum Programmes In African’s Schools’ system.

In order to contend with the soaring unemployment crisis, which cuts across gender difference, in this continent, African leaders has to consider instituting and establishing support programmes that are rooted in entrepreneurship programmes in all educational institutions. The emphasis in such programmes has to be tailored at boosting self reliance amongst all cadres of students and learners. Government has to encourage
academic institutions to design programmes for generating entrepreneurship spirit amongst all students. The aim is to equip these students, on graduation, with skills capable of making them entrepreneurs rather than job seekers, Nwankwo (2010) advances that entrepreneurs are marked by their exceptional drive to achieve; this exceptional drive, according to him, is close to the four pillars of education; these include: (a) learning to know ;(b) learning to do; (c) learning to live together; and (d) learning to be. He expatiates, that entrepreneurship education constitutes an integral part of the general education designed to equip all students with entrepreneurial skills that will make them self-reliant, self-employed, creative and innovative.

Adamu (2005) reflects that the operational definition of entrepreneurship education is that part of education that enables a person to develop the willingness and ability to explore and exploit investment opportunities, establish and manage a successful business enterprise. He argues that since entrepreneurship education is an integral part of the general education, it is necessary to endorse that some measures need to be adopted in the African schools’ system if it must be relevant to the local needs and aspirations of young persons.

The current emphasis on entrepreneurship education amongst Nigeria academics suggests that Nigerian education system, other African countries inclusive, needs some kind revision or modification so as to render it more responsive in meeting our local needs and demands. In this directive, our education could be made more relevant through the infusion of curriculum programmes in the already established education system of each country. Nwankwo (2010) suggests that the relevance of education is better judged from its propensity to respond to the needs and aspirations of its users and operators. If entrepreneurship education is to be capitalized upon in achieving the objectives and goals of sustainable development in any country, particularly in addressing the problems and issues which impinge on economic development, there must be quality teachers who can develop in all cadres of learners, children and students critical and creative thinking patterns in the context of being responsive to our local needs and demands.

Thus the goal of entrepreneurship education in Africa cannot be achieved in the absence of an intelligent, well-educated and professionally qualified teachers who must be dedicated to service of humanity. These teachers should be able to inspire all cadres of learners as to what it takes to be critical and creative. They have to lure students into recognizing that without their ability to think critically and creatively, the possibility of becoming good and successful entrepreneurs might be ruled out. These teachers must necessarily be involved in constant evaluation of curriculum programmes in entrepreneurship education. Through this device, irrelevant materials could be dropped and the entire process made more responsive to the needs and aspirations of the society. These teachers have to stress emphasis on the development and acquisition of skills and knowledge structures useful to our local environments. They also have to be engaged in constant stock taking by weighing any achievements recorded through entrepreneurship education against failures encountered; this could enable them to change or modify any existing practices. On the whole, these teachers must necessarily be committed to the advancement of the core areas of entrepreneurship education which, according to Edomarenriye (2010:111), include:
(a) Endorsement and development of such personal qualities as creativity, spirit of initiative, critical thinking, hard-work, perseverance and diligence amongst all cadres of learners;
(b) Emphasizing amongst members of society, the need for early contact with the world of business and knowledge and the role of entrepreneurs;
(c) Creating the awareness amongst all cadres of learners to visualize self-employment as a career option;
(d) Training and educating individuals to endorse the philosophy of learning by doing; and
(e) Training in business ideas.

Overcoming African Socio-Economic Problems for Sustainable Development in 21st Century through Entrepreneurship Education

This exposition advances that entrepreneurship education provides social programmes for exploring ways of integrating educational graduates into the labour force including the reduction of discrimination against Gender issues in our financial markets. Entrepreneurship education endorses the need for a self-employed people through the acquisition of the habits, attitudes and skills as means of surviving in the face of the global economic recession. Gender issues raised in the context of entrepreneurship education have become subject of current discussion in most international conferences (Edomarenuye, 2010). Derivable benefits by our girls and womenfolk from embracing entrepreneurship education include the following assets (a) acquisition of skills in entrepreneurship; (b) promotion of the zeal to become enterprising and explore the benefits there from ;(c) promotion and enhancement of their levels of accountability.

The Nigerian Government took a giant step to promote the concept of vocationalism by stating the objectives of vocational-technical education in her National Policy on Education (1981, Revised) as follows:
(a) to provide trained manpower in applied science, technology and commerce particularly at sub-professional grades;
(b) to provide the technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development;
(c) to provide people who can apply scientific knowledge to the improvement and solution of environmental problems for the use and convenience of man;
(d) to give an introduction to professional studies in engineering and other technologies;
(e) to give training and impart the necessary skills leading to the production of craftsmen, technicians and other skilled personnel who will be enterprising and self-reliant; and
(f) to enable our young men and women to have an intelligent understanding of the increasing complexity of technology.

These objectives were stated 24 years ago to redeem the bias against vocational-technical education. To this day, even though more vocational-technical institutions have been established across the nation as compared with the fewer numbers of institutions in 1981, the initial bias against, and the disdain for vocational technical education is still evident. Students in polytechnics and technical institutions reflect this bias against vocational-technical education in the enrolment response across the nation.

A serious and positive embrace of entrepreneurship education by our educational system could open students eyes, in respective of Gender differences to the assets intrinsic in operating enterprises of needed capacity, based on their investment
limits and or capacities. Ughamadu (2010) reflects that, with sound research and information disposal and economic analysis, our graduates entrepreneurs could avail themselves of the possibilities of taking calculated risks, and which could also result into huge success (Nwakwo, 2010; Edomareniye, 2010). This cadre of people could undertake the planning and execution of interesting businesses that are of financial, marketing and operational relevance in Africa’s quest for sustainable development in this present Global Village. Ughamadu (2010) further advances that as it is functional in the free enterprise system, risks and rewards as operational processes are clearly defined: This development could become instrumental to exposing our graduate entrepreneurs to a number of basic economics concepts such as ‘savings’, ‘interests’, ‘supply and demand.’ Thus our prospective graduates-entrepreneurs could learn to appreciate the possibilities of varieties in finance, retail, service and technology.

The commitment of our educational system to the “entrepreneurial spirit” could enable its graduates advance strategies that are conducive to promoting a variety of enterprises in a given socioeconomic environment. These strategies could involve: (i) coping with the challenges involved in adopting a “survivalist formula” in the community service, and the overall economic development strategy; (ii) the adoption of practices in a given enterprise or organization, responsibly and professionally as required in legal ethics in an environment; (iii) employing the services of consultants and experts to achieve desired goals and objectives when these services are needed; (iv) exposure of their businesses or enterprises to the exigencies of the times and endeavouring to adopt the socioeconomic trends of the 21st century.

In the sphere of accountability, our prospective graduate’s entrepreneurs could be forced to endeavour to keep proper and accurate accounting system and recording procedures which could also guide them on improvement and assessment of results including the viability of their establishments. These graduates could also cultivate the principle of employing people according to their levels of impact, input and productivity with respect to their enterprises and establishments, and could also learn to reward these employees accordingly and appropriately. Above all, these graduate’s entrepreneurs could begin to produce responsible and capable successors who could also establish and manage their own prospective business consortiums and endeavours.

A reappraisal of this education for financial viability will involve our vocational-technical colleges being attached with business and industrial organization for practical training of students. Through this attachment, industries and business corporations can subsidize vocational-technical education.

In addition, employers and governments at the state and federals levels should encourage on-the-job- training of workers in public and private sectors. Attachment of middle level technicians to businesses and industries for upgrading of skills can help diversify vocationaltechnical training at minimal costs to government.

Also, individual efforts in technological production should be encouraged. For example, about two decades ago, a man built a ‘car’ that was powered by a generator. Another Nigerian in the early 1980s, exhibited a locally made ‘car’ at a National Trade Fare in Lagos. Some Nigerians could still remember that the late Professor Awojobi invented a car. Nigerian federal government needs to encourage young potentials who are contributing their impact technologically to develop our society and give them incentives for their talents.
Conclusion

In this exposition, the vitality of entrepreneur education in terms of addressing African Economic development in the task of achieving sustainable development in 21st century Africa, has been highlighted. In line with the reflections advanced in this presentation, Ughamadu (2010) submits that in this era where the world has become a global village, where information and communication technological breakthroughs have broken the geographical barriers, formatting the nation’s curriculum development designs towards entrepreneurship education is most desirable at this point in time. Our various governments, educational planners and curriculum developers need to recognize and live up to these challenges if we are to explore and employ entrepreneurship education in addressing gender issues and problems in the task of creating the necessary base for sustainable development in 21st century Africa.

African leaders need to create a new approach for the concept of vocational education and its purpose to the society. This is because entrepreneur education, for some decades now has been perceived to mean the education for the mentally retarded, physically handicapped and socially maladjusted students. We are at the beginning of a 21st Century. It is regrettable that many African leaders still believe that vocational education is for students with low intelligence and dropouts from formal school system despite the fact its occupational content offers the trainees the opportunity to acquire skills, attitude and knowledge which are needed for the technological growth of our nation.

Recommendations

In order to address the problem of Socio-economic development in Africa, the use of vocational inventories has become a necessity; this design could assist educational graduates including the general public to become more aware about their interests, aptitudes and “strong-points” in occupational choices so as to make appropriate career decisions.

All our teachers should be re-trained or trained towards embracing entrepreneurship education. These teachers could create the necessary basis for knowledge impartation amongst all cadres of learners.

Curriculum planning and development in our various education levels should be tailored, modified and manage to embrace entrepreneurship education. Primary and secondary school teachers should be more involved in the orientation of students towards the relevance of entrepreneur education to their communities and they should be constantly informed of the nations manpower needs: The administrators in the schools should ensure that qualified and competent teachers are employed to teach pre-vocational and vocational courses as recommended in our National Policy on Education.

Information and Communication Technology (ICT) courses should be grafted and taught in all cadres of our educational trainings so that our young graduates could grow with modern educational facilities provided by computers, internet, handset and other electronic discoveries and methods of information dissemination.

All vocational institutions in Africa should be oriented to explore and covet the assets intrinsic in the modern acquisition of skills provided in entrepreneurship education.
References


PERSONALITY TYPES, COPING STRATEGIES AS CORRELATES OF STUDENTS’ ACADEMIC ACHIEVEMENT IN KWARA STATE UNIVERSITY, MALETE, NIGERIA

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ABSTRACT
This study examined how personality types and coping strategies employed by undergraduate students of Kwara State University could influence the academic achievement of the students. Descriptive survey was adopted for this study. Stratified random sampling was used to select 240 students across the six colleges. An instrument adapted from George Mayer (2001) was used to measure personality types and researcher designed questionnaire titled (Coping strategy questionnaire) was used to measure coping strategies employed by students during stress. A proforma was used to obtain Students present CGPA for 2012/2013 academic session to measure students’ academic achievement. Two research questions were raised and answered with percentage while the research hypotheses were answered with t-test statistical analysis. The findings of the study revealed that students with personality A achieved better academically than students with personality type B. Similarly students that employed problem coping strategies achieved better academically than students that employed emotional coping strategies. In the light of these findings, the researcher therefore recommended that enabling environment should be provided for students and skills that will promote problem coping strategies should be taught directly in the classroom at various institutions.
Personality type; Coping Strategies; Academic Achievement

Introduction
This life activities are characterized by stress which an individual always find means of coping with them. The ability of individuals to function effectively in dealing with life challenges has been a topic of interest to psychologists (Phinney & Hass, 2003). A major challenge for many of today’s young people is the transition from high school to university. In general, studying at university is a stressful time for most students (Tryphena & Cecelia, 2007). This is the time when most adults are struggling with their new freedom and negotiating developmental tasks, focusing on interpersonal relationships and trigging that
with academic concerns (Beard, Elmore & Lange, 1982). In addition, academic, social environment, and personality factors may contribute to adjustment to university life. According to Russell and Petrie (1992) the adjustment to university stress can be organized according to three factors: academic performance, social adjustment and personal adjustment. This transition presents even more challenge to the international students (Tryphena & Ceceha, 2007). This is due to the additional adjustment required to new environment, culture and language.

**Stress and Stress level**

Stress is now recognized as an inevitable aspect of life, but what makes the difference in human functioning is how people cope with it (Lazarus & Folkman, 1984). Most people manage to maintain reasonable health and functioning under stressful conditions (Folkman, 1992). Stress is not a variable but rubric consisting of many variables and processes. Stress has been classified as a host of potentially unpleasant or dangerous events that include unavoidable pain excessive noise and fatigue under strenuous work conditions as well as more routine life changes (Mischel, 1986).

Stress could be categorized into different levels. The level of stress depends on how an individual copes with the given situation for example the readjustment, rating scale scores (Holmas & Rahe, 1967; Holmes & Masuda, 1974) offer a measure of current degree of stress. The scale indicates that the more change one is going through, the more stress one is experiencing. Generally, a significant but modest association has been found between degree of stress and physical illness. More stressful life events take somewhat greater physical and emotional toll on most, but not on all people (Rabskin & Struening, 1976). Reactions to stress also depend on the individual's psychological environment. Individuals generally respond better to stress when they have social ties and supports, that is, close friends and groups to which they belong (Antonovsky, 1979). Individuals are able to cope better when they can share their experiences with others (Mischel, 1986). When individuals are members of a group to which they belong, they can receive emotional support, help with problems and even a boost to self-esteem (Cobb, 1976).

**Coping Styles**

Specific types of coping resources and strategies that deal with stress have been identified (Lazarus & Felkman, 1984; Lazarus, 1993; Paker & Endler, 1992). One way to define coping is a response to specific stressful situations (Moos & Holahan, 2003). Coping is a dynamic process that fluctuates over time in response to changing demands and appraisals of the situation (Moos & Holahan, 2003). Coping is a stabilizing factor that helps maintain psychological adjustment during stressful periods, coping efforts should be most helpful when there is a high level of stressors (Moos & Holahan, 2003). A second way to define coping is as the changing of thoughts and actions to manage the external and internal demands for a stressful event (Lazarus, 1991, 1999). Pierce & Sarason (1996) presented a third way to define coping. For them the starting point is a specified event that involves personality characteristics, personal relationships and situational parameters.

According to Pierce, Sarason and Sarason (1996) individuals’ coping styles are reflected in how they habitually construe and manage complex situations. In general, when personality characteristics, personal relationships and situational parameters come together to produce a robust coping style, individuals tend to exhibit the following characteristics. They tend to have more self-confidence; they tend to perceive that they have more control over stressful situations; they tend to be more persistent and assertive; and they tend to be more likely to expect success. These individuals will also tend to be less anxious, less
depressed and tend to have fewer health problems (Heppner, 1988; Heppner & Baker, 1997).

Coping is also determined by two constraints: personal and environmental. Personal constraints include psychological strengths/deficits and internalized cultural values and beliefs that allow certain ways of behaving. Environmental constraints include demands that compete for the same resources that thwart coping efforts (Lazarus & Folkman, 1984; Roth & Cohen, 1986). The way an individual copes is influenced by his or her resources which include both health and energy (Lazarus & Folkman, 1984), social support, material resources and existential beliefs, such as belief in God (Kim & Duda, 2003). Those with these resources have been found to sustain stress better (Kim & Duda, 2003). One consistent finding is that of the positive role of social support in helping an individual to cope with a stressful situation (Pierce, 1996). Social support could be viewed as a resource or as a coping response. As a resource, social support includes the availability of tangible help, guidance and emotional support. A coping response would include seeking help from others (Pierce, 1996).

Personality and coping are involved directly or indirectly in the production and maintenance of various kinds of adjustments (Sinyder & Ford, 1987). Thus, personality traits could influence the types of coping style used. In terms of daily situations, and problems, that individuals face, judging coping by its effects on outcomes may do a disservice to the efforts that individuals make to cope with difficult, intractable and unrelenting conditions of life (Folkman, 1992). The presence of distress may indicate that adaptive coping processes are taking place.

There are various forms of coping style that could be used to deal with any particular stressor. Two general forms of coping styles are often distinguished in the coping literatures; Problem-focused coping and emotional-focused coping (as measured by the ways of coping scale, Folkman & Lazarus, 1980).

Problem-focused coping involves management and alteration of the problem causing stress and may include learning about the problem, considering different viewpoints and possible options, and actively solving the problem. In the contrast, emotional-focused coping focuses on managing and alleviating the emotional distress that is associated with the problem and may include avoiding oneself from the problem, and minimizing the importance of the problems.

**Personality**

Personality traits are distinguishing qualities or characteristics of a person, that is, their readiness to think or act in a similar fashion in response to a variety of different stimuli or situations (Carver & Scheiver, 2000). According to Gordon Allport’s theory (1937), traits are determining tendencies or predisposition to which an individual respond. These traits are relatively general and enduring responses that produce fairly broad consistencies in behaviour. Allport (1937) believed that one’s pattern of dispositions or personality structure is determined by a particular trait structure that is unique within that individual. Cattel (1965) defined a trait as the basic unit of study in personality as a “mental structure” inferred from behaviour, and as a fundamental construct that accounts for regularity and consistency of behaviour.

According to Eysenck (1970 cited in Eysenck & Eysenck, 1975) the main traits form two independent dimensions of personality. One reflects a changeable-unchangeable dimension, this is called extraversion-introversion dimension. The second reflects an emotional-non emotional or instability-stability dimension. This is called the neuroticism-normal dimension. These two dimensions have contributed more to a description of
personality than any other set of two dimensions outside the personality field (Eysenck & Eysenck 1969).

**Statement of the Problem**

Many factors have been responsible for poor academic achievement of students at various level of our educational system. Some of the factors identified are poor environment, lack of enthusiasm on the part of teachers among students and others. Similarly, previous researches have established that certain personality types have ability to cope with the academic stress than others and this make them to achieve better academically. This reason arouses the interest of the researcher to know the relationship that exists between the two independent variables; personality types and coping strategies and dependent variable academic achievement.

**Purpose of the Study**

The main purpose of this study is to examine the relationship between personality types, coping strategies and academic achievement of undergraduate students of Kwara State University, Malete, Nigeria.

**Significance of the Study**

The finding of this study would be of immense assistance to all students in tertiary institutions to know the importance the personality types and its relationship with their academic achievement. Similarly, students would be able to identify coping strategies to stress so as to jettison those ones that affect their academic achievement and uphold those ones that are constructive and help in combating stress. The study would also assist the school administrators to know the importance of personality types and coping strategies and how it could determine academic achievement of the students in tertiary institutions. The study would assist book writers to write extensively on the personality types and coping strategies.

**Research Questions**

The following research questions were postulated and answered with percentage

1) What is the personality type of undergraduate students of Kwara State University, Malete Nigeria?
2) What are the Coping strategies employed by undergraduate students of Kwara State University, Malete?

**Research Hypotheses**

The following research hypotheses were generated and tested with t-test statistical analysis at 0.05 level of significance.

HO1: Personality types cannot significantly predict the academic achievement of undergraduate students of Kwara State University, Malete

HO2: Coping strategies cannot significantly predict the academic achievement of undergraduate students of Kwara state university, Malete

**Research Design**

This study is a Descriptive survey type. According to Akinboye (1985), descriptive survey research can be described as an empirical research type, which attempts to find the degree of association between operating variables in a particular population. Best and Khan (1989) describe it as the relationship between two or more paired variables or two or more sets of data.

The target population for this study is all the six existing colleges at Kwara state University, Malete. Simple random sampling technique was used to select two departments each across the six colleges in the University, making the total number of twelve (12) departments. Simple random sampling technique was used to select twenty (20) 300 level
students in each department across the (12) departments which totaling 240 respondents that participated in this study. In a situation where the researcher could not find up to twenty 300 level students, 200 level students were picked to complete the required number. The reason for chosen 300 level students was based on the fact these students are moving to the final year in the university and it is presumed that students face much stress at their first year and last year in the university. Also, these students have spent more than two years in the university and they must have adopted series of coping strategies in coping with stress in the University.

To obtain data from the respondents, two instruments were used. The first instrument was used to measure personality types of the students. The instrument was adapted from George Mayer personality scale (2001). The second instrument was a researcher designed questionnaire which was used to measure coping strategies employed by students. To establish the psychometric properties of the instruments, the researcher gave copies to the experts in the department for face and content validity. The corrections made were effected in the final copies of the instruments. To establish the reliability of the test, the researcher administered twenty (20) copies of the items to 300 level of an undergraduate students of University of Ilorin at the interval of three weeks. Test re-test method was used and Pearson Product Moment Correlation of Coefficient (PPMC) was used to correlate the first and second score. The score of r=86 was obtained. Also, the score of r=78 was obtained for the second test which is on coping strategies. A proforma was used to obtain the current CGPA of each student from the selected departments. The scores obtained were later correlated with the personality types and coping styles of the students. The CGPA of the students were converted to the grading system used by kwara state university.

Results

Research Questions

1) What is the personality type of undergraduate students at Kwara State University, Malete, Nigeria?

Table 1: Percentage showing personality types of the students

<table>
<thead>
<tr>
<th>Personality Type</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type A</td>
<td>117</td>
<td>48.8</td>
</tr>
<tr>
<td>Type B</td>
<td>123</td>
<td>51.2</td>
</tr>
<tr>
<td>Total</td>
<td>240</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 1 shows that out of 240 students sampled, 117 (48.8%) have personality type A while 123 (51.25%) have personality type B.

2) What is the coping strategy employed by students of Kwara State University, Malete, Nigeria?

Table 2: Percentage showing coping strategies employed by students of Kwara State University

<table>
<thead>
<tr>
<th>Coping Strategies</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem focused strategies</td>
<td>127</td>
<td>52.9</td>
</tr>
<tr>
<td>Emotional focused strategies</td>
<td>113</td>
<td>47.1</td>
</tr>
<tr>
<td>Total</td>
<td>240</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 2 shows that out of 240 students sampled, 127 (52.9%) employed problem strategies to solve their problems while 113 (47.1%) employed emotional focus strategies to solve their problems.

**Hypotheses Testing**

Two hypotheses were postulated and tested with t-test statistic analysis at 0.05 level of significance.

**H01:** Personality type cannot significantly influence the academic achievement of an undergraduate student of Kwara Students University, Malete, Nigeria

**Table 3: T-test statistical analysis showing whether personality types influence students academic achievement**

<table>
<thead>
<tr>
<th>Personality types</th>
<th>N</th>
<th>Mean</th>
<th>Std Deviation</th>
<th>D.F</th>
<th>Cal. t-value</th>
<th>Critical t-value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>Type A</td>
<td>117</td>
<td>7.1197</td>
<td>1.997</td>
<td>8.844*</td>
<td>1.960</td>
<td>Sig.</td>
</tr>
<tr>
<td>Achievement</td>
<td>Type B</td>
<td>123</td>
<td>5.9675</td>
<td>1.763</td>
<td>13.0872</td>
<td>3.76</td>
<td></td>
</tr>
</tbody>
</table>

Sig. at 0.05 level of significant

Table 3 shows that the calculated t-value is 8.844 while the critical t-value is 1.960, since the calculated t-value is greater than critical t-value, the null hypothesis is hereby rejected while the alternative hypothesis is upheld. The table also shows that students with personality type A achieved better academically than students with personality type B.

**Hypothesis 2:** Coping strategies cannot significantly influence the academic achievement of undergraduate students of Kwara State University, Malete, Nigeria

**Table 4: T-test statistical analysis showing whether coping strategies influence the academic achievement of an undergraduate students.**

<table>
<thead>
<tr>
<th>Coping strategies</th>
<th>N</th>
<th>Mean</th>
<th>Std Deviation</th>
<th>D.F</th>
<th>Cal. t-value</th>
<th>Critical t-value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>Problem focused strategies</td>
<td>127</td>
<td>8.1969</td>
<td>1.8345</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emotional focused strategies</td>
<td>113</td>
<td>6.6549</td>
<td>1.6265</td>
<td>12.705*</td>
<td>1.960</td>
<td>Sig.</td>
</tr>
<tr>
<td></td>
<td>240</td>
<td>14.8518</td>
<td>3.461</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sig. at 0.05 level of significant

Table 4 shows that the calculated t-value is 12.705 while critical t-value is 1.960 with 238 as the degree of freedom. Since the calculated t-value is greater than critical t-value, the null hypothesis is hereby rejected while the alternative hypothesis is accepted. The table also
shows that students who employed problem focused strategies achieved better academically than students who employed emotional focused strategies.

**Discussion**

The first finding of this study revealed that students with personality type A achieved better academically than students with personality type B. According to Friedman and Rosenman (1974) personality type A students are always hostile, aggressive and impatient. He stated further that these qualities may account for better academic performance of the students. Similarly, students who employed problem focused strategies achieved better academically than students who employed emotional focused strategies. The finding of this study corroborates the work of Saranson and Saranson (1996) who asserted that students who employed problem focused strategies tend to have self confidence in their studies and have control over stressful situation. More often than not, they are more persistent and assertive.

**Conclusion**

Personality type is a concept in psychology that needs to be examined by students and teachers because it will promote harmonious relationship among them. Also, coping strategies is an essential and crucial aspect of decision making, it therefore imperative that proper strategies should be employed.

**Recommendations**

Based on the findings of the study, the following recommendations were made:

- Since there is no good or bad personality type, it is therefore essential that individuals should understand the personality type of his / her partner so as have smooth and harmonious relationship with him/her. In a similar vein, school environment should be conducive to accommodate various type of personality type.
- Teachers should inculcate into students through direct teaching the skills to solve their problems and adopt proper problem solving strategies.
- Government should always organize seminar and symposium to sensitize teachers on how to assist students to solve their problems.
- Students should adopt problems focused strategies like tackling the problems directly instead of nursing it for a long time.
- Functional counseling centers should be organized at various high institutions to cater for the needs and problems of students.

**References**

Allport, G.W. (1937). Personality; A psychological interpretation. Sydney, Australia; Holt, Rinehart and wiston


PRINCIPALS’ PERCEPTION OF STRESS AND STRESS MANAGEMENT STRATEGIES BY THE JUNIOR SECONDARY SCHOOL PRINCIPALS IN ABIA STATE

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Abstract
The study sought to investigate the principals’ perception of stress and stress management strategies in junior secondary schools in Abia State. The study, more specifically sought to determine the quality and teacher-student ratio in private secondary schools in Abia State. The study employed descriptive survey. Mean scores and standard deviation were used to answer the research questions while the hypotheses were tested at 0.05 level of significance using ANOVA. The study involved a sample of 986 private secondary school teachers. The teachers’ sample was selected by stratified random sampling technique using a table of random numbers from the teachers’ population of 1088 in the 356 private schools in Abia state. Data was collected using the researchers’ self constructed questionnaire titled principals’ perception of stress and stress management strategies questionnaire (PPSSMSQ) to obtain information from the respondents in the 3 educational zones of Abia, Umuahia and Ohafia. The study revealed factors that constituted stress, symptoms of stress, and stress management practices adopted by the principals. Principals’ gender, qualification and experience do not significantly influence principals stress perception while gender, qualification and experience significantly influence stress management practices of principals. The major findings revealed that some factors that constituted stress to a High Extent (HE) were students’ indiscipline, excess work load, inadequate teaching facilities, and large classes. The study recommended that government should provide adequate facilities in schools and improve principals’ conditions of service to motivate them to perform better.

Key words: Stress, Management, Principals, Junior Secondary, strategies Principal

Introduction
The junior secondary school system is a formal organization which is managed by the principals. A principal’s administration plays vital role in achieving educational objectives in a school. Therefore the principal should create an environment conducive for the principal, teachers, students and non teaching staff through his leadership styles, sound rapport and
channels of communication. If the school environment is not conducive, it may cause stress to the principals. Slyers (2011) has used the term stress to mean that general response which the human body makes to any demand on it. The researchers see stress as a worry which is physical, psychological, physiological and sociological as a result of not meeting with certain demands from the work place. Stress is the condition that touches on well being. A stressed school principal is one suffering from anxiety, frustration and worry which can cause work-related illness in educational sector (HSE, 2007). Principals’ stress therefore may be defined as uncomfortable experiences on the job. This may cause the principals fear, anxiety, discomfort, anger or depression (Kryracus, 1987). If these conditions persist, they may generate actions and reactions that may affect principals’ well being and interfere with students’ academic and social development. The major evidence that principals are stressed may be found in a typical Abia educational system which showed how difficult and un-conducive the atmosphere is for optimal educational administration, teaching and learning. The number of students meant for a class of 35 is occupied by about a hundred students. Adequate space for ensuring free movement for adequate supervision of students by the principals and school inspectors is lacking. Some principals work in poor offices without air-conditioners, good tables and seats, lack of prompt payment of salaries and allowances. The inadequate school infrastructure, discipline, excess work load, can be justifiable reasons for principals’ stress in the area of the study. (Ako 2010, Mali 2011, and Perry 2011).

When a principal does not delegate some aspects of duties appropriately, he may encounter stress. Bull (2013) noted that up to one third of principals perceive their occupation as highly stressful. Carol (2011) remarked that female principals are more stressful than their male counterparts because of combination of domestic work with official roles. Hence the study of the variable of gender and its relationship with stress in this study is necessary. If stress is inevitable and if so much stress is a threat to human beings what then is important is how principals can manage stress. The researchers see stress management as the amelioration of stress, especially chronic ones. Measures taken to manage trying period so that a state of psychological or physiological equilibrium is re-established and subsequently maintained is termed stress management (Cooper cited in Uko, (2012).

The symptoms of stress are manifested differently by different people. It could be that the symptoms are suppression of the reproductive system, anxiety, aggressiveness, indigestion, stomach ache, pains, dizziness, and rapid heart breath. Chronic stress creates muscle tension, fatigue, constipation, and arthritis, Siani, (2007). Ani (2011) sees both male and female principals as being stressful in their jobs in Abia State.

At this point, the demographic variables in this study are; gender, qualification, and teaching experience. Gender is the psychological experience of one’s sex (Gentile, 1993). It refers to the role of male and female. Certain roles are stereotyped to males and females. It appears that principals may perceive stress and management of stress differently therefore the study of gender and its relationship with stress in this research is necessary.

Qualification is another factor that was investigated. A qualified teacher is one properly trained professionally and academically for teaching profession. Ako, (2008) in his study using secondary school principals in Osun State revealed that University Ph.D Principals are
less stressed than ones with only first Degrees. This might be applicable to principals in Abia State and therefore, the influence of qualification on principals’ stress in Abia State needs to be investigated.

Principals, teaching experiences are related to stress. Seed (2011) is of the view that teaching experience of principals is related to stress. Seed stated that less experienced teachers experience more stress. This may be because of their low experience and lack of enough emotional maturity to withstand school stressors (Kruegr, 2002). It is likely that principals in public junior secondary schools perceive stress, symptoms of stress, effects and stress management practice in their job. It has therefore been necessary to determine the influence of experience on the perception and management of stress by principals in Abia State.

STATEMENT OF THE PROBLEM

There is need for administrative machinery of junior secondary schools in Abia State to be stress free. Since stress is inevitable among school principals, the psychological environment that characterizes a particular organization needs to be stress-reducing. There is burning concern that gender, experiences and qualification and the caliber of principals based on their job experience and quality may influence level of stress and stress management strategies of the principals. The problem posed as a question is, what is the perception of principals’ perception of stress and stress management strategies in junior secondary schools in Abia State?

PURPOSES OF THE STUDY

The main purpose of this study was to identify the influence of demographic factors on stress perceptions and stress management practices of principals in junior secondary schools in Abia State.

Specifically, the Study Intended to;

Identify factors causing stress among principals of junior secondary schools in Abia State. Identify the influence of stress on principals in junior secondary schools. Determine the influence of symptom manifested by the principal in Abia State, and Find out the practices adopted in the management of stress by principals in junior secondary schools and identify symptoms of stress manifested by the principals.

Research Questions

The following research questions guided the study

1. What are the causes of stress among public junior secondary school principals in Abia State?
2. What are the influences of stress on principals in secondary schools in the area of the study?
3. What are the symptoms of stress manifested by the principals in junior secondary schools in Abia State?

4. What are the strategies adopted by the principals to manage stress in junior secondary schools?

**HYPOTHESES (HO):**

H1: Principals’ experience, qualification and gender, do not significantly influence stress perception by the principals.

H2: Stress management practices of principals are not dependent on experience, qualification and gender.

**Methodology**

The design used for the study was a descriptive survey carried out ex-post-facto. The population comprises 500 principals in the junior secondary schools in the three education zones of Abia State, Nigeria. The principles’ population was stratified according to three educational zones as follows: Aba, Umuahia, and Ohafia. And from each education zone, fifty percent (50%) of the principals’ total population of 1972 was used for the study. This gave a sample of 986 junior secondary school principals. This was used as a Sample for the study. The instrument used for the study was the researchers’ constructed questionnaire titled (PPSSMSQ) which consisted of section A and Section B. Section A consisted of Bio data of the respondents. Section B was divided into four parts. Part 1: factors causing stress among principals has 19 items, part 11: influence of stress on principals has 16 items, Part three factors that constituted symptoms of stress has 11 items, and Part IV: Management practices adopted by the principals have 16 items. There are different response formats for the different parts of the questionnaire. Response format for Part 1 is very High Extent (VHE), High Extent (HE), Less Extent (LE), and Not Applicable (NA) addressed research question one. While response format for part 11 is: Always (AL), Occasionally (OC), Rarely (RA), and Never (NE) answered questions two and three. Part 111 format of question for part 111 is: Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD).

To ensure instrument validity, two experts in Educational Administration and Planning and Department of Measurement and Evaluation, Abia State University, Uturu, were consulted. Their expert comments were used to modify the final copy of the questionnaire used for the study.

The reliability of the instrument was also determined by the test-retest method, using fifteen principals in Umuahia Education Zone of Abia State who were not part of the sample. The exercise was repeated after two weeks interval on the same respondents. The Cronbach Alpha computed from the respondents’ mean ratings showed a co-efficient alpha...
value of 0.81 for internal consistency of the instrument. The research questions were answered using mean and standard deviation, while the hypotheses were tested at 0.05 level of significant using multiple regressions.

Nine hundred and eighty-six copies of the questionnaire were distributed to principals and all were returned. The instrument gave a percentage return of 100% by the principals.

Results

Research Question One:

What are the causes of stress among principals in public schools in Abia State?

Table 1: **Mean rating and standard deviation scores of factors that cause stress among teachers.**

<table>
<thead>
<tr>
<th>S/No.</th>
<th>Items</th>
<th>X</th>
<th>SD</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Students indiscipline</td>
<td>2.69</td>
<td>1.12</td>
<td>HE</td>
</tr>
<tr>
<td>2</td>
<td>Excess work load</td>
<td>3.06</td>
<td>.99</td>
<td>HE</td>
</tr>
<tr>
<td>3</td>
<td>Inadequate teaching facilities</td>
<td>2.69</td>
<td>1.12</td>
<td>HE</td>
</tr>
<tr>
<td>4</td>
<td>Large classes</td>
<td>3.08</td>
<td>.83</td>
<td>HE</td>
</tr>
<tr>
<td>5</td>
<td>Poor environment</td>
<td>2.19</td>
<td>.88</td>
<td>LE</td>
</tr>
<tr>
<td>6</td>
<td>Lack of experience</td>
<td>2.24</td>
<td>.93</td>
<td>LE</td>
</tr>
<tr>
<td>7</td>
<td>Poor remuneration</td>
<td>2.67</td>
<td>1.33</td>
<td>HE</td>
</tr>
<tr>
<td>8</td>
<td>Lack of adequate payment of allowance as and when due</td>
<td>2.86</td>
<td>1.00</td>
<td>HE</td>
</tr>
<tr>
<td>9</td>
<td>Transfer</td>
<td>2.00</td>
<td>1.01</td>
<td>LE</td>
</tr>
<tr>
<td>10</td>
<td>Short time frame for marking question papers</td>
<td>2.10</td>
<td>1.01</td>
<td>LE</td>
</tr>
<tr>
<td>11</td>
<td>Challenging events in the school</td>
<td>2.17</td>
<td>.97</td>
<td>LE</td>
</tr>
<tr>
<td>12</td>
<td>Competition among teachers</td>
<td>2.25</td>
<td>.98</td>
<td>LE</td>
</tr>
<tr>
<td>13</td>
<td>Non-involvement in decision making concerning teaching and learning</td>
<td>2.17</td>
<td>.97</td>
<td>LE</td>
</tr>
<tr>
<td>14</td>
<td>Appointment to a new post</td>
<td>2.09</td>
<td>1.92</td>
<td>LE</td>
</tr>
<tr>
<td>15</td>
<td>Emotions among teachers</td>
<td>2.05</td>
<td>.95</td>
<td>LE</td>
</tr>
<tr>
<td>16</td>
<td>Appointment to a new post</td>
<td>2.09</td>
<td>1.00</td>
<td>LE</td>
</tr>
<tr>
<td>17</td>
<td>Gossips among teachers</td>
<td>2.24</td>
<td>.93</td>
<td>LE</td>
</tr>
<tr>
<td>18</td>
<td>Challenging events in the schools</td>
<td>2.34</td>
<td>.98</td>
<td>LE</td>
</tr>
<tr>
<td>19</td>
<td>Additional responsibilities</td>
<td>2.09</td>
<td>1.00</td>
<td>LE</td>
</tr>
<tr>
<td></td>
<td>Cluster</td>
<td>2.42</td>
<td>.45</td>
<td>LE</td>
</tr>
</tbody>
</table>

**Key:** using real limits of umbers, Very High Extent (VHE), Always (AL), and Strongly Agree (SA) was from 3.0 to 4.49: High Extent (HE), Occasionally (OC) and Agree (A) from 2.50 to 3.49. Less Extent (LE), Rarely (RA) and Disagree (D) from 1.50 10 2.49. Not Applicable (NA), Never (NE) and Strongly Disagree (SD), from 0.05 to 2.49.
From the table one, item nos. 1 - 4, 7 - 8 show the factors that constitutes stress among the principals to a high extent, while items from 9 – 19 show factors that constitute stress on less extent to the school principals in the area of the study.

Research Question 2
What are the influences of stress on principals in public secondary schools in Abia State

Table 2: Mean ratings and standard deviation scores of principals on the influences of stress on them.

<table>
<thead>
<tr>
<th>S/No.</th>
<th>Items</th>
<th>X</th>
<th>SD</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Inability to manage time well</td>
<td>2.67</td>
<td>.87</td>
<td>OC</td>
</tr>
<tr>
<td>21</td>
<td>Inability to meet deadlines</td>
<td>2.63</td>
<td>.92</td>
<td>OC</td>
</tr>
<tr>
<td>22</td>
<td>Feelings of inadequacy in the performance at work</td>
<td>2.26</td>
<td>.91</td>
<td>RA</td>
</tr>
<tr>
<td>23</td>
<td>Inability to relax</td>
<td>2.34</td>
<td>.89</td>
<td>RA</td>
</tr>
<tr>
<td>24</td>
<td>Taking work home</td>
<td>2.46</td>
<td>.95</td>
<td>RA</td>
</tr>
<tr>
<td>25</td>
<td>Job dissatisfaction</td>
<td>2.34</td>
<td>.94</td>
<td>RA</td>
</tr>
<tr>
<td>26</td>
<td>Aggressive behaviour</td>
<td>2.16</td>
<td>.93</td>
<td>RA</td>
</tr>
<tr>
<td>27</td>
<td>Keeping to self</td>
<td>2.40</td>
<td>.98</td>
<td>RA</td>
</tr>
<tr>
<td>28</td>
<td>Frustration</td>
<td>2.18</td>
<td>1.03</td>
<td>RA</td>
</tr>
<tr>
<td>29</td>
<td>Having less interest in the job</td>
<td>2.12</td>
<td>.93</td>
<td>RA</td>
</tr>
<tr>
<td>30</td>
<td>Lack of concentration</td>
<td>2.10</td>
<td>.94</td>
<td>RA</td>
</tr>
<tr>
<td>31</td>
<td>Reduced self esteem</td>
<td>1.93</td>
<td>.94</td>
<td>RA</td>
</tr>
<tr>
<td>32</td>
<td>Persistent negative thought</td>
<td>1.97</td>
<td>.92</td>
<td>RA</td>
</tr>
<tr>
<td>33</td>
<td>Absenteeism</td>
<td>2.96</td>
<td>.96</td>
<td>RA</td>
</tr>
<tr>
<td>34</td>
<td>Accident prone</td>
<td>1.91</td>
<td>.96</td>
<td>RA</td>
</tr>
<tr>
<td>35</td>
<td>Reduction in Effectiveness</td>
<td>2.34</td>
<td>1.04</td>
<td>RA</td>
</tr>
<tr>
<td>Effects Cluster</td>
<td>2.25</td>
<td>.25</td>
<td>RA</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: presents data for research question 2. Items 20 and 21 have mean scores of 2.67 and 2.63 respectively. This shows that inability to manage time and inability to meet deadlines are experienced occasionally as the influences of stress on principals. The items 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34 and 35 indicate that taking work home, keeping
to self, inability to relax, job dissatisfaction, reduction in effectiveness, feelings of inadequacy in the performance at work, frustration, aggressive behaviour, having less interest in the job, lack of concentration, absenteeism, persistent negative thought; reduced self esteem and accident prone are rare influences of stress on principals. The cluster mean for effects is 2.25 indicating the rare influences of stress on principals.

Research Question three: What are the symptoms of stress manifested by the teachers in public secondary schools in Abia State?

Table III: Mean rating and standard deviation scores on symptoms of stress manifested by principals.

<table>
<thead>
<tr>
<th>S/No</th>
<th>Items</th>
<th>X</th>
<th>SD</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>51</td>
<td>Pains</td>
<td>2.54</td>
<td>.89</td>
<td>OC</td>
</tr>
<tr>
<td>52</td>
<td>High blood pressure</td>
<td>2.04</td>
<td>.92</td>
<td>RA</td>
</tr>
<tr>
<td>53</td>
<td>Consistent tiredness or fatigue</td>
<td>1.84</td>
<td>.89</td>
<td>RA</td>
</tr>
<tr>
<td>54</td>
<td>Muscular tensions</td>
<td>2.02</td>
<td>.85</td>
<td>RA</td>
</tr>
<tr>
<td>55</td>
<td>Rapid heart beat</td>
<td>2.03</td>
<td>.89</td>
<td>RA</td>
</tr>
<tr>
<td>56</td>
<td>Dizziness</td>
<td>2.54</td>
<td>.89</td>
<td>OC</td>
</tr>
<tr>
<td>57</td>
<td>Stomach ache</td>
<td>2.13</td>
<td>.96</td>
<td>RA</td>
</tr>
<tr>
<td>58</td>
<td>Loss of appetite</td>
<td>2.09</td>
<td>.54</td>
<td>RA</td>
</tr>
<tr>
<td>59</td>
<td>Indigestion</td>
<td>2.04</td>
<td>.92</td>
<td>RA</td>
</tr>
<tr>
<td>60</td>
<td>Difficulty in falling asleep</td>
<td>1.96</td>
<td>.82</td>
<td>RA</td>
</tr>
<tr>
<td>61</td>
<td>Depression</td>
<td>1.90</td>
<td>.87</td>
<td>RA</td>
</tr>
<tr>
<td></td>
<td>Cluster mean</td>
<td>2.09</td>
<td>.54</td>
<td>RA</td>
</tr>
</tbody>
</table>

Table 3 presents data for research question 3. Items 51 and 56 have scores of 2.54 and 56 have 2.54 respectively; this implies that pains and consistent dizziness are occasionally manifested as symptoms of stress by the principals. Item 52 to 55 and 57 to 61. Since these scores fall outside the ranges of 1.49 and 2.49 in falling asleep and depression. blood pressure, consistent tiredness or fatigue, muscular tensions, rapid heart beat, stomach ache, loss of appetite, indigestion, are rarely manifested by the principals as symptoms of stress. Two items are occasionally manifested while 9 items are rarely manifested. The cluster mean of the conditions is 2.09 which show that principals rarely manifest symptoms of stress.

What are the strategies adopted in the managing of stress by principals in public secondary schools in Umuahia Education zones of Abia State?

Table 4: Mean rating of scores of management strategies of stress by Principals in the area of the study

<table>
<thead>
<tr>
<th>S/No</th>
<th>Items</th>
<th>X</th>
<th>SD</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cluster mean</td>
<td>2.09</td>
<td>.54</td>
<td>RA</td>
</tr>
</tbody>
</table>
From the table above, items 37 – 40 show that principals do not adopt the items therein to manage stress. While others are the practices principals agree they use to manage stress in schools. The cluster mean for stress management is 2.81 indicating that principals generally agreed to use and manage stress using specific strategies.

**Hypothesis One:**
Ho1 Principals’ gender, qualification and experience do not significantly influence stress perception by the principals.

Table 5: Analysis of ANOVA on the Influence of Independent Variables on the Perception of stress by the teachers

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1.510</td>
<td>6</td>
<td>0.252</td>
<td>1.2243</td>
<td>.282</td>
<td>NS</td>
</tr>
<tr>
<td>Residual</td>
<td>136.866</td>
<td>676</td>
<td>.020</td>
<td></td>
<td></td>
<td>Ho1 Accepted</td>
</tr>
<tr>
<td>Total</td>
<td>138.376</td>
<td>682</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key: DF – degree of freedom, Sig – significant, ns – Not significant, Ho - hypotheses
As seen on table 3, the combined influence of the independent variables on the perception of stress by principals is not significant (F = 1.243, P<.282). Since .282 is more than .05, the level of significance at which the null hypothesis was tested, the F- value is not significant at .05. Hence the null hypothesis is not rejected. Hence principals’ gender, qualification, and experience do not significantly influence stress perception by the principals.

**Hypothesis 2:**
Stress management practices of principals are not dependent on gender, qualification, and experience.

Table 6 Analysis of Variance on the Influence of Independent Variables on Stress Management Practices of Principals.

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of</th>
<th>Mean</th>
<th>F</th>
<th>Sig</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>138.376</td>
<td>682</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4 indicates that the combined influence of the independent variables on the stress management practices of principals is significant \((F = 6.671, P<.000)\). The hypothesis is rejected. The alternative hypothesis is then accepted, thus, principals’ gender, qualification and experience significantly influence stress management practice of principals.

**Discussions**

In the research question one, the following factors constituted stress to a high extent: Students indiscipline, excess work load, inadequate teaching facilities, lack of adequate payment of allowances as and when due. Poor remuneration causes stress when principals are unable to meet up with their needs. This shows that the welfare of the principals are not looked into by the government thus causing stress. Inadequate payment of salaries and allowances cause stress. Some of the factors were also revealed to cause stress to less extent such as proper environment, lost of a close relative, competition among principals among others. Principals in Abia State are faced with poor working conditions, and these can be stressful. This finding is in line with the Ako, 2010, Mail, 2011, and Perry, 2011. This finding is in line with the findings of Ako, 2010, Mali, 2011 and Perry, 2011.

All the symptoms are manifested either occasionally or rarely. Pains and consistent tiredness are symptoms of stress principals occasionally manifested. Other symptoms the principals experience are difficulty in falling asleep, depression, muscular tensions, dizziness and so on.

Twelve strategies were identified by principals as strategies for managing stress, these include, eating balanced diets, being religious, doing physical exercises, thinking objectively. This is in line with Jaja (20110 who maintained that carrying out duties in priority order and effective information management are adopted management strategies by the principals. On the other hand, the principals were not in agreement on strategies of management such as; taking stimulants, drugs, being slow to react, avoiding co-workers etc. The principals also expressed mixed feeling about the adoption of inactive behavioural strategies. While the majority of principals never engaged in physical exercises preferred to keep away from any situation that could cause stress as well as endeavour to separate themselves from people who caused stress.

**Recommendations:**

From the findings of this study, the following have been recommended.

1. There should be seminars/workshops on the causes, consequences of stress and stress management in Organizations for the principals.
2. There should be adequate provision of infrastructure and welfare packages for the school principals.
3. Principals should be assigned with manageable workload which should be clearly drawn in a workable time table. This is to make sure that work load is equitably distributed.

4. Stress-management programmes should be organized by the government through experts in stress in order to educate principals about stress, stress management and the implications of stress on school principals health.

5. Proper work scheduling and design by administrators should be the focus of all principals with the aim of proper delegation of duties. This should be done by drawing a workable time table for all staff.

REFERENCES


Seed (2011). Teacher stress, the search for accurate view and remedies that work. Britain: Routledge.


DECISION MAKING AND JOB SATISFACTION AS CORRELATES
OF TEACHERS’ JOB PERFORMANCE IN JUNIOR SECONDARY
SCHOOLS IN ABIA STATE, NIGERIA

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Michael Okpara University of Agriculture, Umudike
Abia State, Nigeria

Abstract

This study specifically sought to determine decision making and job satisfaction as correlates of teachers’ job performance in junior secondary schools in Abia state, Nigeria. Two research questions were posed and two null hypotheses formulated to guide the investigation, which was carried out ex-post factor, using a descriptive survey design. A sample of 541 junior secondary schools was drawn from a population of 1082 in the 230 junior secondary schools in Abia state. Data were collected using the researcher’s self constructed questionnaire from the respondents titled involvement of teachers in decision making and job satisfaction as correlates of teachers’ job performance in junior secondary schools (ITDMJSTJP). To ensure face validity of the instrument, two experts in Educational Administration and Planning of Abia State College of Education were consulted. Their expert comments were used to modify the final copy of the questionnaire used for the study. Data were analyzed using frequency distribution, ad mean rating to answer the two research questions posed while the Z-test statistic was used to test the null hypotheses formulated. Results indicated that although the teachers were involved in decision making but some decisions reached were not implemented by the school principals. As a result of this, there was lack of job satisfaction and low job performance among junior secondary school teachers in the junior secondary schools. The test of hypothesis one shows that there was no significant difference between teachers’ decision making and job performance. Based on the findings, it was recommended that principals should involve and implement teachers’ decisions in schools to enhance their job performance for uplifting of educational standard in Nigeria.

Introduction

Teachers’ job performance in Nigeria has become an issue of public concern. This is because of declining standard of junior secondary schools in Abia State. Students no longer perform creditably in examination especially in junior school certificates (JSCE) as noted by parents, and guardians. Plank (2011) remarked that some secondary school products are deficient in learning and in character and their performance in school certificate examination in Nigeria is unimpressive. Nwadiani cited in Okunamiri and Uba-Mbibi (2011) stated that the poor quality is reflected in the very low productivities and job performance of secondary school leaver in the world of work. Education is very essential in fostering economic growth and national development. Hence the Federal Republic of Nigeria (2004) states that education is the most important instrument of change. It is apparently through teaching and learning that the change is achieved in any nation through a teacher. The teacher is an important factor of
development and he exerts tremendous influence in interpreting and implementing school curriculum, which is the essence of education. Therefore, it is not surprising that Abraham (2012) stressed that the teacher factor is one major input that should never be compromised. Academic excellence which entails the inculcation of the right type of knowledge, skill, values and attitudes to the learners to enable them function efficiently and effectively within the society can mainly be achieved through disciplined and committed teachers.

Involvement of teachers in decision making is very imperative as they are the life wire of teaching and learning in secondary schools. Unimplemented decisions are very irritating and may lead to lack of teachers’ job satisfaction. It is therefore very important to determine whether teachers are involved in decision making and if decisions reached are adequately implemented Butter (2012) noted that teachers are being marginalized when compared with those in other professions when it comes to decision making. It appears that teachers are not involved in decision making or their decisions are not adequately implemented hence they are not satisfied with their jobs. Mark (2011) has noted that principals take decisions all alone without involving the teachers. Perry (2011) remarked that decision making is the process of choosing from two or more options that best suit a particular situation requiring altered action. Tanfox (2010) is of the view that starting with the teacher can approach the curriculum improvement function of supervisor of a school, it is surprising that these wonderful teachers are mere technicians who only need to heed to the construction of programmed materials, and professional decisions are made without involving the teachers who carry out the implementation. The consequence is poor performance of the teachers and observable falling standard of education in the system. It appears that teachers are not involved in decision making in their schools. Ako (2013) opined that lack of involvement of teachers in decision making leads to resistance of orders and poor performance of teachers. Ako also noted that teachers are not involved in decision making in the area of the study.

There is a lot of tension and conflicts in secondary schools today possibly as a result of lack of involvement of teachers in decision making in schools or those who would help to implement the decisions are not given any thought. Agbai cited in Okunamiri and Uba-Mbibi (2011) highlights that; the problem with Nigerian educational system is not on decision making formulation but in the implementation of decisions. According to Perry (2011) there are cases of school principals either taking decisions alone or handpicking teachers whom they consider as their favorites to assist them in taking decisions. This invariably means that involving teachers in matters concerning teachers’ matters (welfare) are not encouraged.

This study therefore underscored the seeming inability of the secondary school administrators to involve teachers in decision making in school meetings. The purpose of this study therefore, is to examine the influence of teacher’s participation in decision making and job performance in secondary schools in Abia State, Nigeria.

**Statement of the Problem**

There have been serious complaints by well meaning Nigerians on the declining performance of teachers in junior secondary schools in Abia State. This is as a result of declining standard of education in the secondary school system. Research literature confirms
the declining dedication of teachers to their duties. It has been alleged by some well-meaning Nigerians that teachers in Abia State are not satisfied with their job. The situation is worst as the principals could not involve teachers in decision making in their schools. There is therefore a need for a study of involvement of teacher in decision making in schools to minimize job dissatisfaction among teachers. The problem of this study therefore derives from inability of school principals to involve teachers in decision-making in schools.

This study therefore sought to determine whether teachers are involved in decision making in secondary schools in Abia State and what job satisfaction variable that would enhance their performance so as to improve the declining standard of quality of secondary education in Abia State, Nigeria.

PURPOSE OF THE STUDY

The purpose of the study is to investigate decision-making and job satisfaction as correlates of teachers’ job performance in junior secondary schools in Abia State. Specifically the objectives of the study are to find out:

(i) Whether teachers’ participation in decision making as a motivational factor will enhance teachers’ performance.

(ii) If implementation of teachers’ decisions in schools as job satisfaction variable constitutes a correlate of teachers’ job performance in the area of the study?

RESEARCH QUESTION AND HYPOTHESES

To guide the investigation, two research questions were posed while two hypotheses were formulated and tested at 0.05 significance level.

Research Questions:
1. Does involvement of junior secondary school teachers in decision making in schools as job satisfaction variable constitute a correlate of teachers’ job performance in the area of the study?
2. To what extent does implementation of teachers’ decision in schools and job satisfaction variable correlate with teachers’ job performance in the area of the study?

Hypotheses:

H_{01} There is no significant difference in the mean ratings of teachers’ responses on the extent to which teachers’ participation in decisions-making serve as a correlate of teachers’ job performance in junior secondary schools in Abia state.

H_{02} There is no significant difference in the mean ratings of teachers’ responses on the extent to which implementation of teachers’ decisions serve as a correlate of teachers’ job performance in junior secondary schools in the area of the study.
Methodology

The design used for the study was a descriptive survey carried out ex-post-facto. The population comprised all the teachers in the junior secondary schools in the three education zones of Abia State, Nigeria. The teachers’ population was stratified according to three educational zones as follows: Aba, Umuahia, and Ohafia. And from each education zone, fifty percent (50%) of the teachers’ population – (1082) was used for the study. This gave a sample of 541 junior secondary school teachers. This was used as a Sample for the study.

The instrument used for the study was the researchers’ self constructed questionnaire titled Decision-Making and Job Satisfaction as correlates of teachers’ job performance in junior secondary schools Questionnaire (DMJSTPQ) which consisted of sections A and B. Section A sought information on the bio data of the respondents, while section B elicited information on involvement of teachers in decision making and job satisfaction in junior secondary schools in Abia State. The level of agreement and disagreement with the items in the questionnaire were administered to the respondents who provided their opinions by ticking (✓) the rating scale which was patterned in line with the four point likert scale namely Strongly Agree (SA), Agree (A), Disagree (D), and Strong Disagree (SD). To ensure face validity of the instrument, two experts in Educational Administration and Planning of Abia State College of Education were consulted. Their expert comments were used to modify the final copy of the questionnaire used for the study.

The reliability of the instrument was determined by test-retest method. By this method, a trail test was carried out using (30) Junior Secondary School Principals in the three (3) education Zones of Abia State who were not part of the sample. The exercise was repeated after two weeks interval on the same respondents. The two sets of texts were computed statistically using Person product Moment Correlation Statistics. The instrument was found to have a reliability coefficient level of 0.91, which was considered high enough and therefore adequate for the study.

Five hundred and forty one (541) copies of the questionnaire were distributed to the principals and all were duly completed and returned. This gave 100 % returned of the questionnaire by the principals. The two research questions were answered using frequency distributions, and mean rating while the hypotheses were tested using z-test.

RESULTS:

Research Question One:

Do teachers’ participation in decision making enhance their performance at school?

Table I: Mean Rating Of Teachers’ Participation in Decision Making to Enhance Their Performance in Junior Secondary Schools in Abia State.

| S/N | ITEMS | SA (4) | A (3) | D (2) | SD (1) | Total Score | MEAN SCORE | DECISION POOLED MEAN | POOLED MEAN |
With the exception of 2 items Nos. (1) and (4) and the pooled mean (2.54) respectively the mean scores of the other 3 items of the five (5) items are non-motivational ((2.44), (2.30) and (2.46). That means that teachers are participating adequately in decision making in their schools to enhance their performance.

Research Question 2:

**TABLE 2: The Mean Ratings of Implementation of Teachers’ Decisions in Schools in the Area of the Study.**

| 1 | Teachers’ are involved in decision making in my school. | 400 435 250 280 1265 | 2.73 | Positive |
| 2 | Teachers’ involvement in decision making in my school boosts their morale. | 290 270 400 280 1220 | 2.44 | Negative |
| 3 | Teachers have comfortable venue for meetings in my schools. | 400 180 330 245 1125 | 2.30 | Negative |
| 4 | Teachers’ involvement in decision making in my school enhances their cooperation with the school regulations. | 380 400 310 300 1390 | 2.78 | Positive |
| 5 | Teachers always have conflicts during meetings. | 380 390 220 240 1230 | 2.46 | Negative |

With the exception of 2 items Nos. (1) and (4) and the pooled mean (2.54) respectively the mean scores of the other 3 items of the five (5) items are non-motivational ((2.44), (2.30) and (2.46). That means that teachers are participating adequately in decision making in their schools to enhance their performance.
As shown in the table 2 above, the mean rating responses of the teachers in no 1 out of the 5 items is positive (2.63), while the means of the other four items and the polled mean are negative (2.37). It implies that implementation of decisions of the teachers reached in meetings is not adequately implemented to serve as motivational variable to enhance teachers’ performance in junior secondary schools in the area of the study, although, teachers attend meetings and contribute meaningfully.

Hypothesis One (H0)

There is no significant difference in the mean ratings of teachers’ responses on the extent to which teachers’ participation in decision–making as job satisfaction variable serve as a correlate with teachers’ job performance.

Table 3: Z-Test Statistic Analysis of Participatory Decisions Making and Teachers’ Job Performance

<table>
<thead>
<tr>
<th>RESPONDENTS</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>STANDARD ERROR ESTIMATE</th>
<th>Z-CAL.</th>
<th>Z-CRITICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>541</td>
<td>413.6</td>
<td>20.48</td>
<td>12.98</td>
<td>1.96</td>
<td>1.96</td>
</tr>
<tr>
<td>Disagree</td>
<td>147.4</td>
<td>33.46</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 indicates that Z-test critical value of 12.98 is greater than the Z-test calculated value of 1.96. This shows that the null hypothesis is rejected. Thus, there is no significant difference in the mean ratings of teachers’ responses on the extent to which teachers’ involvement in decision making serves as correlate of teacher’s job performance.

Hypothesis two (H02)

**TABLE FOUR: Z-Test Statistic Analysis of Implementation of Teachers’ Decisions and Teachers’ Job Performance.**

<table>
<thead>
<tr>
<th>RESPONDENTS</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>STANDARD ERROR ESTIMATE</th>
<th>Z-CAL.</th>
<th>Z-CRITICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>541</td>
<td>282.4</td>
<td>164.80</td>
<td>101.10</td>
<td>0.12</td>
<td>1.96</td>
</tr>
<tr>
<td>Disagree</td>
<td>294.6</td>
<td>154.74</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Result on table 4 indicates that the Z-test Value of 1.96 is greater than the Z-test Critical Value of 0.12. This implies that the null hypothesis is accepted. Therefore, there is no significant difference in the mean rating of teachers’ responses on the extent to which implementation of decisions constitute a correlate of teachers’ job performance.
DISCUSSIONS

Research question 1 examined the extent to which the involvement of junior secondary teachers in the three education zones in Abia State enhances teachers’ performance. The answers to research question (1) was obtained using the 5 items (1-10) cluster of questions which were completed by the teachers. The result data analyzed as shown in table 1, showed that the teachers’ participation in decision-making in secondary schools did not serve as motivational variable in Umuahia Education Zone of Abia State. The pooled means of the 5 item cluster of the questions (Nos. 1 – 5) is 2.54. Since it is positive and above the range/bench mark of 2.50, that means that teachers were adequately involved in decision making in junior secondary schools in Abia State Education zone. This is in line with Agbai (2009) who argues that the problem with Nigerian educational system is not on decision making formulation but in the implementation of decisions.

As regards research question 2 which sought information on the extent of implementation of teachers decisions on their performance in the schools in the area of the study, the result of the data analysis were got with 5 item questions (Nos. 6 – 10) is represented in table 2 above. The data indicated that the decisions of the teachers were not adequately utilized in junior secondary schools in Abia State with the pooled mean of 2.37. This is below the bench mark of 2.50 that implies that the decisions of the teachers were not adequately implemented and therefore did not serve as motivational variable on the teachers’ performance at schools.

$Ho_1$: There is no significant difference in the mean ratings of teachers’ responses on the extent to which teachers’ participation in decisions-making serve as a correlate of teachers’ job performance in junior secondary schools in Abia State. The result of this data based on the hypothesis is presented in table 3. The mean rating scores shows that there is a significant difference in the mean rating responses of teachers on the extent to which teachers’ participation in decisions-making serve as a correlate of teachers’ job performance. This implies that the null hypothesis is thereof rejected. The result of the study proved Ako (2013) otherwise who stated that teachers are not involved in decision making in schools in Abia State. In effect, teachers are involved in decision making and serves as motivational variable although, did not enhance their performance as students are lacking both in character and in learning as noted by Plank (2011).

$Ho_2$: There is no significant difference in the mean ratings of teachers’ responses on the extent to which implementation of teachers’ decisions serves as a correlate of teachers’ job performance in junior secondary schools in the area of the study. The result of the study indicated that the null hypothesis was accepted which shows that there is no significant difference in the mean ratings of teachers’ responses on the extent to which implementation of teachers’ decisions serves as a correlate of teachers’ job performance. This is proved by the critical 1.96 which is greater than the $Z$-calculated which is 0.12. This is in line with Okunamiri and Uba-Mbibi (2011), and Carole (2012) who opined that the problem with Nigerian educational system is not on decision-making formulation but in the implementation of decision.

Recommendations
1. Principals of schools should be trained and retrained through workshops and seminars by experts to help them know the need to involvement of teachers in decision making.

2. Government of Abia State should direct the school principals to ensure that teachers’ good decisions are implemented in their schools to enhance teachers’ cooperation with the school policies and daily operations and to perform effectively.

3. Both Abia State government and general public should endeavour to provide adequate infrastructural facilities in schools so that teaching and learning will be interesting and fruitful.

4. The esteem of secondary school teachers should be adequately recognized by the school administrators just as their counterpart in other professions.

References


Mark, L. (2011). Introduction to Teachers’ Education. Britain Taristock..


NIGERIAN CHILD LEARNING STYLES: A TEACHING STRATEGY FOR ACHIEVING EFFECTIVE EDUCATION IN NIGERIA

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Abstract
This study investigated the Nigerian child learning styles as a teaching strategy for achieving effective education in Nigeria. It was a survey design carried out in 258 public secondary schools in Anambra State. Respondents were made up of 1000 classroom teachers drawn through simple random sampling. Four research questions guided the study. A four-point scale questionnaire containing 28 items, validated by experts in Educational administration/supervision and Educational psychology was used for data collection. Data analysis was done using frequency distribution tables and mean scores. The findings revealed that secondary school teachers in Nigeria possess characteristics of good teaching to a high extent, eight learning styles for effective teaching were identified. The identified learning styles were applied to a low extent and five constraints responsible for the low application were also identified. Recommendations were made included that regular seminars and workshops should be organized to up-date these teachers, especially on the areas of learning styles and their effective application to encourage learners centred education.

Keywords: Education, Nigerian child, learning styles, teaching strategy, effective education.

Introduction
Education is generally seen as an instrument par excellent that every nation requires for achieving effective education for sustainable development. Education according to Ukeje, Akabogu and Ndu (1992) is the process by which people are prepared to live effectively and efficiently in their own environment. This implies that education is the only veritable instrument for achieving quality and effective citizenship in any society. The education that could prepare and produce quality citizens is said to be effective education. Effective education according to Hornby (2004) is the process of producing an intended result, fulfilling a function or even something being operative. Effective education therefore is that education is capable of producing intended results, and capable of fulfilling its functions. Nigerian education is designed to achieve four major goals in every individual that has the opportunity of passing through it. The goals are:

- Inculcation of national consciousness and unity to the citizens.
- Inculcation of right type of values and attitudes as a means of survival of the individuals and the Nigerian society;
- Training of the mid in understanding of the world around; and
The acquisition of appropriate skills, abilities and competencies both mental and physical as equipment for the individual to live in and contribute to the development of the society (FRN, 2004: 8).

At any level of education, unless the aforementioned goals are successfully inculcated into the citizens, that education is ineffective. No matter how lofty the curriculum might be, if the quality of the teacher and his teaching is not adequate and effective then that education would like be ineffective. No wonder Ukeje (1986) emphasizes that no education system can rise above its teachers. Teachers are group of individuals, who have undergone approved professional training in education at appropriate levels and are capable of imparting knowledge, attitudes and skills to the learners. It is the duty of the teachers to help organize learning experiences, and to put them into effective use. The teachers should help the learner achieve the goals of education through quality teaching/instruction.

Teaching as the major role of Nigerian teacher is the systematic rational and organized process of transmitting right knowledge, values, attitudes and skills in accordance with the professional principles. Those who do not perform the act in accordance with principles are therefore not teachers (TRC, 2002). It is a known fact that teaching and learning go on simultaneously. This implies that quality teaching brings about quality learning. Some of the qualities of good teaching include:

- Good teaching is oriented towards the goals of education;
- Good teaching is innovative i.e. tries new approaches with plenty of room for daily improvement;
- It utilizes adequate teaching methods and skills;
- It develops and encourages positive attitudes such as friendliness and cooperation;
- It provides the learner with activities which stimulates learning;
- It strives to know and understand the learner and his learning environment;
- It recognizes that no two learners are equally gifted;
- Good teaching ascertains that learning has taken place at one stage before proceeding to the next stage.
- Good teaching recognizes teachers as instrument for enhancement of learning.
- Teachers who possess these qualities and put them into action should summarizingly ensure quality learning (Uche & Onyemerekeya, 2008).

Learning according to Wikipedia (2009) is a change in behavior or performance which is as a result of experience and practice which makes an individual face later situations differently. This change according to Stahl (2009) should lead to improvement. It is a process that involves development of habits, attitudes, perceptions, interests, preferences, social adjustment, and development of skills and acquisitions of knowledge. It is therefore the duty of a teacher to ensure that every learner is a potential achiever through quality teaching and learning. Quality teaching is geared towards effective learning. Quality learning should in addition to application of teaching methods/skills probe and identify various learning styles of learners. Anyachebelu (2005) observes that every learner has its own characteristics make-ups that either hinder or promote his/her rate of intellectual functioning. Okeke (2008) notes that rate of learners assimilation of a given subject matter lies greatly on the individual learners learning styles. Harris (2010) defines learning styles as the learners’ unique ways of grasping, organizing and transforming information into useful knowledge and action. Every learner therefore has a
unique and recognizable pattern of learning behavior. Learners tend to adopt more than one learning styles in learning and this is dependent on the nature of topic and mode of instruction. This implies that teachers should incorporate learners learning styles as part of their teaching skills and methods.

Morsin (2010) identifies the following learning styles: collaborative learning style, reflective learning style, avoidant learning style, dependent learning style independent learning style theorist learning style, pragmatist learning style, sensing learning style, and intuitive learning style.

Haris (2010) also recommended another four learning styles for effective education to include:

visual learning style, verbal learning style, sequential learning style, and Global learning style

Intuitive Learning Style is adopted by learners who prefer discovering possibilities and relationships. This encourages innovation and eschews repetition. Learners grasp new concepts readily and are more at home with abstraction/mathematics formulae.

Sensing Learning Style is good for learners like solving problems by well-established methods. They resent being tested on materials that has not be explicitly covered.

Visual Learning Style is very good for promoting learner’s who learn best by observing and seeing the picture, diagrams, i.e. visual aids.

Collaborative Learning Style is typical of a learner who feels that ideas are best shared with other learners in the classrooms. Such learners like to cooperate with teachers in their process of learning. Classroom is seen as a place of social interaction as well as content learning.

Dependent Learning Style indicates learners who do not trust on their abilities and therefore must be carried along.

Independent Learning Style concerns learners who are capable of thinking for themselves. They like to explore on their own.

Avoidant Learning Style applies to learners who adopt dislike syndrome towards a subjects i.e. laissez-faire learners.

Reflective Learning Style concerns process of taking time to consider all alternatives before taking decision or assimilating.

Activist Learning Style entails interest in novelty learner experience.

Theorist Learning Style involves linkages and relationships and

Pragmatist Learning Style involves using need to ensure application of new material encountered.

Implication of these learning styles to the teachers’ teaching is that teachers should be conversant with their learners learning experiences, learning styles and know when to apply each or combination to motivate students learning. Teachers should also know that learning styles are equally teaching skills and at such should be made part of their teaching methods/skills. The problem of the study is that Nigerian education appears not effective as the products seem not properly educated and developed for effective citizenship. This could be due to inadequate teaching methods and skills which seem not to reflect Nigerian child learning styles.

**Purpose of The Study**
The study examined Nigerian child learning styles as teaching strategy for achieving effective education in Nigeria.

**Research Questions**
Four research questions guided the study:

1. To what extent do secondary school teachers possess characteristics of good teaching?
2. To what extent are teachers conversant with various Nigerian child learning styles?
3. To what extent do teachers apply the learning styles as teaching strategies?
4. What are the constraints to teachers’ effective application the learning styles as teaching strategies?

Methodology
The study adopted a descriptive survey design. The descriptive survey is very good in eliciting responses from respondents on prevailing issues.

Population:
The population of the study consisted of five thousand eight hundred (5,800) classroom (2,278 males and 3,522 females) teachers in the two hundred and fifty eight (258) public secondary schools in the 21 Local Government areas within the five (5) Education zones in Anambra State.

Sampling Technique
One thousand (1,000) respondents (392 male and 608 female teachers) were sampled through proportionate stratified sampling techniques from 25 public secondary schools in Anambra State.

Instrument for Data Collection
The instrument for data collection was researcher’s developed questionnaire titled “Learning styles as teaching strategies (LSATS)”. It contained 28 items posed to provide information for the four research questions. It was built on 4-point rating scale of Very High Extent (VHE) (4-points), High Extent (3 points), Low Extent (LE) – 2 points and Very Low Extent (VLE) – 1 point.

Validation of the instrument
Two experts in the Educational Administration/supervision and Educational Psychology validated the instrument on content and face validity. Suggestions reflected in the final draft of the instrument.

Reliability of the instrument
Reliability index values of 0.85, 0.80, 0.75 and 0.80 were obtained from the pilot test data subjected to split half reliability technique for the four research questions

Method of Data Collection
The researchers administered 1000 copies of the LSATS questionnaire to 1000 sampled teachers with the assistance of two research assistants. Analysis was made based on 995 copies of the LSATS questionnaire returned (about 99.5% return).

Method of Data Analysis
The decision rule was that items that score 2.50 and above were regarded as positive and high extent responses while items that score below 2.50 were negative responses and treated as low extent for the research questions 1, 2 and 3. For research question 4, positive responses were treated as agree and negative responses treated as disagree.

Results
Results in table 1, reveal classroom teachers’ mean scores responses on teaching strategy for enhancing Nigeria child learning. Four (4) out of the seven (7) items enumerated scored above 2-50 indicating classroom teachers general agreement that teachers possess the four characteristics of the teaching strategy items to high extent. While 3 items (2, 5 and 6) scored below 2-50 indicating that teachers possess the teaching strategy items to a low extent. Therefore, only 4 items (1, 3, 4 and 7) were identified as the characteristics of good teaching strategy possessed by the teachers.
Research question 1: To what extent do secondary school teachers possess the characteristics of quality teaching?

Table 1: Mean scores analysis of teachers on characteristics of good teaching strategy?

<table>
<thead>
<tr>
<th>S/N</th>
<th>To what extent are these the characteristics of good teaching</th>
<th>TEACHERS RESPONSES</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>VHE</td>
<td>HE</td>
</tr>
<tr>
<td>1.</td>
<td>Good teaching is goal oriented</td>
<td>(505)</td>
<td>(300)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2020</td>
<td>900</td>
</tr>
<tr>
<td>2.</td>
<td>Good teaching is innovative</td>
<td>(10)</td>
<td>(20)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>3.</td>
<td>Good teaching develops positive behaviours in learners</td>
<td>(1000)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Good teaching strives to understand</td>
<td>(450)</td>
<td>(490)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1800</td>
<td>1470</td>
</tr>
<tr>
<td>5.</td>
<td>Good teaching incorporates learners’ learning styles</td>
<td>(100)</td>
<td>(120)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400</td>
<td>6</td>
</tr>
<tr>
<td>6.</td>
<td>Good teaching recognizes that not two are equally gifted</td>
<td>(485)</td>
<td>(102)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2020</td>
<td>306</td>
</tr>
<tr>
<td>7.</td>
<td>Good teaching leads to effective education</td>
<td>(980)</td>
<td>(20)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3920</td>
<td>60</td>
</tr>
</tbody>
</table>

Table 1 with a grand mean of 3.18 indicated classroom teachers general agreement with the seven items enumerated are characteristics of good teachers. Scores below the weighted mean of 2.50 indicated the teachers low extent knowledge of the two out of the seven characteristics of good teaching.

Research question 2: To what extent do secondary school teachers know various Nigerian child learning style as a teaching strategy?

Table 2: Mean scores analysis on knowledge of various Nigerian child learning styles?

<table>
<thead>
<tr>
<th>S/ N</th>
<th>To what extent do teacher know these Nigerian child learning styles as a teaching strategy</th>
<th>TEACHERS RESPONSES</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>VHE</td>
<td>HE</td>
</tr>
<tr>
<td>8.</td>
<td>Collaborative learning styles</td>
<td>(919)</td>
<td>(81)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3676</td>
<td>243</td>
</tr>
<tr>
<td>9.</td>
<td>Intuitive Learning style</td>
<td>(26)</td>
<td>(144)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>104</td>
<td>132</td>
</tr>
<tr>
<td>10.</td>
<td>Visual Learning style</td>
<td>-</td>
<td>(900)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2700</td>
<td>196</td>
</tr>
</tbody>
</table>
11. Theorists Learning style  -  -  -  1000  1.00  L.E

12. Independent Learning style (263) (415) (300) (22)  2.92  H.E
   1052  1245  600  22

13. Pragmatic Learning style  -  (2)  (900) (98)  1.90  L.E
   6  1800  98

14. Sensing Learning style (10) (466) (319) (5)  2.68  H.E
   40  1998  638  5

15. Sequencing Learning style  -  (11) (979) (10)  2.19  L.E
   44  2937  10

Grand Mean  1.95  L.E

Result in table 2 indicates that a low grand mean of 1.95 indicating secondary school teachers low extent knowledge of Nigerian child learning styles. Their ignorance seems highest with two items (11 and 13) which are theorist and style pragmatic learning styles. This implies that majority of Nigerian child learning styles are unfamiliar with the teachers.

Research question 3: To what extent do teachers apply learning styles as teaching styles?

Table 3: Mean score/rating analysis of teachers responses on extent of teachers apply of learning styles as teaching strategy

<table>
<thead>
<tr>
<th>S/N</th>
<th>Extent of application of these learning style as teaching strategy</th>
<th>TEACHERS RESPONSES</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>VHE 4</td>
<td>HE 3</td>
</tr>
<tr>
<td>16.</td>
<td>Collaborative learning style</td>
<td>(500)</td>
<td>(450)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2508</td>
<td>1350</td>
</tr>
<tr>
<td>17.</td>
<td>Intuitive learning style</td>
<td>-</td>
<td>(40)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>120</td>
<td>920</td>
</tr>
<tr>
<td>18.</td>
<td>Theorist learning style</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>19.</td>
<td>Pragmatic learning style</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Independent learning style</td>
<td>(13)</td>
<td>(100)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>52</td>
<td>300</td>
</tr>
<tr>
<td>21.</td>
<td>Visual learning style</td>
<td>(911)</td>
<td>(77)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2644</td>
<td>231</td>
</tr>
<tr>
<td>22.</td>
<td>Sequencing learning style</td>
<td>(2)</td>
<td>(25)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8</td>
<td>105</td>
</tr>
</tbody>
</table>

Grand Mean  2.30

Result in table 3 above shows grand mean of 2.30 indicated teachers’ teachers’ general disagreement with the eight items. This implies that the learning styles are applied to a low extent by teachers of secondary schools as teaching strategy.

Research Question 4:
What are the constraints to secondary school teachers’ effective application of learners learning styles as teaching strategy?
Table 4: What are the constraints to teachers’ effective application learning styles as teaching strategies?

<table>
<thead>
<tr>
<th>S/ N</th>
<th>Some of the constraints to teachers application of learning styles as teaching strategy are</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.</td>
<td>Inadequate knowledge of their existence</td>
<td>(12)</td>
<td>48</td>
<td>2748</td>
<td>90</td>
<td>27</td>
</tr>
<tr>
<td>25.</td>
<td>Inadequate knowledge of their importance to achievement of education goals</td>
<td>(259)</td>
<td>1036</td>
<td>204</td>
<td>122</td>
<td>3.20</td>
</tr>
<tr>
<td>26.</td>
<td>Inadequate possession of skills of their education goals</td>
<td>(1000)</td>
<td>4000</td>
<td>-</td>
<td>-</td>
<td>4.00</td>
</tr>
<tr>
<td>27.</td>
<td>Inadequate access to current materials for up-dating</td>
<td>(1000)</td>
<td>4000</td>
<td>-</td>
<td>-</td>
<td>4.00</td>
</tr>
<tr>
<td>28.</td>
<td>Inadequate motivation of teacher for innovativeness</td>
<td>(536)</td>
<td>2144</td>
<td>(430)</td>
<td>1290</td>
<td>(24)</td>
</tr>
</tbody>
</table>

Grand Mean 3.52

The result in table 4 reveals grand mean score of 3.52 for teachers, indicating general agreement that the five items enumerated could serve as are constraints to secondary school teachers’ application for Nigerian child learning styles as a teaching strategy.

Discussion

Effective education has been recognized as an instrument of social transformation. Teachers are seen as the agent through which this their teaching quality. Good teaching has many characteristics that supports and enhances achievement of education goals. This quality teaching incorporates teaching methods, skills and learning styles.

Result of findings in table 1 showed that secondary school teachers general agreed that the seven items on the table 1 are characteristics of good teaching for attainment of effective education. The findings are in line with Uche and Onyemerekeya (2008) that identified about fifteen qualities of a good teaching to include: goals oriented, transformation of citizens, identification of learners/individual difference in learning, recognizing learners learning styles etc. The findings also disagreed that items 2 and 5 (i.e. teaching entails innovativeness, and incorporates learning styles) as characteristics of teaching. Teachers seem to believe that innovativeness is not directly related to teaching. This could be one of the reasons present day teaching is not very effective. Result in table 2 identified various Nigerian child learning styles to be collaborative, intuitive, visual, independent learning styles, etc. These findings support the earlier works of Morsin (2010) and Haris (2010) that recommended various learning styles, that good teaching should incorporate for quality teaching and learning. Finding also showed that two items out of the eight that is theorist, pragmatic and sequencing learning styles are accepted to a low extent by teachers as Nigerian Child Learning styles. This is in contrary to recommendation of Morsin and Harris as enumerated in table 2. The grand mean of teachers responses on the table 2 confirmed that teachers generally do not know various Nigerian Child Learning styles that could be part of teaching strategy.

Result in table 3 with low grand mean of 2.30 revealed that secondary school teachers apply learners learning style to a low extent during their teaching. This observation is not surprising since result in the table 2 showed that teachers are not very aware of or familiar
with Nigeria Child learning styles. One can hardly apply what he does know. This observation disagree with Okeke (2008) that emphasized the importance of application and incorporation learning styles in teaching and learning as a teaching skills. Result in table 4 tried to identify about five constraints to awareness and effective application of learners learning styles during teaching. These included ignorance/inadequate knowledge of the existence of learning styles, inadequate knowledge of their importance, inadequate opportunities for up-dating knowledge, poor access to up-dating materials and poor motivation. Stahl (2009) and Anyachebelu (2005) observed that majority of teachers are not well groomed and equipped for the task of teaching at this age of information technology.

**Recommendations**

Regular, periodical seminars and workshop should be organized to update these teachers especially on learner centered teaching approach and Nigerian child learning styles. Teachers working conditions should be enhanced to serve as motivation to attend to these workshops on their own sponsorship.

**Conclusion**

The study has examined what teaching ought to be in terms of characteristics. It identified level of Secondary School teachers awareness of Nigerian child learning styles and their utilization during teaching to achieve quality education of Nigerian child. Secondary school teachers are knowledgeable of the characteristics of good teaching. But the teachers are not very knowledgeable of various Nigeria Child learning styles. The study observed that teachers in secondary schools apply learning styles to a low extent during the process of teaching and learning. About five constraints to the application of these learning styles were identified.

**REFERENCES**


INSTRUCTIONAL SUPERVISION AS A CATALYST FOR QUALITY IMPROVEMENT IN SECONDARY EDUCATIONAL SETTINGS

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and

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Abstract
A lot of inputs have gone into the creation and establishment of supervisory unit through organization and planning in our educational system. These inputs have been channelled towards the purpose of realizing the stipulated goals and objectives in the National Policy on Education. Thus, a quality school must provide its students with sufficient, current and detailed content in every subject areas. To do this effectively, the teachers have to utilize the appropriate teaching methods and materials that will enhance improved instructional materials, hence the urgent need for instructional supervision in the school. Instructional supervision must, therefore, be efficiently created and properly mapped out to help interaction that will foster quality improvement in the process of teaching and learning. This paper examines instructional supervision, quality education and the do’s and don’ts of effective and quality supervision of instruction. The paper also examine instructional supervision as catalyst for quality improvement in secondary schools. Finally, the paper concludes that there should be modalities in place to ensure inspectors of the Ministry of Education monitor school heads to ascertain their appropriate use of the various techniques of instructional supervision in secondary schools.

Keywords: Instructional Supervision, Quality, Improvement, Effective and Secondary education

Introduction
The goals of secondary education as stipulated in the National Policy on Education (FRN, 2004) is to provide the highest level of basic education geared towards preparing the child for future challenges in tertiary institutions and in the society. As such, instructional supervision programmes are imperative as the quality of education system is measured by how well the system performs the functions of achieving the goals of education in the country. Instructional supervision ensures improved teaching and learning. To achieve improved teaching and learning process, therefore, require supervision to help teachers develop a new set of instructional methodology. Moreover, in this era of constant change that require teachers to be abreast with modern trends in their subject areas, ensuring quality in the school is possible through instructional supervision. The importance of supervision of instruction as a leadership process to stimulate, guide and assist teachers and, in fact, to improve instructional interactions is captured by Ukeje, Akabogu & Ndu (1992:359) that:
The educational leader as a supervisor has the responsibility for improving the school curriculum through cooperative planning of educational opportunities provided for education. He has to improve instruction through the use of classroom visitations, individual and group conferences and demonstrations. These techniques were related to the broad strategies or approaches to supervision – clinical supervisions and micro-teaching. Therefore, supervision is associated with the overall development of the teacher to grow professionally to be able to carry out his teaching exercise effectively and efficiently, thus improving learning in secondary schools. It involves technical services primarily aimed at studying and improving cooperatively all factors which affect child growth and development. Through the means of supervision we improve instruction, stimulate professional growth and develop teachers to be able to utilize the appropriate materials of instruction and methods of teaching in schools. The essence of a good instructional supervision, therefore, is to help a teacher to attain a better teaching-learning situation. It is also aim at providing conditions that are necessary for quality learning through effective teaching.

However, in schools today, supervision is lacking than it did in the past two decades. This may be attributed to the rapid enrolment growth of students in schools and increase in professionalism within the educational system (Ogunsaju in Utake, 2012). In fact, the tendency for some modern school heads is to unwittingly shy away from the supervision of instruction. They rather occupy themselves with inspecting school building projects; soliciting for funds from the Parents Teachers Association (PTA) and the general public; attending to visitors and unnecessary administrative chores, among others (Okwor, 2002). Giving credence to this, Adebayo (2008) noted that public education today is faced with various challenges ranging from mismanagement of allocated resources, inadequate supervision to failing academic standards to the extent that the primary purpose of schooling has been set aside. This is probably why there have been consistent question and complain about the quality of instruction children received at the secondary school level in Nigeria.

Today, the poor performance of students in external examinations has become a major concern of stakeholders, educators, parents, employers, employees and indeed the society at large (Ogunu & Momoh, 2011). The results in external examinations remain the major indicator of quality in the secondary educational system. For instance, West African Examination Council (WAEC) records of the results released in 2010 was reported as being the worst in the years 2008, 2009 and 2010. The result in 2008 was 23%, it was 21.9% in 2009 and in 2010, 20.4%. A further breakdown of the WAEC result released in December, 2010 and the report of WAEC (2004) by science subjects, grade and sex are shown in Tables 1 and 2.

Table I revealed that, out of the total number of 310,077 candidates that sat for the 2010 WAEC examination only 62,295 candidates passed, representing 20.09%. While Table 2 revealed low achievement in students’ outputs in the science subjects such as agricultural science, biology, chemistry, health sciences and physics. This persistent poor performance in WAEC is an indication that the quality of education provided at the Nigerian secondary schools is of low quality. It, therefore, suggest that effective and quality instructional supervision is not only imperative but require immediate attention to ensure quality improvement in education. This is because if the principals can carry out their supervisory roles and duties and the teachers encouraged to perform their duties effectively, the educational goals and objectives, may be achieved. Experience may have shown that teachers’ job performance is enhanced by correction, encouragement and in-service training. The fault or errors in teaching can only be detected through instructional supervision hence the importance of supervision in secondary schools cannot be over-emphasized (Onoyase &
Onoyase, 2007). The focus of this paper is on the discussion of how instructional supervision would serve as catalyst for the effective and efficient improvement of teaching and learning in secondary schools.

### Table 1: 2010 WAEC results

<table>
<thead>
<tr>
<th>No. of candidates that wrote the examination</th>
<th>Result released</th>
<th>Result with held</th>
<th>Result with credit in English</th>
<th>No. that passed with credit in Mathematics</th>
<th>No. of students that passed with 5 credits including Mathematics and English</th>
<th>Students that failed to meet the requirement to enter higher institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>310,077</td>
<td>295,224</td>
<td>51,876</td>
<td>133,807</td>
<td>151,565</td>
<td>62,295</td>
<td>247,782</td>
</tr>
<tr>
<td>100%</td>
<td>92.21%</td>
<td>16.73%</td>
<td>43.06%</td>
<td>48.88%</td>
<td>20.09%</td>
<td>79.91%</td>
</tr>
</tbody>
</table>

Source: Daily Trust, December, 24th, 2010 in Ogunu & Momoh, 2011

### Table 2: WAEC SSCE (August/September) zonal statistics of results in Nigeria by subject, grade and sex

<table>
<thead>
<tr>
<th>Subject</th>
<th>Sex</th>
<th>Entry</th>
<th>% of all candidates that obtained a given grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>1</td>
</tr>
<tr>
<td>Agric. Science</td>
<td>134951</td>
<td>86418</td>
<td>221369</td>
</tr>
<tr>
<td>Biology</td>
<td>156673</td>
<td>128314</td>
<td>284987</td>
</tr>
<tr>
<td>Chemistry</td>
<td>71709</td>
<td>44542</td>
<td>116251</td>
</tr>
<tr>
<td>Health Science</td>
<td>3029</td>
<td>2767</td>
<td>5796</td>
</tr>
<tr>
<td>Physics</td>
<td>64567</td>
<td>31969</td>
<td>96539</td>
</tr>
</tbody>
</table>

Source: WAEC Report, 2004

### Instructional Supervision

Instructional supervision is the act of appraising particular learning exercise to determine the needs of the learner and the effectiveness of the teaching process. It is a process of aiding and suggesting guideline for improvement of teaching and learning in order to enhance pupils learning and quality education. Thus, an instructional supervisor helps teachers to improve teaching process in the educational system. The process of instructional supervision involves supporting and assisting teachers to improve instruction through changing their behavior (Peretomode, 1995). Nwogu (1980), for instance, presented it as a process or an activity by which an individual or a group or team of individuals by means of advising and stimulating interest in teachers and pupils, help to improve teaching and learning situation in educational institutions. In effect, instructional supervision brings about improvement in instructional by helping teachers to improve on their teaching. In this sense, Ezeocha as cited in Nosiri (1997:215) asserted that:

Supervision deals mainly with improvement of learning and teaching and helps teachers to recognize and accept general aims, and work towards the achievement of the purposes to
Therefore, supervision is a positive task directed towards the improvement of instruction, the continuous development and guiding of teachers and every others that are concerned. Hence, the primary aim of supervision is to recognize the real true value of each person, so that in the end, the full potentials of all those in the educative process will be recognized, appreciated and utilized (Nosiri, 1997). The fundamental focus of instructional supervision is the input maximization of teaching and supporting staff for quality control of teaching and students learning activities. As such, supervision has two contexts such as the people and the improvement of the school programme (Utake, 2012). According to her, the mediator between the people and the programme is the supervisor as depicted by the model below:

![Diagram of the Context of Supervision](image)


Significantly, instructional supervision serves various aims in the school system viz:

a. Help to Develop and Utilize Methods and Materials: In order to effectively and efficiently carry out the teaching and learning process, we need to develop teaching aids and adopt appropriate methods to impart knowledge to ensure improvement in the pupils. This the instructional supervisor does by assisting the teacher to develop and direct how to utilize such methods and materials to ensure continuous progress in the pupil, as well as, help the teacher to do his work better.

b. Staff Development: It is an obvious fact that teachers need to be retrained to be able to meet and mediate the constant changing society. We need to learn new trends in details. Thus, the instructional supervisor supplies the teachers with specific information they need in order to improve the professional effectiveness of the teachers and the growth of students.

c. Professional Guidance: This helps to improve the conditions which affect the teaching and learning, as well as, the development and growth of students and teachers.

d. Provide Instructional Leadership: Odor (1995) added that instructional supervision helps solve problems of improving instructions, improving quality of education in schools, achieving educational goals, ensuring curriculum development, development of staff and evaluation of staff. Supervisor provides instructional leadership to
teachers by assisting, guiding and stimulating them to be able to do their work better, improve their instructional skills, experiences and growth professionally.

e. Attainment of Educational Objectives: Nwosu (1997) also added that supervision is geared towards galvanizing and sensitizing of teachers for the improvement of materials, techniques and methods of instruction. This amplifies the rationale for supervision of instruction, the enforcement of which has not only become absolutely necessary but also imperative for the attainment of educational objectives.

Quality Education

Quality is the degree of excellence of peculiar and essential characteristics. It is the grade, degree of performance and worth. Quality is something considered good which everyone wants to have presupposing that there is a standard set by which it is measured or assessed. Quality in education is assessed in terms of its relevance to the needs of the immediate community or society at large: relevance, functionality, needs of daily life and life challenges (Ogunu & Momoh, 2011). Quality education suggests the ability or degree with which an educational system conforms to the established standard and appropriateness of the inputs available for the delivery of the system (Fedipe, 1999). According to Okeke (2001), the quality of schooling can be measured in terms of the number of contact hours, curricular, class size, students motivation, characteristics of teaching staff, leadership style, how well the system prepares the product for life are to live. He noted that quality is assessed by the level of attainment of the goals as enshrined in the National Policy on Education. This implies that quality is an institutional value and conscious efforts are to be made to ensure and sustain quality in all its ramifications at every facet of the educational system by proper and adequate utilization of the available human and material resources (Emenalo, 2008).

The Dakar Declaration Framework expanded the definition of quality education to include the desirable characteristics of learners (health, motivated students), processes (competent teachers using active pedagogies), content (relevant curricular) and systems (government and equitable resources allocation). DuBrin (1997) noted that quality education require adequate curriculum, appropriate teaching and learning environment and experiences. This agrees with the United National Educational Scientific and Cultural Organization (UNESCO) Quality Education Framework Four-Fold Principle of Learning (Delors, Singh & Amagi, 1996) as depicted in Table 3 below:

<table>
<thead>
<tr>
<th>Type</th>
<th>Principle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning to Know</td>
<td>Acknowledging that quality learning provides opportunities for learners to build their own knowledge daily combining indigenous and external elements.</td>
</tr>
<tr>
<td>Learning to do</td>
<td>Opportunities for learners to apply what they learn.</td>
</tr>
<tr>
<td>Learning to live together</td>
<td>Developing in learners attitude free from discrimination, where all have equal opportunities to develop themselves, their families and their communities.</td>
</tr>
<tr>
<td>Learning to develop skills</td>
<td>Emphasis on skills require for developing individual’s full potential.</td>
</tr>
</tbody>
</table>

Quality Education therefore include:
- Learners who are healthy, well-nourished and ready to participate and learn and who are supported in learning by their families and communities.
- Environments that are healthy, safe, protective and gender sensitive and provide adequate resources and facilities.
- Content that is reflected in relevant curricular and materials for the acquisition of basic skill, especially in areas of literacy, numeracy and skills for life, and knowledge of nutrition, HIV/AIDS prevention and peace.
- Processes through which trained teachers use child-centred, teaching approaches in well-managed classrooms and the schools and skillful assessment to facilitate learning and reduce disparities.
- Outcome that encompasses knowledge, skill and attitudes, and are linked to national growth for education and positive participation in society (United Nations Children’s Fund (UNICEF) in Aigbomian, 2012:2).

Do’s and Don’ts for Effective and Quality Supervision of Instruction

There are certain things supervisors should do away with for them to carry out effective and quality supervision of instructions in secondary schools. In other words, they are those attitudes that hinder efficient supervision viz:
- Supervision should not be seen and used as a means of clamping down on staff;
- Supervision should not be viewed as a fault-finding weapon;
- Supervisors should not forcefully or autocratically take charge of the classroom instructional interaction from the teacher to prove a point;
- Supervisors should avoid inspection;
- Avoid evaluation of the school as a designated place of learning;
- Avoid acting as threats to teachers careers;
- Avoid authoritarian attitude in the conduct of supervision of instructions; and
- Supervisors should see their role as basically that of facilitators.

As you are now aware of the factors that hinder effective supervision of instructions, it is even more imperative to be abreast of the positive factors that enhance quality supervision of instruction in schools. They are:
- Enhanced Satisfaction: The procedures of supervision should result in improved staff morale and job satisfaction. Thus, the supervisors should help teachers to develop more confidence in themselves.
- Advise and Guide: The supervisors should help teachers to feel more adequate to handle their own problems and experience the fuller realization of their capabilities.
- Assistance: The instructional supervisor should assist teachers to see far beyond their immediate performance and strive for quality improvement in instructional interactions.
- Cooperation: The genuine supervisor encourages the full participation of all those involved in the teaching and learning process rather than skill manipulation of staff. Thus, the effective supervisor seeks the adoption of pre-conference, observation and post-conference to enable the teacher be part and parcel of the decision reached.
- Supervision should help to increase the rate and quality of learning by students.

Instructional Supervision for Quality Improvement in Secondary Education

Those in charge of education such as the government and its education agencies are concerned about the values to be attained through schooling at all level of the educational
system. All agencies responsible for education are equally concerned about the quality of the education system. According to Okwor (2002) achieving quality education is a function of effective and efficient administration by which smooth operation of school is ensured. Ensuring smooth operation of schools is possible through effective supervision. It is in realization of this, that responsibility to ensure the quality and increasing improvement of instructions in the education system was assigned to specific agency (Ministry of Education) and individual experts (School heads) to assess and supervise instruction in school in order to maintain and improve on quality. This kind of supervision serves as a catalyst to quality improvement in four ways: (i) to provide leadership; (ii) control and coordination; (iii) resource and service; and (iv) to evaluate the progress of instructional interactions. In the first instance, instructional leadership helps to identify the problems of instructions in the system. Then in a relax atmosphere, the supervisor brings the staff and all concerned together to assess the instructional problem and assist by providing solution to them. In this process, the supervisor assessment will enable or aid to clarify the teachers’ purposes and aims of their classroom instructions. In this way, there will be healthy organizational climate, instructional leadership stimulate staff to work towards attaining the objectives and goals of the system, that of quality improvement in teaching and learning. Therefore, supervision of instruction help to support teachers so that there is efficient learning, as well as, enable teachers to match and mediate changes in the system.

In addition, instructional supervision help to improve both skilled and unskilled teachers, this the supervisor does by observing the teachers to enable them adapt to new instructional techniques and results of research findings. By so doing, the supervisor would contribute his professional experience in instructional supervision to successfully solve problems of classroom instruction and development. Here, the responsibility of the instructional supervisor may include:
- Mentoring young teachers in the teaching profession;
- Guiding teachers up to a minimum standard of effective teaching;
- Improving individual teacher’s competencies by providing them with necessary resources for effective teaching;
- Working with groups of teachers in a collaborative effort to improve student learning;
- Relating teacher’s efforts to improvement in their teaching
- Monitoring to assess the level of performance with a view to finding out how far set objectives are being met; and
- Evaluation, used to see how the system can be assisted to improve on its present level of performance based on available data (Ogunu & Momoh, 2011).

Also, the supervisor is in the position to locate the human and material resources available in school. The supervisor has the authority to coordinate the available human and material resources in the school and make assessable to be fully utilized for the achievement of the school goals.

Moreover, the instructional supervisor assessment of teacher effectiveness help to determine whether there is improvement in the teaching learning process. Such an evaluation and assessment might find that there is need to plan and organize more efficiently for improvement in the future (Odor, 1995). According to him, even when classroom instruction is satisfactory, there is always room for improvement. So the guarantee for continuous instructional improvement is through supervision for evaluation of teacher effectiveness in instruction. Thus, supervisors according to Odor (1995) are to develop the teachers’ method of influencing the students learning and to impact some knowledge of
instructional organization to teachers. To do this effectively, instructional supervisors should:

- Work with teachers to develop instructional goals and objectives consistent with the National Policy on Education.
- Provide teachers with necessary resources for effective teaching.
- Obtaining and providing relevant educational information for teachers.
- Stimulate, encourage, support and facilitate all activities designed to improve instruction.
- Visit classrooms to observe how teachers are teaching.
- Hold individual and group conferences.
- Evaluate and develop curriculum materials, including a well-stocked library and instructional resource centre in the school.
- Inspect teachers’ lesson notes, class registers, diaries and teaching and offering professional advice for their improvement (Ogunu & Momoh, 2011).

Furthermore, Oraemesi (1997) and Okwor (2002) identified some instructional supervision methods to ensure improvement of quality in secondary education to include:

- Classroom Visitation: Here, supervisor visits the classroom perhaps with a view to watch the teacher and the pupil in action.
- Demonstration in order to illustrate a process or procedure of doing a new particular thing or to demonstrate a particular newly developed or being wrongly applied. Through this technique, the services of the supervisor as an experienced and knowledgeable officer or some other expert are employed in introducing and explaining innovation or problems that need attention and emphasis.
- Research finding affecting teaching/learning should be investigated or tried to determine their worth and relevance.
- Organization of Workshop: Here, periodic workshops, conferences and seminars for teachers should be organized in the schools for teachers to update their knowledge and keep current in their areas of specialization. These activities help to raise group spirit; integrate efforts, introduce new ideas, techniques or make improvements, tackle common problems and difficulties.

Therefore, supervision provides framework for monitoring and reporting on the effectiveness of the teachers’ performance and focus upon improving it. As such, the process of educating the students need to be monitored and controlled so as to identify, remove or control the causes of the defects and departure from set standards (Emenalo, 2008).

**Conclusion**

This paper has looked at how instructional supervision could act as catalyst to ensure quality improvement in education in Nigeria, what instructional supervision and quality education entails, as well as, the do’s and don’ts for effective and quality supervision of instruction in secondary schools, with emphasis on those attitudes that hinder efficient supervision and those that enhance effective supervision of instruction. The major considerations on how instructional supervision could stimulate and support teachers so that there is efficient teaching and learning, as well as, the attainment of secondary education were also discussed.

**Recommendations**

1. School heads due to their administrative task should delegate some supervisory functions/tasks to other teachers who are educationally qualified and experienced with sound classroom pedagogy to ensure effective teaching and learning.
2. There should be training and re-training programmes for school heads and teachers in the form of workshop to inform and guide them about current methods in their field to ensure effective supervision of instruction.
3. There is need for school heads to improve their instructional supervision techniques in order to offer necessary advice on the improvement of quality education.
4. There should be modalities in place to ensure inspectors of the Ministry of Education monitor school heads to ascertain their appropriate use of the various techniques of instructional supervision in secondary schools.
5. There should be regular upward and downward communication between the school heads and the ministry of education.

References


GLOBALISATION AND ITS INFLUENCE ON MATHEMATICS EDUCATION IN SECONDARY SCHOOLS IN AKWA IBOM STATE, NIGERIA.

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ABSTRACT

The study investigated globalization and its influence on mathematics education in secondary schools in Akwa Ibom State, Nigeria. The study determined how globalization influences mathematics contents, teaching methods and instructional resources. The research questions were to what extent does globalization influence mathematics contents, teaching methods and instructional resources. Descriptive survey design was employed in which five (5) secondary schools were chosen and ten SSII students were randomly selected from each of the schools making a total of fifty (50) students. A 22-item studied questionnaire comprising of the following subsections: mathematics contents, mathematics teaching methods and mathematics instructional resources were used to collect the needed data for the study. The collected data were analysed using chi-square analysis, and the hypothesis that there is no significance influence of globalization on mathematics contents, teaching methods and instructional resource were tested at 0.05 level of significance. The result shows that globalization has not significantly influenced the three variables- mathematics contents, teaching methods and instructional resources. It was recommended among others, that technology based instruction should be adopted by mathematics teachers and government should build well-equipped e-library in all the States to improve online learning.

Keywords: Globalisation, Mathematics Education, Mathematics Contents, Teaching Methods, and Instructional Resources.

INTRODUCTION

Globalisation is a process of interaction among the people, companies and government of different nations, a process driven by international trade and investment and aided by information technology. It is a process of making something generally accepted all over the world. Globalisation has unified the entire world into one small village with common socio-economic, political, cultural and educational systems (Wokocha, 2011). With the world educational system, every individual or society must operate within the world order to meet the challenges of globalization.

Globalisation processes have linked education to technological and economic development. For instance, global collaboration is essential for moving mathematics education forward in this globalised world and at the same time avoiding the colonialism of the past and allowing the discipline to play its role in bridging the ever increasing gap between countries (Atweh & Clarkson, 2005). The culture of globalization has equally engendered the Millennium Development Goals strategies (MDGs), which seek to address
issues of poverty, education, equality, wealth and environment and the Education For All Goals to be achieved by year 2015 (Obomanu & Adaramola, 2011). In view of these, globalization has deeply affected mathematics education in schools since mathematics is regarded as the peak for decision making.

With the discovery of computer and internet which make globalization possible, the nature of teaching and learning is changing from traditional learning to electronic learning method. The change from teacher-centered to learner-centered has created a close connection between knowledge construction and reflective action among students and the need to embrace information technologies. Education and training need to keep up with the emergence of new technologies so that students learning mathematics in Nigeria can fit in with other students in another country.

Odili (2006) opines that the education of any nation is given impetus by the quality of educational programmes that are available and the zeal with which they are implemented. Through the internet, globalization allows the access to ideas on new things and best practices in all areas of human endeavour. Odili conceptualises mathematics as the queen of the sciences and that no nation can hope to achieve any measure of scientific or technological advancement without proper foundation in school mathematics. Mathematics itself is very important for the study of other social sciences. It is associated with the development of technology because engineers cannot do without mathematics.

White (2007) discussed how many of the patterns and practices of everyday life are shifting and changing at different rates in response to the powerful global processes that often appear beyond immediate local control, belief or even comprehension. Globalisation is a force reorganizing the world’s economy and help to increase the body of knowledge and quality of life. Knowledge is fundamental to globalization and globalization in turn has influence on the transfer of knowledge. Therefore the concept of mathematics learning and knowledge delivery needs to be changed.

As the world is advancing, the use of traditional learning gadgets and learning style has changed to the use of technology/electro-mechanical devices for societies to acquire the right information skills, attitudes and techniques for sustainable growth and development. In this case, learning is easily linked across countries thereby maintaining learning standard between societies to meet the challenges of globalization. According to Wokocha (2011), the globalised world was made possible by the discovery of the computer and internet which has made the world virtual by transmitting information across the globe in a matter of micro-seconds.

In Nigeria, mathematics does not appear to be in tune with the developments across the world because its pedagogical approach has not changed substantially over the years. Schools do not integrate new technologies into teaching and learning. Students do not learn how to use and integrate the new technologies in order to fit in wherever they find themselves. Communication infrastructure is inadequate for our students. Most learners in remote areas cannot have access to computers or get connected when they want to learn after school hours. It has been observed that learners do not appear to use their mobile phone for learning, and the use of computer and internet is not embraced in a higher rate particularly for learning mathematics.

Since the need for knowledge and technology-based personnel in the area of mathematics is very necessary in this era of globalization, it therefore becomes imperative and expedient to find out if there is any influence of globalization on teaching and learning of mathematics in secondary schools.
This research in general terms seeks to determine the influence of globalization on mathematics education in secondary schools. Therefore, the purpose of this study is to determine how globalization influences mathematics contents, teaching method and instructional resources. In the same vein, the following research questions were developed to direct the study. To what extent does globalization influence mathematics contents, teaching method and instructional resources? The hypotheses adopted for this study is there is no significant influence of globalization on mathematics contents, teaching method and instructional resources?

**GLOBALISATION AND MATHEMATICS CONTENTS**

Cabillan (2011) opines that globalization in the 21st century is reaching almost all countries. Few places can elude contemporary trends and innovative practices are seen to spread even faster due to modern technology. Mathematics has played important role in the school curriculum in every country. It acts as a means of access to other courses thereby helping to develop many professionals. The inexorable transformation of consciousness brought on by globalization alters the content and contours of education, as schools take on an increasingly important role in the process. (Wokocha 2011), and Rutkowski & Rutkowski, (2008) argue that it is reasonable to expect that what students know (based on curriculum) is one type of outcome for which an increase in similarity across countries may be expected. Therefore it is wise for us to promote the international curriculum standards that might positively influence mathematics learning. Rutkowski et al asserted that, as the role and impact of technology continue to increase in society and in the workplace, the concepts, processes and skills of science and mathematics are likely to become even more highly valued and the importance of these subjects in school curricula to become even greater.

Cabillan (2012) has asserted a necessity of addressing the need to shift the culture of mathematics learning to suit the features of globalization. In this case more specific contents should covers cognitive processes in hypermedia and multimedia learning, social issues in computer-supported collaborative learning, motivation and emotion in blended learning and e-learning.

Rutkowski & Rutkowski (2008) provides a comparison and contrast of two theories of the impacts of global forces on education. First, a Common World Educational Culture (CWEC) theory, developed over a number of years by John Meyer and Colleagues and students at Standford University, argues that a universal model of education is being developed primary by global institutions.

Therefore mathematical academic bodies should try to make changes in the area of contents design, instructional resources and teaching method which should be well incorporated for the training of youths.

**GLOBALISATION AND MATHEMATICS TEACHING METHOD**

Cabillan (2011) has asserted that the classical way to deliver lectures needs to be changed, minimizing the use of old textbooks and offering a very lively guiding programme based upon various information sources, with revised teaching notes and opening new windows to appreciate the context of students and their creativity as individuals and as a group.

Carnoy & Rhoten (2002) opine that the way knowledge is delivered in the classroom is an important aspect of knowledge production and the classroom seems largely untouched. Wokocha (2011) also asserted that equity pedagogy creates an environment in which
students can acquire, integrate and produce knowledge and envision new possibilities for the use of knowledge for societal change. It challenges the idea of instruction as transmission of knowledge where the professor is the source of knowledge and wisdom and the students are passive recipients.

GLOBALISATION AND MATHEMATICS INSTRUCTIONAL RESOURCES

Cabillan (2011) asserted that education is very gradual in its adoption of changes despite the presence of technology within their reach. They are rarely used. Yushau (2006) also found that, Mathematics professors perceive computers as a positive tool that can enhance the teaching and learning process but putting such perception into practice tells a different story.

Cabillan (2012) investigated the response of some members of the faculty of mathematics department of selected universities to questions an issue regarding the pervasiveness of globalization. Four top universities of the Philippines were included in the study. The study employed a case type qualitative research design. The study considers the area of instructional design, faculty and research. Findings have shown a very low level of the use of technology in the classrooms.

In view of these, the new technologies should be highly embraced by mathematics learners such as making use of mobile phone in learning, the use of computer, internet, hypermedia and multimedia facilities should be encouraged. Some techniques have been developed to have access to information on the internet such as communicating with colleagues on mathematics topics over the internet, sharing information on mathematics through e-mail, downloading of information into Digital Video Disk (DVD) to distribute to schools which help students without computer to use television and study which make them active in learning. O1aniyan & Obadara (2006), assert that with the increasing capacity of information and communication technologies, there is a rise in new learning opportunities beyond the traditional bookteacher model. These factors cannot be denied because it is the main factor in increasing the level of collaboration as globalization comes to stay.

According to Castells (1996) as cited in O1aniyan & Obadara (2006), a substantive progress in implementation of information and communications for that matter progress in quality of life and development cannot be achieved without preparing people for a knowledge society. Learning takes place through communication. Therefore students should make use of information and communications technology to broaden learning skills.

Globalisation has many important implications for the learning of mathematics in schools. Based on these facts, it of interest to examine the influence of globalization on mathematics education in schools.

RESEARCH METHOD

The research design adopted for this study is descriptive survey. This design helps the researcher in obtaining the vital facts and opinions from students.

The population of the study consists of all senior secondary two students in all the secondary schools in Uyo. To obtain the sample five (5) students were randomly chosen from each of the ten schools selected for the study. Therefore, a total of fifty (50) students in SS2 formed the sample for the study.

The study area is Uyo Local Government Area in Akwa Ibom State, Nigeria. This local government area is the central part of Akwa Ibom State and serves as the State capital.
It is thickly populated and has five clans with twenty two public and private secondary schools. But this study is restricted to only ten (10) secondary schools in the State.

A questionnaire was designed, validated and their reliability determined before they were used. The above instrument was used to collect the data used for the study. The administration and collection of all the necessary information were done during the normal class hours. Chi-square test ($\chi^2$) was used to see if there exist any significant influence in the globalization of mathematics contents, teaching methods and instructional resources in students learning.

**RESULTS**

Table 1: Result of Chi-Square Analysis of the Influence of Globalization on Mathematics Contents

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>Df</th>
<th>$\chi^2$-cal</th>
<th>$\chi^2$-cri</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Our Mathematics teacher always asks us to browse contents from internet and compare with the ones given</td>
<td>11</td>
<td>12.5</td>
<td>15</td>
<td>12.5</td>
<td>15</td>
<td>9</td>
<td>2.16</td>
</tr>
<tr>
<td>2</td>
<td>Mathematics contents in Nigeria is too simple compared with other countries</td>
<td>11</td>
<td>12.5</td>
<td>10</td>
<td>12.5</td>
<td>11</td>
<td>18</td>
<td>3.28</td>
</tr>
<tr>
<td>3</td>
<td>We usually browse new topics from internet</td>
<td>13</td>
<td>12.5</td>
<td>12</td>
<td>12.5</td>
<td>14</td>
<td>11</td>
<td>0.40</td>
</tr>
<tr>
<td>4</td>
<td>We get some mathematics textbooks from internet</td>
<td>6</td>
<td>12.5</td>
<td>7</td>
<td>12.5</td>
<td>18</td>
<td>19</td>
<td>11.60</td>
</tr>
<tr>
<td>5</td>
<td>Our teacher introduces us to DVD on mathematics topics</td>
<td>4</td>
<td>12.5</td>
<td>7</td>
<td>12.5</td>
<td>19</td>
<td>20</td>
<td>16.08</td>
</tr>
<tr>
<td>6</td>
<td>We watch the teaching of mathematics on television</td>
<td>11</td>
<td>12.5</td>
<td>13</td>
<td>12.5</td>
<td>8</td>
<td>18</td>
<td>4.24</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>56</td>
<td>75</td>
<td>64</td>
<td>75</td>
<td>85</td>
<td>75</td>
<td>14</td>
</tr>
</tbody>
</table>

Chi-square test ($\chi^2$) was used to determine the significance of the influence of globalization on mathematics contents, teaching methods and instructional resources in students learning.
Table 1 reveals that the calculated $\chi^2$ value of 15.40 is less than the critical $\chi^2$ value of 23.685 with 14 degree of freedom at 0.05 level of significance. The result is not significant. Therefore, the hypothesis that there is no significant influence of globalization on mathematics contents is retained.

The table also shows that none of the items on influence of globalization on mathematics contents is significant when the calculated $\chi^2$ values of 2.16, 3.28, 0.40, 11.60, 16.08, 4.24 are compared with the critical $\chi^2$ value of 7.815 at 0.05 level of significance. This result means that globalization has no significant influence on the contents of mathematics in the secondary school system.

Table 2: Result of Chi-Square Analysis of the Influence of Globalization on Mathematics Teaching Method

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>df</th>
<th>$\chi^2$-cal</th>
<th>$\chi^2$-cri</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>Our teacher uses drill and practice method in teaching mathematics.</td>
<td>11</td>
<td>12.5</td>
<td>15</td>
<td>12.5</td>
<td>11</td>
<td>12.5</td>
<td>13</td>
</tr>
<tr>
<td>8.</td>
<td>Inductive-deductive method is used by our teacher to solve mathematics problems.</td>
<td>10</td>
<td>12.5</td>
<td>21</td>
<td>12.5</td>
<td>12</td>
<td>12.5</td>
<td>7</td>
</tr>
<tr>
<td>9.</td>
<td>The teacher uses analytic and synthetic methods to analyse some mathematics topics.</td>
<td>8</td>
<td>12.5</td>
<td>8</td>
<td>12.5</td>
<td>9</td>
<td>12.5</td>
<td>25</td>
</tr>
<tr>
<td>10</td>
<td>Our teacher uses computer assisted instruction in teaching mathematics.</td>
<td>6</td>
<td>12.5</td>
<td>13</td>
<td>12.5</td>
<td>16</td>
<td>12.5</td>
<td>15</td>
</tr>
<tr>
<td>11</td>
<td>Our teacher applies electronic (e) learning in teaching mathematics.</td>
<td>2</td>
<td>12.5</td>
<td>18</td>
<td>12.5</td>
<td>16</td>
<td>12.5</td>
<td>14</td>
</tr>
<tr>
<td>12</td>
<td>Our teacher uses simulation method to teach mathematics.</td>
<td>7</td>
<td>12.5</td>
<td>7</td>
<td>12.5</td>
<td>13</td>
<td>12.5</td>
<td>23</td>
</tr>
<tr>
<td>13</td>
<td>The teaching methods adopted by my teacher are students centered.</td>
<td>10</td>
<td>12.5</td>
<td>14</td>
<td>12.5</td>
<td>14</td>
<td>12.5</td>
<td>12</td>
</tr>
</tbody>
</table>
Table 2 reveals that the calculated value of 20.80 is less than the critical $\chi^2$ value of 23.685 with 14 degree of freedom at 0.05 level of significance. The result is not significant. Therefore, the hypothesis that there is no significant influence of globalization on mathematics teaching method is retained.

The table also shows that none of the items on influence globalization on mathematics teaching method is significant when the calculated $\chi^2$ values of 0.88, 8.72, 16.72, 4.88, 12.40, 13.68, 0.88 are compared with the critical $\chi^2$ value of 7.815 at 0.05 level of significance. This result means that globalization has no significant influence on the mathematics teaching method in the secondary school system.

### Table 3: Result of Chi-Square Analysis of the Influence of Globalization on Mathematics Instructional Resources

<table>
<thead>
<tr>
<th>S/N</th>
<th>Item</th>
<th>Fo</th>
<th>fe</th>
<th>fo</th>
<th>Fe</th>
<th>fo</th>
<th>Fe</th>
<th>fo</th>
<th>Fe</th>
<th>$\chi^2$-cal</th>
<th>$\chi^2$-cri</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Our teacher uses computer to teach mathematics</td>
<td>2</td>
<td></td>
<td>15</td>
<td>12.5</td>
<td></td>
<td>16</td>
<td>12.5</td>
<td>17</td>
<td>12.5</td>
<td>11.92</td>
</tr>
<tr>
<td>15</td>
<td>Our teacher uses projector to teach mathematics</td>
<td>9</td>
<td></td>
<td>12</td>
<td>12.5</td>
<td></td>
<td>16</td>
<td>12.5</td>
<td>13</td>
<td>12.5</td>
<td>2.00</td>
</tr>
<tr>
<td>16</td>
<td>All my teachers are computer literates</td>
<td>11</td>
<td></td>
<td>10</td>
<td>12.5</td>
<td></td>
<td>20</td>
<td>12.5</td>
<td>9</td>
<td>12.5</td>
<td>6.16</td>
</tr>
<tr>
<td>17</td>
<td>We use twitter to communicate with my teacher at home</td>
<td>4</td>
<td></td>
<td>11</td>
<td>12.5</td>
<td></td>
<td>13</td>
<td>12.5</td>
<td>22</td>
<td>12.5</td>
<td>13.20</td>
</tr>
<tr>
<td>18</td>
<td>There is mathematics laboratory in my school</td>
<td>12</td>
<td></td>
<td>4</td>
<td>12.5</td>
<td></td>
<td>11</td>
<td>12.5</td>
<td>23</td>
<td>12.5</td>
<td>14.80</td>
</tr>
<tr>
<td>19</td>
<td>I interact with students in another country through e-mail</td>
<td>12</td>
<td></td>
<td>13</td>
<td>12.5</td>
<td></td>
<td>12</td>
<td>12.5</td>
<td>13</td>
<td>12.5</td>
<td>0.08</td>
</tr>
<tr>
<td>20</td>
<td>I have my personal computer for learning mathematics</td>
<td>15</td>
<td></td>
<td>10</td>
<td>12.5</td>
<td></td>
<td>15</td>
<td>12.5</td>
<td>10</td>
<td>12.5</td>
<td>2.00</td>
</tr>
<tr>
<td>21</td>
<td>Our school has Information and</td>
<td>17</td>
<td></td>
<td>13</td>
<td>12.5</td>
<td></td>
<td>12</td>
<td>12.5</td>
<td>8</td>
<td>12.5</td>
<td>3.28</td>
</tr>
</tbody>
</table>
Table 3 reveals that the calculated $\chi^2$ value of 12.40 is less than the critical $\chi^2$ value of 30.144 with 19 degree of freedom at 0.05 level of significance. The result is not significant. Therefore, the hypothesis that there is no significant influence of globalization on mathematics instructional resources is retained.

The table also shows that none of the items on globalisation influence on mathematics instructional resources is significant when the calculated $\chi^2$ values of 11.92, 2.00, 6.16, 13.20, 14.80, 0.80, 2.00, 3.28, 2.00 are compared with the critical $\chi^2$ value of 7.815 at 0.05 significance level. This result means that globalization has no significant influence on the mathematics teaching method in the secondary school system.

DISCUSSION OF FINDINGS

The finding on Hypothesis 1 reveals that there is no significant influence of globalization on mathematics contents. This is in consonance with findings by Rutkowski & Rutkowski (2008) which says that, policy and curriculum may be impacted more by regional forces than global forces, which mean that students are yet to feel the impact of globalization on mathematics contents.

The test of Hypothesis 2 reveals that there is no significant influence of globalization on mathematics teaching methods. This is in agreement with the findings of International Mathematics Study (SIMS) who performed a comprehensive survey of the teaching and learning of mathematics in the schools of twenty-four countries around the world. The result revealed that American students were distinctly mediocre in mathematics when compared to their peers in most other countries. (Vernille 2002). This therefore means that there is no influence of globalization on mathematics teaching and learning.

The test of Hypothesis 3 reveals that there is no significant influence of globalization on mathematics instructional resources. This agrees with the findings of Cabillan (2012) which shows a very low level of the use of technology in the classrooms from the four departments studied. This therefore means that there is no influence of globalization on mathematics instructional resources.

EDUCATIONAL IMPLICATION OF FINDINGS

From the findings, it implies that with globalisation which enhances the adoption of good modern techniques of instructional delivery through the use of mathematics hypermedia and multimedia and demonstration procedure, students can become versatile in their approach to solving mathematics problems. It also implies that with the use of internet, computer, mobile and information technology in learning mathematics students’ potentials of understanding the concepts of mathematics will increase. It also reveals that with the
adoption of globalization in mathematics teaching and learning, students are likely to develop interest in the subject.

CONCLUSIONS

The study took a careful look at globalization and its influence on mathematics education of students in secondary schools. It has been realized that there is no significant influence of globalisation on mathematics contents, teaching methods and instructional resources. This is as a result of low level use of computers technology in teaching. And it has reduced students’ knowledge and skill compared to what and how it should be achieved. Hence, appropriate methods of teaching and the use of Technology based Instruction be embraced as these would help reduce the rate of globalisation influence on mathematics education. Also the framework for what students need to know to meet their potential for learning challenging mathematics in the school should be provided.

RECOMMENDATIONS

From the study, it is recommended that more specific contents should be covered and schools should embrace the new teaching techniques. Government should provide to all schools computers, multimedia facilities, good communication network system, etc. for students quality learning.

- Information and Communication Technology Centre (ICTC) should be built in all the schools.
- Teachers should embrace computer and technology based instruction in lessons delivery which will help us move toward blackboard-less classrooms.
- Parents should help their wards to have their own personal computer to help them interact with colleagues and teachers online after schools hours.
- Students should make use of their mobile technology, computer and internet to search for information on mathematics.
- Government should build well-equipped e-library in all the States to improve online learning.

REFERENCES


REVIVAL OF HISTORICAL FOUNDATIONS AND HERITAGES THROUGH EDUCATION: PANACEA FOR PEACE AND SECURITY IN NIGERIA

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Abstract
The alien nature of crimes in Nigeria has necessitated the need to look inward and find possible ways of reviving Nigeria’s historical foundation and heritage. It is against this backdrop that the objectives of this paper is conceived and anchored. Suitably historical analysis was employed in this paper in order to identify features of historical foundations and heritages of Nigeria and to find the missing link between traditional educations and present violent prone modernized Nigeria. Oral traditions and craft works form the major features of historical foundation and heritages in Nigeria. These historical foundations and heritages afterwards subconsciously generate among young people character formation, leadership training, skills and vocational training, and other basis of traditional education. However, the relegation of historical foundation and heritage is believed to have resulted into poor character formation, belligerent nationalism, laziness and corrupt leadership which are the major causes of insecurity in Nigeria. It is therefore, recommended that families and schools should rejuvenate these historical foundations and heritages that promotes peace and collective security in Nigeria.

Key words: Education, Historical Foundation, Heritage, Peace and Security

Introduction
Nigerian societies before nineteenth century British incursion were recorded to be governed by prestigious norms and values injected through education in historical foundations and heritages. Upon these foundations stand tranquility, love, togetherness, hard work and dignity of labor. Each society had socio-political system that professes peace and ensured collective security (Obasi and Erondu 1997). There is no gain saying the fact that the advent of colonialism drastically changed the mode of affairs in every facet of Nigeria. Therefore, many believed that the historical foundations and heritages of the Nigerian peoples that flourished in the pre-colonial times invariably disappeared with the colonial regime. After observing the socio-political trends of event in post-colonial Nigeria, Sunny Okoso in a song exclaimed “which way Nigeria? This question has remained unanswered till this day. Nigeria is today confronted with high level of insecurity occasioned by numerous factors that were alien to the Nigerian people like kidnapping, suicide missions, and bombing of civilian population by terrorist groups. This has raised serious concern among scholars on the factors that must have build-up to drive Nigerians off their historical foundations and
heritages. These factors according to Attah and Bukar (2009) include but not limited to colonial traits, modernization and misconception of educational objectives. Colonialism introduced into Nigeria all sorts of differentials and disharmonies (Uya and Erim 1984). Furthermore, there seem to be great socio-cultural transfiguration going on in Nigeria, from traditionalism to modernism or globalism, mainly as a result of relegating historical foundations and heritages in the educational process both at the formal and informal realms. Thus, Erim (2004) maintained that Nigeria is among that part of the world now generally referred to as societies in transition, created by waves of delusive historical education and misplacement of priority.

Without a clear sense of identity based on sound historical education, we are in danger of merely drifting along with others. Burston (1975) posited that history is the story or the evolution of one’s environment, its development and explanation of the present general laws governing the behavior of the society. The value of history from Burton’s assertion is based on the fact that these laws apply to our own time and knowledge of them enables us to deal more wisely with the future. Reference has often been made to the relevance of history as a vital tool for the transformation of culture and for social control.

In spite of the fact that we are in the era of internationalism, we must not fail to appreciate that international community is an aggregate of nations, each with its own distinctive character. It is discernable that nationality and national character are the results as well as, if not rather than, the causes of history (Erim 2004). On this note, this paper is aimed at evaluating features of Nigeria’s historical foundations and heritages in educational process and its relevance to peace and security in Nigeria. This is because the past provides standard for the present as well as starting point for the forward movement.

**Concept of Education**

There have been controversies on the originality of the word “education”. To some scholars the word "Education" was believed to have been derived from the Latin term "Educatum" which means the act of teaching or training. Others postulated that it has come from another Latin word "Educare" which means "to bring up" or "to raise". In the opinion of some other scholars the word "Education" has originated from another Latin term "Educere" which means "to lead forth" or "to come out" (Swastik 2012). Our intention here is not to content on the actual source of the word education, however, all the Latin words listed here indicates that education seeks to nourish the good qualities in man and draw out the best in every individual. On this basis many great philosophers have recapitalized the concept of education.

Aristotle conceived Education as “the creation of a sound mind in a sound body. It develops man's faculty, especially his mind so that he may be able to enjoy the contemplation of supreme truth, goodness and beauty of which perfect happiness essentially consists”. In view of Aristotle’s supposition, happiness is the central aim of education. It is noteworthy that what constitute happiness apparently amount to principles, conducts and ethics globally accepted and these are what education intend to manifest in humans. Thus, to Socrates “education means the bringing out of the ideas of universal validity which are latent in the mind of every man”. Universalistic norms from all parameter denounce acts that cannot guarantee the safety of others, acts that bring agony and pains, but mostly promote peace
and happiness among people. This as it stands could be described as the cornerstone of educational processes from the traditional education and the formal education.

In conceptual terms, education has received so many definitions. According to Berg (2012) education implies a process of attaining and assisting others to attain optimal attitudes that enable a person to perceive accurately, think clearly, and act effectively according to self-selected goals. Berg maintained that self-selection of goals is not merely the result of the efforts of a single ego, but the result of the interactions between the minds of many or all of the members of a caring community.

Therefore, by educating an individual we attempt to give him/her some desirable knowledge, understanding, skills, interests, attitudes and critical thinking. That is, he/she acquires knowledge of history, geography, arithmetic, languages and sciences. He develops some understanding about the deeper things in life, the complex human relations, and the cause and effect relationship and so on. He develops some interests in and attitudes towards social work, democratic living, co-operative management and so on. As an individual in the society on this note has to think critically about various issues in life and take decisions about them being free from bias and prejudices, superstitions and blind beliefs (Swastik 2012). Thus, he/she has to learn all these qualities of head, hand and heart through the process of education which made education a lifelong process manifesting in formal and informal directions.

However, Musgrove (1979) observed that education is a social institution with profound social effects quite apart from the intellectual and moral truths it may reflect, it can divide society or it can help to unite it. Drawing experience from the American cultural transformations Kennedy (1994) mournfully noted that in many of America’s great universities, brightest young men and women are no longer educated in the great traditions of western civilization; instead the campuses have become virtual concentration camp, intellectual gulags, for indoctrinating destructive ideas of political correctness and historical revisionism. And because they have no sense of history, they are easy prey for radical beliefs and practically any political theory being palmed off by their liberal teachers (Sykes 1991). Most scholars believed that American liberalism has dislodged America from its historical foundation and heritage of “believe in God”; it has rather enthroned promulgation of aberrant legislations like homosexuality, and legalization of abortion. This underscores the importance of traditional education in every society in order to keep in touch with the historical foundations and heritages that speak volume on the character of the society.

**Features of Historical Foundations and Heritages in Nigeria**

Everybody sees tradition as crucial to his/her place in the societies (macro and micro) and lay claims to its knowledge. Majority of the Nigerian people could base their claim to present state on the past achievements of their ancestors (Erim 2004). Apparently to the Nigerians, the past merely lives on in the present. It is on this note that the idea of historical foundation and heritage is strongly upheld in ensuring peace and harmony in the community from generation to generation. Therefore, oral traditions form the major feature of historical foundation and heritage in Nigeria.

Oral tradition refers to past human actions reported through speech and handed down from generation to generation. In other words, oral traditions consists of all verbal testimonies
which are reported statements concerning the past (Vasina 1961). Oral traditions provide the tradition of origin of families, clans and communities, socio-cultural organizations, achievements of the individuals in the community, expertise, taboos and list of leadership or political systems (Fadeiye 1986). These formed the fundamentals of historical foundations and heritages in every community.

However, the attainment of oral traditions in a society is a combination of many traditions which represent the life wire of Nigerian societies for example idiom, proverb, art, totem, myth, song, crafts and so on. On this note Ajayi and Smith (1956) and Alagoa (1986) maintained that Nigerian non-literate societies have always used the oral mode of transmission of general knowledge, history and customs without any feelings of inadequacy. Many had evolved various devices for the faithful transmission of those ancient traditions essential to maintaining the identity, integrity, peace and security of their communities. Invariably the ingredients of oral tradition are the bedrock of the historical foundation and heritage of the society.

In addition, families and societies are recognized by one special skill/craft or another, like weaving, carving, dying, leather works, and blacksmith. These crafts or skills were held in high esteem, thus professionals of the crafts take special interests in ensuring that their forebears in the event in which they have participated are not left out of reckoning (Erim 2004). In other words, these crafts/skills are passed from one generation to another which provides source of livelihood to the family and society.

The transmission of oral tradition and extension of crafts/skills are believed to be done basically through traditional education where every reasonable adult is a potential teacher while the conventions, norms, values and expertise of the people serve as the curriculum. In the light of this, it is prominent to underscore the basis of traditional education in the advancement of historical foundations and heritages among Nigerians.

### Basis of Traditional Education in Nigeria

Traditional education is the type of education which is indigenous to the people of Nigeria. According to Bello (2008) traditional education is that system of education that prepare a generation on how to live as members of their groups, their cultural values, norms and beliefs of the society. This form of education has long been in practice before the advent of western and Islamic educations in Nigeria. In earnest, traditional education is the foundational pillars of Nigerian society because it is upon it that historical foundation and heritage are nurtured and expressed. This could be observed in the basis of traditional education, like formation of character, intellectual development, skill acquisition, social integration, service for common good of the society and leadership training.

In virtually all the Nigerian communities' traditional education was geared towards molding the character of children to be worthy ambassadors of their respective families and society. Basically the child is educated on the need to respect elders and those in authority, manners and ways of doing things as allowed by the society and those things forbidden in the society (Bello 2008). Methods of getting the desired character were often attained through intellectual works.

Taiwo (1980) noted that traditional education stimulates the intellectual potentialities of its recipient through the mastery of local history, geography and literature. Other sources of intellectual developments facilitated through traditional education include proverbs, riddles and jokes, dirges, poetry, games, incantations, myth and discussions (Obasi and Erondu 1997). These intellectual works carry along with them powerful messages of rights, wrongs, heroism, sacrileges and reward for hard work (Majuk 2001).
Hard work could be described as the watchword in all the traditional education. Hence, young people were trained in skills acquisition in form of vocations and trade. These include agriculture, art and craft, building, blacksmithing, herbal medicine and trading skills (Bello 2008). Against this background, everyone in the society is given an opportunity of been gainfully employed through skill acquisition, hence, idleness was anathema in the society. Peace and security in traditional societies were achieved through educating the young ones on the virtues of social integration. Traditional education grants sense of belonging to every member of the society and members were taught how to empathize with and love one another. The virtues of honesty and justice were inculcated (Obasi and Erondu 1997). In almost all the societies this gesture was extended to strangers.

At this point it is important to note that the culmination of all the basis of traditional education amount to leader training. Every good leader is expected to be of good character, understand the history and ethnologies of the community, and has been excellent in specific skills recognized by the community. But it is discernible that these bases of traditional education that amount to historical foundation and heritage seem to be under serious threat in the contemporary Nigerian society.

Factor Strangulating Historical Foundation and Heritage in Nigeria

Historical foundation and heritage could be said to be presently at a moribund stage. These days there are changes in attitudes, morals, taste, ethics and value system in the society. Many factors have been identified as strangulating to the basis of historical foundation and heritage.

Traditionalism in Nigeria is profoundly affected by modernization, which has prepared the young ones for a different kind of world from the one in which their parents grew up. Therefore, there is discontinuity in the historical foundation and heritage. Discontinuity in the life of a child occurs when an abrupt and dramatic change takes place in his/her roles as he/she progresses steadily to mature adult behavior (Okoh 1983). Modernization is also facilitated by other factors like the rapidity of information and communication technology, religious fanaticism, mass media and materialism (Bidmos 2003, Closkey 1967). These factors from all indications have generated negative influences in the overall spheres of life in Nigeria most especially leading to insecurity.

Causes of Insecurity in Nigeria

Present nature of crime in Nigeria has remained a source of confusion to many sociologists, psychologists, criminologists and other scholars in the faculty of arts and social sciences. It is this frustration that spur Arizona-Ogwu (2008) to query “I hardly denote these people to be Nigerians; they behave like strangers”. Apparently the nature of insecurity in Nigeria negates every value or norm Nigerian peoples are known for. Most of the crimes we see in the television or hear on the news about far distance places are now found in almost every corner of Nigeria such as kidnapping for ransom, terrorism, organized crimes and so on. All in all, major causes of insecurity are evident in poor character formation, belligerent nationalism, laziness and corrupt leadership.

Kennedy (1994) observed that crisis of character is capable of undermining every aspect of a nation’s life. Thus, ethical and moral fallout threatens not only the political, economic and intellectual well-being but the “destiny” of a nation in its entirety. Those moral values traditionally put in place to ensure social control is no longer fashionable in Nigeria. There is lack of respect for elders and constituted authority (Cookey 1970). Therefore, the citizens are always at war with one another and violent constituted authorities.
Belligerent nationalism is among the factors that have helped to breed insecurity in Nigeria; this has come in form of ethnicity, tribalism, sectionalism, and religious bigotry (Agi 1986, Gowfen 2004). Availability of “human instrument” to perpetrate these anti-social activities is generally believed to be the aftermath of laziness or societal induce unemployment, largely encouraged by capitalistic perception of educational qualification (Attah and Bukar 2009). In earnest, vacuum created by the downgrading of crafts and skills in Nigeria have been occupied by laziness and turn young people into viable “weapons of mass destruction” in the hands of corrupt leaders and politicians.

Considering the level of corruption among public office holders, Erim (2004) asked some rhetoric questions, could it be that the evil we complain so much about in many of our public men could be due to the total absence or the low level of historical consciousness in them? Could the maddening struggle for power and wealth show regard for history? It would appear that the transient nature of power which is implied in Pareto’s dictionary that history is the graveyard of the aristocracies is lost upon the people involved. This has clearly indicated the relevance of reviving Nigeria’s historical foundation and heritage through education to prepare young Nigerians on the task of nation building devoid of insecurity.

Relevance of Historical Foundation and Heritage to Peace and Security in Nigeria

The relevance of historical foundation and heritage to peace and security in Nigeria was captured by Professor Chinua Achebe words, "In a universe of beings intimately related, this nation is our family, and that family has family values. The family values of this Nigerian land are gratitude - respect for nature's cycles - the sacred - harmony - and above all, reciprocity - don't take something without giving something back. What needs to happen is a return to these traditional Nigerian values" (cited in Arizona-Ogwu 2008). By returning to the historical foundation and heritage the values that project economic advancement and socio-political stability will be largely promoted into achieving the desire peace and security.

Nigerian indigenous economies operate to sustain individuals, their rulers and constituted authority. These economies are generally rural-based. In any case, every adult male or female, married or unmarried is expected to participate in the local economy to sustain himself/herself and his/her family. Land is generally available, and where it is short, rural migrants find resources in host societies where they use their indigenous technologies to exploit well known and familiar economic niches (Adetunji 2012). This implies that the principles guiding the historical foundation and heritage demand that everyone be employed. Everyone is socialized to feed himself, wife or wives, and his children. Against this backdrop, there is hardly idleness or beggars. In fact begging is generally regarded as despicable, and shameful to the family. Not even the very elderly or the sick and insane people are allowed to beg for their living in the locality in many of the cultures. Such people are cared for or hidden away from the public while receiving medical treatment (Ottite 1979). The economic involvement of everybody in the society will reduce youth restiveness, and other forms of crimes, just like it is popularly said “an idle mind is the devil's workshop”.

On the other hand, historical foundation and heritage to a large extent provided Nigerian people with necessary political system that guaranteed checks and balances. Tyrants and dictators are deviant authorities and there are practical, constitutional, and symbolic ways of demonstrating in the polities that such rulers are not wanted. This point also implies that the people are not passive respectful followers; they take part in governance with democratic features, and abide by the decisions of their rulers. The indigenous political structure and family organization have mechanisms for controlling recalcitrance and tendencies towards
disintegration and criminal acts (Adetunji 2012). Consequently, embezzlement of public funds that impoverish the people will be checked and power mongering will be controlled through traditional means than the present defective oath taking.

**Conclusion**

It is permissive to conclude that presently Nigeria is lost in the League of Nations. Nigerians cannot even ascertain what they are capable of because they have deranged from those historical foundations and heritages that distinguish them from others. Before the escalation of terrorism in Nigeria, U.S government officially declared that there are terrorist groups in Nigeria, but Nigerian government officials living under the shadows of the past refuted that claims. Today keen observer of all the events taking place in the southern and northern parts of Nigeria will definitely concur that Nigeria is indeed lost. It is only the compass of the historical foundation and heritage that is proficient to bring Nigerians back on track. This could be achieved mainly by sincerely embracing traditional education in families and the society at large.

**Recommendation**

From the foregoing, this paper is aimed at proffering solutions to the malingering insecurity caused by the reversal state of historical foundation and heritage in Nigeria. The following recommendations are hereby outlined;

Parents should start the process of educating their wards on the nitty-gritty of traditional education.

School curriculum should be design to capture some of the principles of traditional education especially emphasis on vocational and entrepreneur skills.

Communities should endeavor to use necessary medium to revival their various healthy historical foundations and heritages.

An indigenous political system should be intercreatively fashioned out that will check the excesses of political leaders in power and common wealth management.

**References**


DEVELOPMENT AND VALIDATION OF LEADERSHIP SKILL ASSESSMENT
SCALE FOR SECONDARY SCHOOL PRINCIPALS

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Abstract

This study was designed to develop and validate principals’ Leadership Skill Assessment Scale. It is an instrumentation study. The sample for the study comprised all the secondary school principals in Enugu State. Two research questions guided the study. Data were collected using a draft copy of the Principals Leadership Skill Assessment Scale. The data were subjected to construct validation using factor analysis with varimax rotation and Cronbach Alpha(α). Results of data analysis reveal that out of the thirty-six items subjected to construct validation, only thirty-one items had a minimum loading of up to 0.35 (acceptance level for factor loading according to Menedith, 1969) on the six factors extracted. Five items did not attain the minimum loading on any of the six factors. One item was loaded on factors 3 and 4 and was considered factorially complex and was discarded alongside the other five items that did not attain the minimum loading of 0.35 on any of the six factors. Results of factor analysis also reveal that some factors have fewer than four items loaded on them. Because it is not easy to explain such factors, the four items were also discarded. Out of the thirty-six items, a total of ten items (items 14, 21, 22, 24, 27, 28, 32, 33, 34, and 36) were dropped as invalid items. Test of internal consistency for the surviving twenty-six items reveal that the instrument has an internal consistency index of 0.958. Based on the findings, the researcher recommends that measurement of principals leadership skill should constitute a regular practice of the Post Primary Schools Management Board especially now that a valid and reliable instrument for the exercise has been developed. The researcher further recommends that researchers in the field of leadership should adopt this instrument in situations that require a clear assessment of principals’ leadership skills.

Key Words: Leadership, Validation, Reliability, Assessment, Instrumentation

Introduction

Leadership is a topical issue in education and school administration. According to Adesina (1992), it is the quality, which in theory signifies the ability of a person, or group of people to persuade others to act by inspiring them and making them believe in a proposed course of action. Leadership implies followership, which exists within an organizational context. As an aspect of influence process in an organization, leadership is both a process and a property. As a process, it involves the use of non-coercive
influence but as a property, it is the set of characteristics attributed to someone who is perceived to use influence successfully (Moorhead and Griffin 2004). Although researchers in the field of administration conceive leadership from a varying theoretical and practical perspectives which range from skill to behaviour exchanges, it must be appreciated that their ideas tend to converge at a point where leadership could be generalized as the ability and readiness to inspire, guide, direct or manage others. Mschane and Vonglinow (2010) identified two dimensions of leadership – initiating structure and consideration. According to Mchane and VonGhnow (2010) initiating structure refers to the leader’s behaviour in delineating the relationship between himself and members of the work group, and in endeavouring to establish well defined patterns of organization, channels of communication and methods of procedure. On the other hand consideration implies the behaviour indicative of friendship, mutual trust, respect and warmth in the relationship between the leader and members of his staff.

Ajiboye (1990) rightfully pointed out that within the school system leadership does not exist for itself, rather it exists for the staff and students and its efficacy must be measured by the extent to which it contributes to teaching and learning. The effective leader should not only take steps to satisfy the psychological and sociological needs of the employees but also ensure that the entire school system functions as a whole. In order to achieve the objectives of education, secondary education needs effective and efficient leadership. Effective leadership is essentially characterized by smooth flow of information and efficacy in discharge of duties. These functions are the responsibilities of an effective leader through his effectiveness is very much influenced by subordinates.

In the past years especially with the creation of Enugu State, which catalyzed hurried appointment of school principals, the status of secondary education has begun to change. Inspite of the increasing support of state and federal government in the provision of instructional resources and trained personnel to secondary schools and also the unrelenting efforts of Parent Teacher Association (PTA) and other non-governmental agencies, in ensuring effective teaching and learning, the trend in job performance of teachers and the academic achievement of students have not improved. A number of administrative lapses have currently characterized secondary school administration especially in Enugu State. In fact, the degree of teacher redundancy, lateness to school, overt truancy, disruptive behaviours on the part of the students and the associated poor academic achievement go a long way to confirm the degenerating status of secondary education.

Although the current trends in secondary school management have been speculated to stem from the leadership styles of principals, such assumptions lack empirical backings. While it is also well acknowledged that issues pertaining to leadership in school administration have not been played down by researchers, it must be appreciated that the validity of most research findings in school administrative leadership have been inherently questionable. This is because of the paucity of a standard measuring instrument in the leadership skill domain.

While also the issue of leadership has been widely emphasized in school administration, the aspect that pertains to its measurement has not gained prominence in current research discourse. This makes it obviously impossible for researchers to carry out an intensive and reliable study in the field of leadership. Considering also the current inclusion of leadership skill as basis for appointment of principals by the Enugu State
Post Primary Schools Management Board (PPSMB) (2004), one may wonder how this objective could be realized without a valid and reliable measuring instrument.

In view of the current emphasis on effective leadership and the acquisition of good leadership skill as a requisite for appointment and promotion of principals, it has become obviously necessary that a valid and reliable leadership skill Assessment Instrument be developed for researchers in the field of administrative leadership and also for effective screening of would-be or ‘already appointed’ principals. This will go a long way in improving not only research in school administration but also enhance the proposed programme on appointment, promotion and re-training of school principals PPSMB.

Statement of the Problem

The current high rate of administrative lapses in secondary schools, which manifest in staff redundancy, truancy and poor scholastic achievement on the part of the students are sources of distress to the education ministry and the entire public where investments on education need to be justified. Although the general consensus about these problems is that secondary schools lack good leaders who could co-ordinate both the human and material resources of the schools so adroitly towards the realization of the set objectives, it must be appreciated that the extent of acquisition of leadership skills among the school principals is merely speculated. This is true because, most studies on leadership were conducted without a valid and reliable measuring tool in that specific skill domain. According to Asike (1997), most researchers in the field of leadership had gone ahead to collect data on leader skills and behaviour using ordinarily face-validated tools.

In view of the fact that the psychometric attributes of the available instruments were not ascertained, it is quite obvious that whatever data collected with such an instrument and the conclusions derived from them are also questionable. In the same vein, if the on going proposal by the Enugu State PPSMB on screening of principals’ leadership skills as basis for appointment, promotion and retraining is to be realized, there has to be a valid and reliable instrument for the measurement of such skills. This study is therefore faced with the problem of developing and validating a reliable and valid leadership skill assessment scale (LSAS) for secondary school principals.

Purpose of the Study

The purpose of this study is the develop and validate a Leadership Skill Assessment Scale (LSAS) for secondary school principals. Specifically this study is designed to:

a. develop a valid Leadership Skill Assessment Scale (LSAS)

b. determine the reliability of the LSAS

Research Questions

The following research questions guided this study:

1. How valid is the principals’ Leadership Skill Assessment Scale in terms of its factor loading?

2. What is the reliability index of the principals’ Leadership Skill Assessment Scale?
Research Method

The study is an instrumentation study. An instrumentation research is the type of research study that focuses on introduction of new or modified content, procedure, technologies or instruments of educational practice. The study was carried out in Enugu State of Nigeria. The population of the study comprised all the secondary school principals in Enugu State. These also comprised the sample since the population is not large. In generating the draft copy of the instrument, forty items were generated. This was to make provision for item mortality both at the preliminary assessment stage and during the main field work. It is a likert type scale scored on 4-point basis. The draft copy was face validated by four specialist. This was later administered to a sample of thirty principals for field test. Their responses were scored and subjected to factor analysis. Four items were dropped leaving a total of 36 items. The 36 items were used in the main field work. The 36 items that survived the validation exercise were also subjected to reliability assessment. Copies of the 36-item principals Leadership Assessment Scale were administered to all the principals used for the study.

Research question 1 was answered using factor analytic procedures (ie principal factors and normal varimax rotation). The cronbach alpha was used to answer research question 2.

Results

Results are presented in tables according to individual research questions.

Research Question 1

How valid is the principals’ Leadership Skill Assessment Scale in terms of its factor loadings?

For this research question, the thirty six items of the principals leadership skill assessment scale were subjected to construct validation procedures using principal component analysis with varimax rotation. Summary of the rotated factor loadings of the items is shown in table 1.

<table>
<thead>
<tr>
<th>Table 1: Varimax Rotated Factor Loadings of the items of LSAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 262</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
<th>Factor 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.72143</td>
<td>.14680</td>
<td>.13833</td>
<td>-20601</td>
<td>-24120</td>
<td>.08971</td>
</tr>
<tr>
<td>2</td>
<td>.12622</td>
<td>.83939</td>
<td>-.09251</td>
<td>-.02269</td>
<td>-.14171</td>
<td>.09136</td>
</tr>
<tr>
<td>3</td>
<td>.10775</td>
<td>.84052</td>
<td>-.02839</td>
<td>-.22966</td>
<td>.11083</td>
<td>-.01902</td>
</tr>
<tr>
<td>4</td>
<td>.03563</td>
<td>.06639</td>
<td>.13911</td>
<td>.02889</td>
<td>.90754</td>
<td>.09627</td>
</tr>
<tr>
<td>5</td>
<td>.88165</td>
<td>.09638</td>
<td>.02191</td>
<td>-.11034</td>
<td>-.03519</td>
<td>.06881</td>
</tr>
<tr>
<td>6</td>
<td>.09247</td>
<td>.90618</td>
<td>-.00568</td>
<td>-.00125</td>
<td>.08644</td>
<td>.09325</td>
</tr>
<tr>
<td>7</td>
<td>.87389</td>
<td>.08868</td>
<td>.21862</td>
<td>.00418</td>
<td>-.10277</td>
<td>-.2476</td>
</tr>
<tr>
<td>8</td>
<td>.12255</td>
<td>.88903</td>
<td>-.08883</td>
<td>-.00367</td>
<td>-.08168</td>
<td>.13701</td>
</tr>
<tr>
<td>9</td>
<td>.11292</td>
<td>.05280</td>
<td>.15259</td>
<td>.12412</td>
<td>.86201</td>
<td>.09404</td>
</tr>
<tr>
<td>10</td>
<td>.19057</td>
<td>.08260</td>
<td>.87342</td>
<td>.06355</td>
<td>.17832</td>
<td>-.06205</td>
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<tr>
<td>11</td>
<td>.84467</td>
<td>.06938</td>
<td>.21500</td>
<td>.10114</td>
<td>-.11953</td>
<td>-.11397</td>
</tr>
<tr>
<td>12</td>
<td>.04463</td>
<td>.10348</td>
<td>.90427</td>
<td>.18512</td>
<td>.10669</td>
<td>.10274</td>
</tr>
</tbody>
</table>
Summary of factor analysis presented in Table 1 reveals that six factors were extracted. Each factor has items loaded on it. As revealed in the Table only thirty-one items had a minimum loading of up to 0.35 (acceptance level for factor loading according to Meredith 1969) on the six factors. The items include items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, and 36. Five items did not attain the minimum loading of up to 0.35 on any of the six factors. They are items 21, 22, 24, 27, and 28. One item (item 32) was loaded on factors 3 and 4 and was therefore considered factorially complex and was discarded along side the other five items that did no attain the minimum loading of 0.35 on any of the six factors. The table also reveals that some factors have fewer than four items loaded on them. They are factor 4 (item 14) and factor 6 (items 33, 34, and 36). According to Meredith (1969) it is not easy to explain such factors that have fewer than four items loaded on them. These four items (items 14, 33, 34, and 36) were also discarded. In all therefore a total of ten items (item 14, 21, 22, 24, 27, 28, 32, 33, 34, and 36) were dropped as invalid items. Summary of factor loadings for the surviving twenty-six items is presented in Table 2.

Table 2: Summary of the Factor Loadings of the surviving twenty-six Items of the LSAS

<table>
<thead>
<tr>
<th>Factor</th>
<th>Items</th>
<th>Item Structure</th>
<th>Loading</th>
<th>Comm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Draft</td>
<td>Validated</td>
<td>Act without consulting your staff</td>
<td>.72143</td>
<td>.66982</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>Refuse to explain his actions</td>
<td>.88165</td>
<td>.80523</td>
</tr>
</tbody>
</table>
Make all class scheduling .87389 .83054
Keep records of defaulting teachers through class records .84467 .80201
Delegate responsibilities to deserving staff .87662 .81121
Treat all members of staff as colleague .86158 .81091
Use positive reinforcement to motivate staff .58291 .42909
Provide incentives to challenge staff productivity .88903 .83874
Show interest in negotiation for better condition for teachers .85040 .82203

Insist on implementing changes .83939 .75801
Are known for high expectations from staff .84052 .78428
Insists on standard rules and regulations .90618 .84592
Dominate the staff meeting .88903 .83874
Let staff members know what is expected of them .96700 .99447
Inform teachers about new ideas he has come across .96700 .99447

Resist late coming of staff .87342 .84569
Keep tracks of teachers through class records .90427 .80201
Are friendly and approachable .85040 .81091
Support productivity of teachers .55040 .82203
Insist on deadline being met .90754 .85875
Programme tight work for teachers .86201 .80614
Consider teachers in assigning responsibilities .85571 .99447
Have good rapport with staff .90427 .88661
Provide teachers with suitable materials for teaching .78818 .72499
Show interest in team work for the general welfare of the school .68988 .55530

Research Question 2
What is the reliability index of the principals’ Leadership Skill Assessment Scale?
The twenty-six items of the LSAS that survived the factor analysis were subjected to a test of internal consistency using the Cronbach alpha. The reliability test was content for each of the emerging four sections of the instrument which represents the four valid factors in the instrument. Summary of the analysis is shown in table 3i – 3iv.

Table 3: Reliability Analysis of the LSAS

TABLE 3i. Reliability Analysis for Section A: Items of Factor 1

<table>
<thead>
<tr>
<th>Item Mean</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>Max/Min</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4333</td>
<td>1.9667</td>
<td>3.6333</td>
<td>1.6667</td>
<td>1.8475</td>
<td>.2364</td>
</tr>
<tr>
<td>.8259</td>
<td>.2402</td>
<td>1.2920</td>
<td>1.0517</td>
<td>5.3780</td>
<td>.0980</td>
</tr>
</tbody>
</table>
## Table 3ii. Reliability Analysis for Section B: items of Factor 2

<table>
<thead>
<tr>
<th>Item Mean</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>Max/Min</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.6095</td>
<td>2.2000</td>
<td>3.6333</td>
<td>1.4333</td>
<td>1.6515</td>
<td>.2558</td>
</tr>
<tr>
<td>Item Variances</td>
<td>.08962</td>
<td>.2402</td>
<td>1.2747</td>
<td>1.0345</td>
<td>5.3062</td>
</tr>
</tbody>
</table>

Reliability Coefficients  7 items
Alpha = .7435 Standardized item alpha = .7825

## Table 3iii: Reliability Analysis for Section C: items of Factor 3

<table>
<thead>
<tr>
<th>Item Mean</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>Max/Min</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.7250</td>
<td>2.4333</td>
<td>3.1000</td>
<td>.6667</td>
<td>1.2740</td>
<td>.0988</td>
</tr>
<tr>
<td>Item Variances</td>
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<td>.7138</td>
<td>1.2195</td>
<td>.5057</td>
<td>1.7085</td>
</tr>
</tbody>
</table>

Reliability Coefficients  4 items
Alpha = .68333 Standardized item alpha = .6635

## Table iv: Reliability Analysis for Section D: items of Factor 4

<table>
<thead>
<tr>
<th>Item Mean</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
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</thead>
<tbody>
<tr>
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<td>Item Variances</td>
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<td>.5759</td>
<td>1.3575</td>
<td>.7816</td>
<td>2.3573</td>
</tr>
</tbody>
</table>
Summary of Result
Summary of the reliability test presented above indicates that each of the four sections (A – D) of the LSAS has an alpha of 0.72, 0.74, 0.68 and 0.72 respectively indicating that each of the four sections of the instrument has high internal consistency.

Discussion of Findings
The summary of the factor analysis is displayed in Table 1. As shown in the table, 6 factors were extracted. As revealed in the table, only thirty one items had a minimum loading of up to 0.35 on the six factors. Those items are 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 23, 25, 26, 29, 30, 31, 32, 33, 34, 35 and 26. On the other hand five items (21, 22, 24, 27 and 28) did not attain the minimum loading of up to 0.35 on any of the six factors. The table also reveals that some factors have fewer than four items loaded on them. They are factors 4 (item 14) and factor 6 (items 33, 34 and 36). Because it is not easy to explain such factors that have fewer than four items loaded on them, those items (items 14, 33, 34 and 36) were also discarded. In all, a total of ten items (items 14, 21, 22, 24, 27, 28, 32, 33, 34 and 36) were dropped as invalid items.

The surviving twenty-six items of the instrument were subjected to a test of reliability using the cronbach alpha. Summary of result of data analysis shown in Table 3 indicate that the reliability indices of the four sections of the instrument are indices of 0.72, 0.74, 0.68 and 0.72. This implies that the instrument is very reliable.

According to Anastasi and Urbina (1997) the concept of reliability underlies the computation of the error of measurement of a single score, whereby we can predict the range of fluctuation likely to occur in a single individual’s score as a result of irrelevant or unknown chance factors. Reliability assessment as it concerns this study is to determine the extent to which individual differences in the test scores are attributed to true differences in the characteristics of the principals that responded to the instrument and the extent to which they are attributable to chance error. As revealed by the summary of result in Table 3, whatever test scores obtained with the instrument will be solely attributable to true differences in the leadership skills of the principals.

Conclusion
Based on the result obtained in this instrumentation research, the researcher concludes that the newly developed and factorially validated leadership skill assessment scale for secondary school principals are both valid and reliable in measuring leadership skills of principals.

Recommendations
Based on the findings of this study, the researcher recommends that:
a. Measurement of principals leadership skills should constitute a regular practice of the Post Primary Schools Management Board especially now that a valid and reliable instrument for the exercise has been developed.

b. Researchers in the field of leadership are also advised to use this instrument whenever they come to a situation that requires a clear assessment of principals’ leadership skills.

References


ASSESSING BENEFITS OF COLLABORATIVE LEARNING ENVIRONMENT FOR QUALITY HIGHER EDUCATION IN NIGERIA

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ABSTRACT
The study was carried out to determine the benefits of collaborative learning Environment in Institutions of Higher Learning. This study is concern with the benefits of collaborative learning environment on students for better understanding. Collaborative learning represents a philosophy of life as well as learning strategy. It says that whatever people get together in groups their purposes are best served when they work together collaboratively to reach their goals versus using competition among group members to address problems. It embodied the learning community philosophes. Our current educational system, however, is based upon competition among students for grades, scholarships, admissions to top schools and social recognition, etc. In order to change this paradigm, collaborative learning structures will need to be introduced at the earliest learning situations and used throughout each students learning career starting in preschool-and continuing through kindergarten and higher education. In order to accomplish this change in student behavioural attitudes teachers will need to adopt a new role. They will need to step down from the podium and switch from lecturing to facilitating student interactions in class. The findings revealed that collaborative learning environment has a beneficial influence in the lives of the students for better understanding and full participation. Based on findings, it was recommended that collaborative learning environment should be encouraged in tertiary institutions as it is never static. It benefits the students in many ways and also benefits the teachers through sharing of ideas, brainstorming and critical-thinking about problems which arise with the co-operative approach.

Keywords: collaborative learning philosophy, social benefits, psychological benefits and academic benefits.

INTRODUCTION
Teaching and learning processes are the two term primary purposes of an educational institution. This process is jointly affected by the quality, quantity and
utilization of key inputs into the teaching and learning process. The effective teaching of subject can best be measured by the amount of knowledge the learner acquires as a result of the teaching process. The assessment or measurement mechanism of the teaching, learning process always revolves around the learner who is like a product and the teacher the producer. The teacher cannot say he has taught until the learner has learnt. To this end, a total commitment is desired of both parties in the teaching and learning process. The teacher is directly connected with every educational programme and plays an important role in its implementation. He interprets the goals, objectives and subject content of the programme to the students. His role in the implementation of the curriculum can therefore not be over-emphasized. The learning environment also creates an impact in the teaching-learning process of students.

To critically diagnose the benefits of collaborative learning environment in the institutions of higher learning, one may not overlook the National policy in Education (1998) which in its broadest sense stipulates seven broad goals among which is developing the intellectual capability of individuals to understand and appreciate their local and external environments, acquire both physical and intellectual skills etc. In order to achieve this, it is expected that high quality education be provided for the learner. The quality of education as noted by Long (1999) includes the learning environment and the students outcomes.

Therefore this study is intended to promote human interactions through co-operation is tertiary institutions. It presents four major categories of benefits created by collaborative learning methods. They are academic, social, psychological and assessment benefits. Each of these areas is subdivided further to help the reader focus on specific themes within each category. Specific references are provided to document each benefit described below.

Nelson-LeGall (1992), captures the nature of collaborative learning when she states “Learning and understanding are not merely individual processes supported by the social context; rather they are the result of a continuous, dynamic negotiation between the individual and the social setting in which the individual’s activity takes place. Both the individual and the social context are active and constructive in producing learning and understanding”.

According to Belson-LeGall (1992), “Relatively few students attend schools that regularly encourage peer interactions as a major means of learning. Moreover, with increasing grade level in school, students are likely to encounter classroom learning situations in which competition and independent performances are increasingly normative (Eccles et al, 1984). It is likely; therefore than unless children begin elementary school in classrooms that emphasize the social sharing of cognitive learning activities, children will come to co-operative learning groups with perceptions that collaborating with and assisting peers in classroom learning activities are not “normal” behaviours of students”.

Fogarty and Bellanca (1992), highlight the reaction that teachers have after they implement co-operative learning paradigms when they style “Surprisingly and almost unfailingly, once the philosophical shift begins, once teachers begin implementing collaborative interactions, the evidence of student’s motivation becomes so overwhelming visible those teachers are encouraged to try more. The momentum builds for both teachers and students, and before long the “new school lecture” becomes the
norm in the classroom. The challenges now becomes choosing the most appropriate interactive designs for the target lesson. The models are subtly slotted into the lesson to familiarize the students with the different interactions and to lead them toward involvement in the learning situations.

Collaborative learning is therefore a personal philosophy, not just a classroom technique. In all situations where people come together in groups, it suggests a way of dealing with people which respects and highlights individual group members’ abilities and contribution. Collaborative learning is based upon consensus building through cooperation by group members in contrast to competition in which individuals best other group members. Collaborative learning Practitioners apply this philosophy in the classroom at committee meetings, with community group and generally as a way of hiring with and dealing with other people (Panitz, 1997).

Collaborative learning involves the entire spectrum of learning activities in which groups students work together in or out of class. It can be as simple and informal as pairs working together in a Think-Pair-Share procedure, where students consider a question individually, discuss their ideas with another student to form a consensus answer, and then share their results with the entire class, to the more formerly structured process.

**ACADEMIC BENEFITS**

**Collaborative learning promotes critical thinking skills (Web, 1982):**

Students working together are engaged in the learning process instead of passively listening to the teacher present information or reading information off a computer screen. Pairs of student working together represents the most effective form of interaction, followed by threesomes and larger groups (Schwartz, Black, Strange, 1991), when students work in pairs, one is listening while the other partner is discussing the question under investigation. Both are developing valuable problem solving skills by formulating their ideas, discussing them, receiving immediate feedback and responding to questions and comments by their partner (Johnson, D.W, 1971). The interaction is continuous and both students are engaged during the session.

Smith, Johnson and Johnson (1981) studied sixth grade students who worked on controversial issues. They found that for students engaged in controversy, “the cognitive rehearsal of their own position, and the attempts to understand their opponent’s position, result in a high level of mastery and retention of the materials being learned”. The Johnsons have developed a co-operative method called structured controversy where students study and defend one position and then stitch with another group which has taken the opposite position.

Slavin (1992), emphasizes that “students will learn from another because in their discussions of the content, cognitive conflicts will arise, inadequate reasoning will be exposed, disequilibrium will occur, and higher quality understandings will emerge”.

**Collaborative learning stimulates thinking and helps students clarify ideas through discussion and debate:**

The level of discussion and debate within groups of three or more and between pairs is substantially greater than when an entire class participates in a teacher led discussion. Students receive immediate feedback or questions about their ideas and formulate responses without having to wait for long intervals to participate in the discussion.
Another aspect of the benefits of collaborative discussion is the effects it has on students, who peer edit written work. According to Mc Carthey and Mc Mahon (1992), “Research focusing specifically on revision when peers respond to and edit writing has revealed that students can help one another improve their writing through response. Nystand (1986), found that students who responded to each others writing tended to re-conceptualize revision, not as editing, but as a more substantive rethinking of text, whereas students who did not work in groups viewed the took as editing only”.

**Skill building and Practice can be enhanced and made less tedious through collaborative learning in and out of class, (Tannenbery, 1995):**

The acquiring of information and operational skills can be facilitated through the use of collaborative activities (Brufee, 1993). In order to develop critical thinking skills, students need a base of information to work from. Acquiring this skills base often requires some degree of repetition and memory work. When this is accomplished individually the process can be tedious, boring and overwhelming, when students work together the learning process becomes interesting and fun despite the repetitive nature of the learning process.

**Collaborative learning develops oral communication skills (Yager, 1985a):**

When students are working in pairs one partner verbalizes his/her answers while the other listens, ask questions or comments up in what he/she has heard. Clarification and explanation of one’s answer is a very important part of the collaborative process and represents a higher order thinking skill. As students work in groups and express themselves orally three benefits occur. First the more advanced students demonstrate appropriate ways of approaching a problem, how they analyze content material and formulate arguments and justifications for their approaches. Secondly, instead of an individual thinking about a problem in small increments in isolation, a group will often look at a problem from a wider perspective and consider more options and solutions than one person. Thirdly, by discussing various aspects of a problem solution and questioning the more advanced students, the novices in the group can participate in actually solving the problem.

**Collaborative learning fosters met cognitive in students:**

Meta-cognition involves student and recognition and analysis of how they learn (O “Donnell and Dansereau, 1992). Meta-cognition activities enable students to monitor their performance in a course and their comprehension of the content material.

Co-operative discussions also improve student’s recall of text content when students read a text and explain the concepts to each other and evaluate each other’s explanations they engage in a high level of critical thinking. They from the new concepts by using their own vocabulary and by basing their comments upon their previous knowledge, thus they construct a new knowledge base on top of their existing base. This process leads to a deeper understanding and greater likely hood they will retain the material longer than if they worked alone and simply read the text, therefore students actively participate in the learning process.
Collaborative learning creates an environment of active, involved, exploratory learning (Slavin, 1990):

Whenever two or more students attempt to solve a problem or answer a question, they become involved in the process of exploratory learning. They interact with each other, share ideas and information, seek additional information, make decisions about the results of their deliberation and present their findings to the entire class. They may tutor their peers or receive tutoring students have the opportunity to help structure the class experience through suggestions regarding class format and procedures.

Collaborative learning also encourages student’s responsibility for learning:

The empowerment of students produces an environment which fosters maturity and responsibility in students for their learning. The teacher becomes facilitate instead of a director and the student becomes a willing participant instead of a passive follower.

(Kort, 1991), also stressed that collaborative learning involves students in developing curriculum and class procedures. During the collaborative process students are asked to access themselves and their groups as well as a class procedures. Marzano (1992), identifies four specific ways in which students become involved in developing class procedures when cooperative learning is the basis for class processes. The class can identify desired features of the physical environment, such as the arrangement of desks, number and type of breaks that will be taken, the display of classroom accessories to name a few. It provides training in effective teaching strategies to the next generation of teachers (FELDER, 1997). It also helps students wean themselves away from considering teachers, the sole sources of knowledge and understanding.

Collaborative learning promotes a learning goal rather than a performance goal:

It also fits well with the constructivist approach (Darits, Mahler & Noddings, 1990). Only when students formulate their own constructs and solutions are they truly thinking critically. It creates a constructivist approach when students become actively involved in defining questions in their own language and working out answers together instead of reproducing materials presented by the teacher or the text book (Wooley et al, 1990).

Collaborative learning allows students to exercise a sense of control on task (Sharan and Sharan, Gentile, 1997):

It also promotes higher achievement and class attendent because students are often inspired by the teacher who takes the time to get to know them and encourage them to aspire to better performance. According to (Felder, 1997), additional benefits occur in that students, grades are improved, they show longer retention of information, transfer information better to other courses and disciplines and have better class attendance. There is a strong positive correlation between class attendance and success in courses (Johnson and Johnson, 1990), which may help account for the improved performance.

It promotes a positive attitude towards the subject matter and increases student retention. Classes where students interact foster an environment conducive to high student motivations and participation and student’s attendance. It also enhances self management skills. The promotive interactions help students learn self management
techniques. Psychologically collaborative learning fosters self efficacy among students. It also promotes innovation in teaching and classroom techniques (Slavin, 1980, 1990).

Collaborative learning process include class warm up activities, name recognition games and group building activities, and group processing. Students work in pairs or larger groups depending upon the task at hand. Group work on content takes many forms, including pairs or groups working on individual questions, problem assignments, projects study activities, group tests etc (Panitz, 1996). Classes are interesting and enjoyable because of the variety of activities available for use by the teacher. It fosters modeling of problem solving techniques by students’ peers. Collaborative learning allows assignment of more challenging tasks without making the work load unreasonable (Felder, 1997).

Davidson (1990), points out that “students in groups can often handle challenging situations that are well beyond the capabilities of individuals at the developmental stage”. Once students have been trained to work collaboratively their performance and output increases dramatically, weaker students also improve their performance when grouped with higher achieving students (COHEN, 1994). Burns (1990), also suggests that with collaborative learning there is no waiting for help because it is available from other students or the teacher who circulates among the groups. It also leads to generation of more and better questions in class (FELDER, 1997). Students also explore alternate problem solutions in a safe environment because many students are hesitant to speak out and offer opinions publicly in a traditional classroom setting for fear of appearing foolish. Therefore, it creates a safe, nurturing environment, where students can express themselves and explore their ideas without the fear of failure or criticism.

Large lectures can be personalized:

Collaborative learning activities can be used to personalize large lecture classes. It can be adapted to large lectures involving students in interactive, critical thinking activities during class. According to Bean (1996), an advantage of collaborative learning is that it can be adapted to large classes. In lecture hall students may be asked to form pairs or small groups by turning around in their seats or working with the student seated next to them. It is nearly impossible to lead to whole class discussion in large lecture classrooms; however, it is possible to give students a critical thinking task by having them work with a neighbour for ten minutes or so and then asking representative, groups to present and justify their solutions. This techniques helps focus student attention on a particular topic, it also creates an active learning environment and involve students directly in their own learning, helping them take some responsibility for their learning and that of their peers.

Collaborative learning is especially useful in foreign language courses where interaction involving the use of language is important:

Brufee (1993), French clubs in many institutions is a typical example of this because those in the club do speak French fluently than others. Therefore working collaboratively is an idea way to facilitate the acquisition of language and to practice the customs of debate and discussion which occur in a particular academic field such as Mathematics, Psychology or History. Interacting collaboratively with the Professor in and out of class also facilitates the enculturation process defined by Brufee. Mathematics problems can often be solved by several different approaches. Students in groups can learn several strategies for solving the same problem.
**SOCIAL BENEFITS**

**Collaborative learning leads to inclusion and better diversity understanding:**

Collaborative learning promotes student faculty interaction and familiarity whereby the teacher can talk to the students directly or in small groups. A natural tendency to socialize with the students on a professional level is created by approaches to problem solving and about activities and attitudes which influence performance in class.

Students also develop social interaction skills through collaborative learning. By asking group members to identify what behaviours help them work together and by asking individuals to reflect on their contribution to the groups, success or failure, students are made aware of the need for healthy, positive, helping interactions when they work in groups (Cohen & Cohen, 1991).

Collaborative learning promotes positive societal responses to problem and fosters a supportive environment within which to manage conflict resolution (Johnsons and Johnson, 1990). It reduces violence in any setting; it eliminates fear and shame and increases honour, friendliness, quality and consensus. It creates a stronger social support system among students. Collaborative learning uses student’s social experiences to encourage their involvement in the learning process. Warm up exercises and group building activities used throughout the course building a social support. The teacher plays a very active role in facilitating the process and interacting with each student. Administrative school staff and parents become integral parts of the collaboration process, thus building into it many possibilities for support for any individual who develops problems due to influences from outside of the class such as financial, emotional, family problems etc.

**Collaborative learning fosters and develops interpersonal relationships:**

The reliance on base groups to help individual keep track of each other’s performance, the interdependence created by self and group assessment and improvement techniques, and the social nature of collaborative learning processes all combine to improve interpersonal relationships among students. Collaborative learning encourages out of class work by the groups, bringing them together in a combined academic and social experiences which continues over long periods of time. Students also develop responsibility for each other because a nurturing atmosphere is created whereby students help each other and take responsibility for their entire group’s progress. Group cerebration of individual and group performance promotes a supportive atmosphere and highlights each student’s responsibility to the entire group.

Collaborative learning also builds diversity understanding among students and staff. It builds more positive heterogeneous relationships and also encourages diversity understanding.

It fosters a greater ability in students to view situations from others perspectives. Students using collaborative learning methods are encouraged to question each other, debate issues and discuss each other’s ideas and approaches to answering questions and solving problems. A much deeper understanding of individual differences and cultural differences among students is developed. Because students work in supportive
environment where group processing skills are taught, they are much more inclined to accept different approaches than if they work in a competitive, non-interactive system which credits individual effort above team effort. Additionally, students are exposed to many more methodologies with collaborative learning than those presented by the teacher using a lecture. It also helps majority and minority populations in a class learn to work with each other. Students are actively involved in exploring issues and interacting with each other on a regular basis in a guided fashion, they are able to understand their differences and learn how to resolve social problems which may arise.

In collaboration learning students are taught how to criticize ideas, not people. A function of collaborative learning as to help student resolve differences amicably, they need to be taught how to challenge ideas, and advocate for their positions without personalizing their statements. They are also taught conflict resolution methods, which are important for real life situations as well as being useful for academic endeavours.

Students also practice modeling societal and work related roles in collaborative classes; students may be assigned roles in order to build interdependence within the groups. Roles such as reader, recorder, reporter, materials handler, time keeper skeptic/challenger and others are rotated among group members for each new assignment or project. Students are thus encouraged to develop and practice the skills, which will be needed to function in society and work world (Hauston, 1991). These skills include leadership, information recording, and communication of result orally, and in writing, challenging ideas in a constructive manner, participate brainstorming, meeting deadlines, etc (Sandbery, 1995). Therefore, collaborative learning fosters team building and a team approach to problem solving while maintaining individual accountability. It enables the teacher to observe group dynamics and intervene where necessary to encourage participation by all students.

Collaborative learning activities also promote social and academic relationships, well beyond the classroom and individual course (Beans 1995) there is a significant benefit to collaborate learning which is not always because it takes place outside of the classroom if groups are continued long enough during a course they will get to know each other and extend their activities outside of class. This includes meeting on campus for meals or coffee, forming study groups, getting together at each others home in the evening at weekends to work in the projects or study for exams. Student’s exchange phone numbers and contact each other to get help with questions or problems they are having. Students are able to make new friends and establish study groups easier within a collaborative learning environment (felder 1997). Therefore collaborative learning uses student’s social experiences to encourage their involvement in the learning process. Warm up exercises and group building activities used throughout the course build a social support. It also encourages out of class work by the groups, bringing them together in a combined academic and social experiences which continues over long periods of time.

**PSYCHOLOGICAL BENEFITS**

“Collaborative learning Builds Self Esteem in students”

Collaborative efforts among students result in a higher degree of accomplishment by all participants as opposed to individual, competitive systems in which many students are left behind. Competition fosters a win-lose situation where superior student reap all rewards and recognition and mediocre or low-achieving students reap none. In contrast
everyone benefits from collaborative environment. Students help each other and in doing so build a supportive community which raises the performance level of each of each member (Kangan1986) it also enhances student satisfaction with the learning experiences.

Collaborative learning promotes a mastery attribution pattern rather than helpless attribution pattern. It encourages students to seek help and accept tutoring from their users. Students are often reluctant to seek out extra help or tutoring from their peers because help-seeking is interpreted negatively as an indicator of dependency (Hertz-lazarowitz et al 1992). Beller (1955) points out that help-seeking may lead to self-perceptions of low ability, embarrassment, or feeling of indebtedness. Hertz-lazarowitz et al (1992) identify additional research in social psychology which indicates that students show a decreased liking towards helpers, negative feelings are generated when students do not see opportunities to reciprocate the help; helping activities reflect adversely upon an person’s intelligence.

Nelson La Gall (1992) states that “Help-seeking, particularly the seeking of information, is valued more positively than volunteering information in cooperated work conditions; these evaluations are reversed, however, in competitive work conditions. “Further “in small cooperative learning groups, students may consult, question, explain, and monitor one another. Nelson La Gall (1992) states “when children are able and willing to take the initiative to gain assistance of more mature and expert others, they can participate, in a supportive social context, in the interrogatory process that mature learners employ to construct the relevant contextual knowledge for task solutions” (p 52) compare this to the lecture class where the teacher is the only legitimate helper. Students seeking help during the delivery of a lecture might appear to be in attentive or worse yet ignorant of the lecture content. Students will generally wait passively for a more opportune time to raise questions about lecture materials.

Web (1992) points out that students who do not seek help, even though they may be having trouble with course content or concepts and do need help, may still benefit from group interactions and learn the materials by observing the group and seeing the strategies used by their peers as helping occurs within the group. Students can compare their learning strategies and work habits with other students and make changes simply by observing the questioning and answering process which occurs as students helping each other.

**Collaborative learning Reduces Anxiety**

It reduces anxiety in the classroom as well as during the text. Competition increases anxiety and makes people feel less able to perform. It leads to a reduction in text anxiety because the students see that the teacher is able to evaluate how they think as well as what they know. Students are locked into a testing format which requires memorization and reproduction of basic skills. Though the interactions with students during each class, the teacher gains a better understanding of each student’s learning style and how she performs. An opportunity is thus afforded to provide extra guidance and counseling forms of assessment. This type of interaction is completely lacking in a lecture class.

Therefore collaborative learning creates a more positive attitude toward lecturers and other school personnel by students and creates a more positive attitude toward their
students. The level of involvement of the entire participant in a collaborative system is very intense and personal. Students get to know teachers personally. Lecturers learn about student behaviours because students have many opportunities to explain themselves to the lecturer. Lines of communication are opened and actively encouraged. The empowered created by the many interpersonal interactions leads to a very positive attitude by all parties involved. It also sets high expectations for students and lecturers because by setting obtainable goals for groups and by facilitating group interaction lectures established high expectations which become self fulfilling as the students master the collaborative approach, learn how to work well together in teams and demonstrate their abilities through individual tests and a variety of other methods. However, higher self esteem and higher expectations are the outcomes.

Collaboration learning makes use of teaching techniques and utilizes a variety of assessments such as observation of groups, group self assessment and short individuals writing assessments (ANGELO AND CROSS 1993) Collaborative learning provides the lecturer with many opportunities to observe students interacting, explaining their reasoning, asking questions and discussing their ideals and concepts. In addition, group projects provide an alternative for those students who are not as proficient in taking written tests based upon content reproduction. Also group tests give students an alternate way of expressing their knowledge by first verbalizing their solution to their partner or group prior to formalizing a written response.

GROUPS ARE EASIER TO SUPERVISE THAN INDIVIDUAL STUDENTS

Dennis Lander (1995) points out that an obvious advantage of collaborative learning is that six groups are easier for a staff member to supervise than thirsty individuals students. Groups may be monitored for their progress through the use of worksheets or exercises which require an end product. Teachers can observe students working on assignments together and individually within their groups when students work above it is very difficult for the teacher to observe most of the students during a class. This is especially true in large classes. Quite the collaboratively on an assignment it is easy for the teacher to watch individual students perform. Lecturer may raise questions; make observations or suggestions based upon the group’s interactions and progress. With the lecture format there is little opportunity for these types of students-teacher interactions and student-student interactions.

Slavin (1992) looks at the classroom perspective of collaborative learning and points out that when students take responsible for managing themselves in cooperative groups the teacher is freed up to attend to more essential tasks such as working with small groups or individual students. This is especially helpful in writing classes. By having students respond to each others does not have to evaluate several drafts from each student. The teacher can focus on helping students develop the criteria used to evaluate each other’s work, present the criteria to the students that the teacher wishes to be met and work with individual students if necessary.
SUMMARY / CONCLUSION

There are many benefits to observing students at work in groups with their peers one can observe a student working through a complete problem or assignment versions seeing only the final product (exam or paper) one can observe their reasoning techniques level of basic knowledge, and concept attainment. One can identify their dominant learning style by observing whether their presentation in pairs or groups is oral, visual or kinesthetic. This information can be in valuable if one helps tutor the student in or out of class. (As an aside cooperative learning lends itself using multiple learning style presentations throughout each class)

Brief, specific interventions are possible by the teacher or other students to provide help and guidance for students having difficulties. Informal conversations take place between individuals, groups and the teacher which help highlight problem areas the entire class may be having these discussions also help create conclusive environment which is more personal, as students get to know the teacher and the teacher learns about the students. Shy students will participate more with their peers in small groups than in a large class and they too can be observed. It is very helpful to identify students who are shy in order to encourage their participation in non-threaten ways.

Standardized tests using multiple choices, true false fill in the blanks or essay questions provide a limited basic for understanding and evaluating student performance. These methods deal primarily with factual information, rote memory and perhaps some critical thinking through an essay. What is needed in addition to these historic assessment techniques are methods for understanding student’s affective learning skills and a variety of student learning styles.

Finally, the benefit of using observations as an assessment tool to help students understand when they have mastered course material is numerous. This approach reduces anxiety markedly, raises students’ esteem, parts them in control of their own destiny and emphasizes that they are responsible for their own learning. The results they obtain are based upon their efforts, not the teacher’s.

REFERENCES

Felder, R.M., (1997), e-mail communication from felder@eos.ncsu.edu www page


ATTITUDES AND PRACTICES OF SMOKING IN COLLEGE STUDENTS

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Abstract
The main purpose of this paper is to investigate the impact of smoking on the student’s efficiency and mentality regarding habit of smoking. Smoking in nowadays a very spread unethical habit among different schools, colleges and universities students. Most of students are spending huge amount on this activity. Smoking not cause financial loss but also cause health diseases in which most common are cancer, lungs and heart diseases. Millions of people in world die just because of smoking. Study was taken to distribute questionnaire among students of Government College of Management Sciences, Peshawar, KPK, to know the impact of smoking, like and dislike behavior. 70 students sample was selected randomly as study population. The findings revealed that most of the students not like smoking, other considered as fashion and while some answered it increase efficiency level. Recommendation and conclusion is the last part of the paper.

Key words: College, Students, Smoking, Disease.

1. INTRODUCTION

In the Holy Book Almighty Allah has ordered us, “O you who believe intoxicants (all kinds of alcoholic drinks) and gambling and Al-Ansab, and Al-Azlam (arrows for seeking luck or decision) are an abomination of Shaitan’s handiwork. So avoid that in order that you may be successful” (surrah 05, part 07, verses 90).

And further ALLAH says “Shaitan wants only to excite enmity and hatred between you with intoxicants and gambling, and hinder you’re from the remembrance of Allah and from Al-Salat (the prayer) So, will you not then abstain?” (Surrah 05, part 07, verses 91).

As we can see its clear form the above verses that intoxicant is haram (prohibit) in Islam whatever the source may be it is unislamic and unethical. Smoking is also like a drugs and totally forbidden in Islam. Smoking cause mental as well as financial loss to the person. Smoking also cause different diseases includes mouth, lungs, cancer, stomach problems etc. it has also have great impact on psyche and health. Although smoking is not criminal activity but it is bad social habits which creates different problems such as lack of mental efficiency, laziness, as most of the smoking materials consists of different chemicals it also cause heart diseases, these chemicals are very dangerous to health and like poison.

Although the anti smoking law exit, it strictly enforcement can never work until you change the public attitude through different campaign and awareness methods, directly
imposes penalties never works, it needs voluntarily involvement of young generation and other society people to come and stop this unethical habit. (M. Irfan, M. Tufail, 2009).

Today smoking is becoming fashion for society. A person likes smoking just for fashion. One who habitual to smoking is different from those who are not habitual to smoking. But finally smoking fashion exist in most of our society, younger, elder, men even women also involved in this unethical habit. We can see that most in our legislature orders exist in the country about smoking but still this is not implemented properly. Majority places such as schools, universities, public places, colleges are not free from this dishonorable habit, and no proper attention is giving from the side of government to see and control the situation which not only hazardous for individual but also destructive for society as whole.

1.1 Purpose of the study
The main objective and purpose of the paper is to a) Find out the affect of smoking on the efficiency of college students b) To see the level of mentality as compared to those who do not smoke c) To see the attitude and behavior regarding this habit d) To learn more about different psychological stress of the smokers e) To see the socio-economic factors of smoking for college students and f) To give some policy statements to control smoking in college students.

2. Research Methodology
2.1 Sample size

The sample size for this research was selected from a Government College of Management Sciences, Peshawar. As study population randomly a simple of 70 students was selected.

2.3 Instruments Used for Study
Data was collected for this study through Questionnaire. This was designed on the basis of a questionnaire developed by Rozi, & Akhtar, in 2004. The questionnaire was consisted 15 questions which were tailored according to the study. And which were distributed among students to get the answers of the questions regarding the study.

Data for this study was analyzed by using SSPS, and all variable results are given in percentages.

2.4 Findings
As majority of the college students were consisted male students, female students were only in master classes that are master of commerce previous and final and some female students admitted in BBA (Hons) so a random size of sample for population were selected of 70 smokers student, which were majority male students. But for the purpose of more sophisticated of the study, I was included in study female students as well. The population comprised 62 male students and 8 female students, which were male (88.57%) of the total population and female, were (11.42 %) of the total population. The mean age of female was 22.5 years ranging of 19 - 25 years.
Table 1: Smokers Allocation (Male & Female Students)

<table>
<thead>
<tr>
<th>Male</th>
<th>62</th>
<th>88.57%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>8</td>
<td>11.47%</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100%</td>
</tr>
</tbody>
</table>

Chart: 1

Table 2: Allocation of Post Graduate and Graduate students

<table>
<thead>
<tr>
<th>Post Graduate</th>
<th>48</th>
<th>68.57%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate</td>
<td>22</td>
<td>31.42%</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100%</td>
</tr>
</tbody>
</table>

Chart: 2
Table: 3  Smokers allocation smoking in front of family and relatives

<table>
<thead>
<tr>
<th>In front of family and relatives</th>
<th>26</th>
<th>37.14%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No smoking in front of family and relatives</td>
<td>44</td>
<td>62.85%</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100%</td>
</tr>
</tbody>
</table>

Chart: 3

Table: 4  Allocation of smokers Discipline wise

<table>
<thead>
<tr>
<th>Discipline</th>
<th>31</th>
<th>44.28%</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.com students</td>
<td>31</td>
<td>44.28%</td>
</tr>
<tr>
<td>B.com and B.com (Hons) students</td>
<td>23</td>
<td>32.85%</td>
</tr>
<tr>
<td>BBA students</td>
<td>16</td>
<td>23%</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100%</td>
</tr>
</tbody>
</table>

Chart: 4
### Table 5  Allocation of smokers when free, with friend and at hostel

<table>
<thead>
<tr>
<th>Smoking when free</th>
<th>46</th>
<th>65.71%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking when at friends</td>
<td>16</td>
<td>22.85%</td>
</tr>
<tr>
<td>Smoking at hostel</td>
<td>8</td>
<td>11%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>70</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Chart 5

3. Discussion

As it is clear from the above tables and charts and other statistical data, that most of the students like smoking. Now the question is that what should be done next to make light of this spreading trend of smoking, one can see the importance of print media is more indispensable in this regard.

As well as electronic media play a very important role, specially newspaper and television which are easily available sources may play a vital role to capture the mind and change the behavior of students and general people to hate smoking. Most of the countries have their own laws and regulation to have restriction of smoking products, its advertisements and other related items, the number of the countries have counted round about 47, and some other countries that have totally banned on smoking products, tobacco, and their advertisement. (M. Irfan, M. Tufail, 2009)

The world Health Organization has also made this clear that smoking has dangerous affect on individual health, society and the environment, which not only loss of good health but also mentally and physically damage the person, and also causes them in different diseases and financial loss.
4. Policy statement

a) first of all young generation should be induced towards real Islamic spirit, a very beautiful statements written by Stephen covey in his book, “The seven habits of highly effective people” that he said, we must reform our selves by sharpen the saw, it means that we have to reform our selves spiritually, mentally, physically so that once a man spiritually reform his self so then he never moves to illegitimate things, such as drugs, etc.

b) There should be completely banned on those channels that openly disseminate information regarding smoking and related things.

c) Most of our society illiterate so education regarding smoking and its dangerous consequences should be spread among different members of the society, through religious scholars, imam of the mosque etc.

d) The major factor of spreading habit of smoking in young generation is also that, there is no check and balance form the side of their families, so it is desirable and imperative to have proper check and balance form their family members, so with great extent young generation may be saved from smoking addiction.

e) Other society members may also play a very important role to control young generation from smoking, such as teachers, professors, advocates, doctors, they may arrange some seminars on the bad consequences of smoking so that have to control this habit.

5. Conclusion
As mentioned on previous pages that smoking items basically based on carcinogenic (a substance that cause cancer) elements, and other lungs diseases in which most common disease is emphysema, and other heart diseases like cardio vascular disease etc. and being Muslims smoking and all other alcohols strictly prohibited in Islam. There is no place for these things in our religion. Smoking is not only destruction of wealth, health but also very harmful for society as whole. So smoking all means must be banned and forbidden. So that individual and society may save from this unethical habit.

6. References
Hameed, A et al. Role of Islam in prevention of smoking. Frontier Medical College, Abottabad
Rehman. A. Impact of smoking on personality, Faisalabad, Pakistan.
www.askquestion.com/smoking diseases
www.Google.com/smoking impact
www.wikipedia.com/smoking quit/stopping
www.Quit- smoking –stop .com
EFFECTS OF PROBLEM-BASED AND DISCOVERY-BASED INSTRUCTIONAL STRATEGIES ON STUDENTS’ ACADEMIC ACHIEVEMENT IN CHEMISTRY

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ABSTRACT

The study investigated effect of Problem-based and Discovery-based instructional strategies on students’ Achievement in Chemistry in Agbani Education Zone of Enugu State. The research adopted a quasi-experimental pre-test, post-test, non-equivalent control group design involving two experimental and one control groups. The sample comprised 375 senior secondary class two Chemistry students from three intact classes randomly drawn from a clustered sample of three senior secondary schools in Agbani Education Zone. The classes were assigned randomly to experimental and control groups. Experimental groups were taught selected topic in Chemistry using problem-based and discovery-based strategies. Control groups were taught the same topic using expository method. Pre-test was administered to both groups before the commencement of the treatment. Treatment was administered for a period of 6 weeks after which a post-test was administered. Data was collected using two instruments, pre and post-achievement tests in Chemistry duly validated and a reliability co-efficient of .71 obtained using Kuder Richardson 20 (KR – 20) formular. Data were analyzed using mean and standard deviation to answer the research questions while analysis of Covariance (ANCOVA) tested hypotheses at .05 significance level. It was revealed among others that problem-based strategy significantly enhanced students’ achievement in Chemistry more than the discovery-based and the expository strategies.

Key Words: Problem-based, Discovery-based, Achievement, Gender, Chemistry

INTRODUCTION

Most nations develop because of the dominant role played by science. Science has been instrumental to the solution of the socio-economic problems facing nations like Nigeria. Such problems include hunger, unemployment and population explosion (Afolabi, 2009). However, Nigeria has been making frantic efforts to create scientific and technological awareness in her citizenry (Adeyemi, 2007).

All over the world, there has been an increasing search for means of improving and promoting teaching and learning especially the teaching and learning of Chemistry and other sciences. It is believed that this search will promote better understanding of science concepts and encourage greater scientific and technological advancements. This search has led to lots of research done by science educators towards making science education better, especially in the area of teaching students with the notion of discovering, engaging in critical
thinking, questioning and developing problem solving skills. Therefore, the curriculum for science and technology should be developed to educate science–literate students to enable them inquire and solve problems facing them.

Many developed and developing countries of the world have introduced many educational reforms especially in the field of science and technology. Some countries like Japan, American and Britain have achieved good results and have become self-reliant. Unfortunately Nigeria, despite all the reforms and innovations, such as the 6-3-3-4 system of education, the Universal Basic Education (UBE), the introduction of guidance and counseling in schools, expanded curriculum, for example, the study of introductory technology, not much success have been recorded. Science education has not succeeded in producing a self-reliant nation. Teaching and learning of science, in particular Chemistry, in Nigerian schools has been criticized that it has often resulted in poor students’ performance (Ivowi 1984, Otuka 1987, Okebukola and Jegede, 1986, all in Egbo 2004). These researchers identified a number of factors as being responsible for the observed trend. It is possible that those factors act singly or in combination affecting students’ achievement. Such factors as identified by the researchers include students’ poor academic background, insufficient qualified teachers, unmotivated teachers and students, inappropriate teaching and learning strategies and lack of innovative instructional strategies. The need to foster students’ achievement in Chemistry has given rise to innovative approaches that provide room for students’ active participation in the lesson.

Problem-based instructional strategy consists of carefully selected and designed problems that demand from the learner acquisition of critical knowledge, problem solving proficiency, self-directed learning strategies and team participation skills (Maloney, 2004). It reduces teacher’s instruction where learners are seen as active listeners and passively involved in classroom activities as in the case of conventional method. Problem-based learning is an example of constructivist learning strategy which poses significant contextualized real world situations and provide resources, guidance, and instruction to learning as they develop content knowledge and problem solving skills (Yager, 2001).

The first task for the teacher in problem-based learning is to guide the students to identify the problems and help them to link with previous knowledge. The students discuss the problems cooperatively among themselves in a small group, explain what they know, pose research questions, generate hypotheses, develop initial plans and organize their knowledge, attempt to solve the problems with several modifications, derive learning goals and organize further work.

Finally, the results are presented to larger groups through the guidance of the teacher, instructor or facilitator and the students are allowed to reflect on the learning that has taken place. Problem-based learning is a form of inquiry-based learning which explains the environment in which learning is driven by a process of inquiry constructed by the students.

Discovery is a way from the unknown to the known by the learners themselves (Bruner, 1966). The active participation of the learner in the learning process is called discovery learning (Bruner, 1968; Kara & Ozgun-Coca, 2004; Kipnis, 2005). In discovery learning, students construct knowledge based on new information and data collected are used by them in an explorative learning environment (De Jong & Van Joolingen, 1998).

Bruner (1961) states that learning happens by discovering, which prioritizes reflection, thinking, experimenting, and exploring. Discovery instructional approach to education is more closely aligned with constructivist concepts of exploration, discovery and invention (Bok, 2006). Constructivist theory is the basis for discovery learning. Under both
constructivism and discovery learning, educators subscribe to the idea that “knowledge cannot be transferred from one person to another” (Domin, 1999). Instead, a student needs to experience an event in order to make it truly meaningful. In a constructivist classroom, the role of the teacher is less defined. The teacher is no longer the focal point of the classroom. Instead, the would be instructor is now seen as a “facilitator, mentor, coach, or consultant” (Honebein, 2006). Additionally, the role and expectations of the students are transformed. Under constructivist theory, the emphasis is not on the amount of content that a student manages to retain, but is on the manner in which the students learn, or constructs knowledge (Honebein, 2006).

Over the years, the predominant method of instruction in schools has been the expository method (Nwabufo, 2005). By this method, learners were encouraged to master course content through constant repetition of facts and drills. The method guarantees the completion of the course outline on time, but incidentally encourages learners to memorize and regurgitate content of learning experiences instead of digesting and assimilating them. Most teachers in Nigerian schools use the expository method, which unfortunately provides little or no room for active student participation in the lesson. This expository (conventional) method of teaching has no laid down principles of learning.

Urevbu (1990) stated that the students’ active participation in a lesson aids understanding and achievement. Jerkin and Dodds (2006) confirmed that statement when they said that schools are provided with curricular that have to be learnt and which are within the limits of the learner’s own understanding. The teacher should deliver this using appropriate instructional strategies and relevant instructional materials to enable the learner achieve optimally. Obviously, when the teacher meaningfully imparts his lesson and allows active participation on the part of the students, there is bound to be high degree of achievement ability and also improved performance.

The social milieu, aspirations and rewards for males and females in our society also have some effects on their respective intellectual development. The reluctance of hardwork of the majority of females in our society should have some effects on their respective intellectual development. Hence, girls differ from boys in the age at which they develop logical thinking (Piaget, 1965).

The aim of the present study was therefore, to discover an instructional strategy that will result to better achievement in male and female students in Chemistry subject. There is therefore the need to determine the effect of problem-based and discovery-based instructional strategies on students’ achievement in chemistry.

**Purpose of the Study**

The study sought to determine the effect of problem-based and discovery-based instructional strategies on the achievement of students in Chemistry. Also, the study sought to ascertain the influence of gender on students’ achievement in Chemistry.

**Research Questions**

The following research questions guided the study.

1) What are the differences in the mean achievement scores of students taught with discovery-based, problem-based and expository instructional strategies?

2) What is the relative mean achievement score difference between the male and female students in the Chemistry post-test?

**Hypotheses**
The following hypotheses were tested at 0.05 level of significance.

1) There are no significant differences among the mean achievement scores of students taught with discovering-based, problem-based and expository instructional strategies.

2) There is no significant difference between the mean achievement scores of male and female students in post-treatment chemistry test.

Research Method

The study adopted a quasi-experimental pre-test, post-test, non-equivalent control group design involving two experimental and one control groups. The sample comprised 375 senior secondary class two (SS II) Chemistry students from three intact classes randomly drawn from a clustered sample of three senior secondary schools in Agbani Education Zone.

The data was collected using two instruments, the pre-achievement test in Chemistry and post-achievement test in Chemistry which were duly validated by three research experts. The regular Chemistry teacher subjected the experimental groups to instruction on chemical equilibrium using discovery-based and problem-based instructional strategies while the control group was taught using expository (conventional) strategy. The pre-test was administered to all groups (experimental and control groups) before the commencement of the treatment. Treatment was administered for a period of 6 weeks after which a post-achievement test in chemistry was administered to the subjects. The test re-test technique was used to determine the reliability co-efficient of the instrument and the reliability co-efficient of 0.71 was obtained. Data collected were analyzed using mean, standard deviation and analysis of covariance (ANCOVA). Specifically, mean and standard deviation were used to answer the research questions while ANCOVA was used to test the hypotheses at .05 level of significance.

Results

Research Question One

1) What are the differences in the mean achievement scores of students taught with discovery-based, problem-based and expository instructional strategies?

Table One: Relative Mean Scores of students taught with discovery-based, problem-based and expository instructional strategies in chemistry post-test

<table>
<thead>
<tr>
<th>Groups</th>
<th>( \bar{X} )</th>
<th>SD</th>
<th>Cases (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discovery-based strategy</td>
<td>14.14</td>
<td>3.98</td>
<td>120</td>
</tr>
<tr>
<td>Problem-based strategy</td>
<td>17.51</td>
<td>4.45</td>
<td>112</td>
</tr>
<tr>
<td>Expository strategy</td>
<td>14.29</td>
<td>3.65</td>
<td>143</td>
</tr>
<tr>
<td>Overall</td>
<td>15.31</td>
<td>4.42</td>
<td>375</td>
</tr>
</tbody>
</table>

Table 1 above shows that mean scores of student taught using discovery-based instructional strategy was 14.14 with standard deviation of 3.98. The table also shows that the mean score of students taught the same topic using problem-based instructional strategy was 17.51 with standard deviation of 4.45. Students taught with expository (conventional) strategy had mean score of 14.29 and standard deviation of 3.65.

Generally, the results, as shown in table 1, indicate that the highest mean score was recorded by students taught with the problem-based strategy followed by that of students...
taught with the expository instructional strategy. The least mean score was obtained by students taught with discovery-based strategy. However, the standard deviations of students’ scores in the chemistry post-test for discovery-based, problem-based and expository instructional strategy are 3.98, 4.45, and 3.65 respectively. Thus, there are more extreme scores in the problem-based group (SD = 4.45) than in the discovery-based group (SD = 3.98). The least standard deviation (3.65) was obtained for students taught with expository method indicating that the students’ individual scores were more clustered around the mean than is the case with discovery and problem-based strategies.

Research Question Two
What is the relative mean achievement score difference between male and female students in the chemistry post-test.

Table Two: Achievement scores of male and female students on the chemistry post-test.

<table>
<thead>
<tr>
<th>Sex</th>
<th>X</th>
<th>SD</th>
<th>Cases (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>13.51</td>
<td>4.00</td>
<td>174</td>
</tr>
<tr>
<td>Female</td>
<td>17.11</td>
<td>4.82</td>
<td>201</td>
</tr>
</tbody>
</table>

Table two shows difference in mean scores of male and female students in chemistry post-test. Male students score was 13.51 while that of their female counterparts was 17.11. This shows that female students generally achieved higher than the male students in the post-test. However, the standard deviation for male and female students are 4.00 and 4.82 respectively, indicating that the individual scores of male students are more clustered around the mean than those of their female counterparts.

Hypotheses
Ho1: There are no significant differences among the mean achievement scores of students taught with discovery-based, problem-based and expository instructional strategies in the chemistry achievement test.

Table Three: Analysis of covariance of students’ Mean Achievement scores in chemistry Achievement Test (Teaching Group X Gender)

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Sum of squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F-Cal.</th>
<th>F-Crit</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected model</td>
<td>3262.459</td>
<td>6</td>
<td>543.743</td>
<td>35.062</td>
<td>3.84</td>
<td>Sig</td>
</tr>
<tr>
<td>Covariate</td>
<td>307.420</td>
<td>1</td>
<td>307.420</td>
<td>19.823</td>
<td>3.84</td>
<td>Sig</td>
</tr>
<tr>
<td>Treatment</td>
<td>924.293</td>
<td>2</td>
<td>462.147</td>
<td>28.401</td>
<td>3.84</td>
<td>Sig</td>
</tr>
<tr>
<td>Gender</td>
<td>1076.647</td>
<td>1</td>
<td>1076.647</td>
<td>70.685</td>
<td>3.84</td>
<td>Sig</td>
</tr>
<tr>
<td>Treatment Gender</td>
<td>602.601</td>
<td>2</td>
<td>301.301</td>
<td>19.429</td>
<td>3.84</td>
<td>Sig</td>
</tr>
<tr>
<td>(2-way interaction)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>6746.002</td>
<td>435</td>
<td>15.508</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>112542.00</td>
<td>422</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 shows that the calculated f-value for the effect of treatment on students’ achievement in the chemistry test is 28.401. This is greater than the critical f-value of 3.84 at 2df for the numerator and 435 for the denominator, at 0.05 level of significance. As such, the null hypothesis is therefore rejected. This mean that there are significant differences in
the mean achievement scores of students taught with discovery, problem based and expository learning strategies.

H_{02}: There is no significant difference between the mean achievement scores of male and female students in the chemistry achievement test.

Table 3 shows that the calculated f-value for the effect of gender on chemistry taught is 70.685 and 1df for numerator and 435 for denominator. Since this value (70.685) is greater than the critical f-value of 3.84 at 0.05 level of significance, the null hypothesis is rejected. This means that a significant difference exists in the mean achievement scores of male and female students in the post-test. The difference as shown in table 2 is in favour of female students.

Discussion

Result of data analysis (Table 1 and 3) have shown that students taught with discovery-based and problem-based instructional strategies performed significantly better on the achievement test than their counterparts who were taught using the expository strategy. This result is in agreement with the results of earlier studies carried out by Mayer (2003) and Keislar (2008), both of which established the relative efficacy of discovery-based and problem-based instructional strategies in fostering students’ achievement in school subjects relative to the expository method. Students taught using problem-based achieved higher than those taught with discovery-based instructional strategy (Table 1) which may well be indicative of the demand each of the method makes of students’ learning processes. While the discovery-based instructional strategies suggest that the learner is not provided with the target information or conceptual understanding and must find it independently and only with the provided materials, the problem-based approach avails students of the opportunity to carefully select and design problems that demand from the learner acquisition of critical knowledge, problem solving proficiency, self directed learning strategies and team participation skills (Maloney, 2004). Problem-based strategy reduces teacher’s instruction where learners are seen as active listeners and passively involved in classroom activities as in the case of conventional method. More so, problem-based strategy as an example of constructivist learning strategy poses significant contextualized real world situation and provide resources, guidance and instruction to learning as they develop content knowledge and problem solving skills (Yager, 2001).

As indicated in table 2, the mean achievement scores of female students was found to be significantly greater than that of their male counterparts, irrespective of the strategy or methods employed in teaching them the same chemistry topic. It was however, found out that female students in the problem-based group achieved significantly higher than those in the other two groups (discovery-based and expository groups). The observed female superiority in achievement is in line with the findings of studies conducted by Biehler (2003) and Reedy (2001), which established the fact that females are superiority to their male counterparts especially in linguistic and verbal studies. It however differs from the results of studies in Nwagwu (1999), Ibeme (2000), Hutt (2002), which found out that male students achieved significantly higher than female students in sciences and mathematics.

The findings of this study deviated from the already established pattern of male superiority in chemistry achievement. This may be linked to the fact that none of the earlier works cited employed problem-based or discovery-based strategies in the teaching of chemistry and other science subjects. Given by the revelation by Sternberg and Berstein
that no innate difference exist between boys and girls in their intellectual abilities, it may not be surprising to observe, in this study, that female students outperformed their male counterparts in the achievement test.

**Conclusion**

The findings of this study show that students taught with problem-based strategy performed significantly better on the chemistry achievement post-test than both the discovery-based and the control (expository) groups.

Also, the mean achievement score of female students was found to be significantly greater than that of their male counterparts irrespective of the instructional strategies used in teaching them same topic in chemistry.

**Recommendations**

1) Professional associations and government agencies whose responsibility it is to design and revise the curriculum for secondary schools should incorporate and emphasize the use of problem-based instructional strategy in the teaching of senior secondary certificate (SSC) chemistry.

2) Science teachers should be encouraged to use problem-based instructional strategy in teaching senior secondary school chemistry. The use of problem-based instructional strategy should not be limited to chemistry as a subject, but should be incorporated in other science subjects.

3) Both male and female students should be exposed to the problem-based teaching method as data available has shown that female students benefit significantly from the study.

**REFERENCES**


DEVELOPING BETTER TEACHER EVALUATION

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Abstract
Teacher performance appraisal is the process of arriving at judgment about individual teacher’s performance against the background of his work environment and his future potential for the school system. Increasing teacher and teaching effectiveness is arguably the paramount challenge facing public primary and secondary education in Nigeria. It is universally acknowledged that improvement in educational systems is crucially dependent on effective teacher self-evaluation. Effective teaching evaluation is a key to helping teachers improve their teaching, which then improves student learning. Teacher evaluations are often designed to serve two purposes: to measure teacher competence and to foster professional development and growth. Effective teacher appraisal can also help schools to become sensitive to individual talent, performance and motivation by allowing teachers to progress in their career and take on new roles and responsibilities based on evaluations of their performance. Experienced teachers often state that the evaluations are not productive. Some of this dissatisfaction is based on experience which can be avoided. Teachers do not have any inputs: they are not involved in the evaluation criteria. Criteria for evaluation are determined by school boards who usually decide how the criteria are tailored. This leads teachers to distrust the evaluation process and question the validity of the results it produces. To be more effective, teachers need to participate actively in the evaluation process. Evaluators should spend time to make sure quality information is gathered.

Introduction
Teacher performance appraisal is the process of arriving at judgment about individual teacher’s performance against the background of his work environment and his future potential for the school system. It is the overall assessment of staff normally covering the period of one year or more. The main focus of the appraisal is on the job evaluation. Performance appraisal covers all information regarding the performance of the individual job.

It is universally acknowledged that improvement in educational systems is crucially dependent on effective teacher self-evaluation. Indeed, teachers instinctively wish to reflect on their work, evaluate it and look for ways to improve it. However, effective self-evaluation is not simply a process for the individual, but involves colleagues in a variety of ways. A fundamental principle is that teachers should also see themselves as learners.

Problem
Increasing teacher and teaching effectiveness is arguably the paramount challenge facing public primary and secondary education in Nigeria. The evidence suggests that most teachers’ professional development has little if any impact. Most times teachers attend professional workshops with no difference in the quality of their lesson delivery. The gaps between the stated aims of Federal policy, the needs of the teacher workforce, and proven solutions that improve teacher and teaching effectiveness are a serious impediment to any effort to improve student achievement. Schools all across all over the world are busy developing and implementing teacher evaluation system. A good teacher evaluation should
be able to discriminate between effective and ineffective teacher, to measure teacher quality and aid in developing highly skilled teacher workforce

Effort should be made more quickly in designing and implementing more effective teacher evaluation system. Teacher evaluation systems that are designed to help teachers improve have their primary characteristics: the system should be comprehensive and specific. Comprehensive means the model includes all those elements that researchers has identified as associated with student achievements. Specific means model identifies classroom strategies and behaviors at a granular level. In America there is rigorous training for teachers not just before one can become a teacher, but throughout their entire career. Good teacher development and ongoing development while you are a teacher is one of the key components in making our education system successful. Making sure that teachers are well prepared is very important.

THOERY OF MOTIVATION
Various individuals come to an organization with diverse needs and expectations which they expect to accomplish in exchange for their services to the organization. These needs and expectations could be defined in terms of the rewards the workers expect to get after exhibiting a particular behaviour. According to Flippo (1980; 342) just as the employee has certain needs that the organization is expected to supply, the organization has certain type of behaviour that it wishes elicit from employees.

In 1960, theory X and Y was postulated by McGregor which he related to the physiological needs of the people with regards to their particular jobs and various forms of management. Theory X assumed that subordinates in any organization is naturally lazy and avoids work where necessary. Incentives are therefore needed either in form of monetary, sanctions like loss of job, demotion, praise and so on. Theory Y assumes that people will willingly accept responsibility if they are given the right environment in terms of work conditions and attitude.

Rivers state government is investing heavily in the education sector especially primary and secondary schools. The school buildings are esthetically beautiful, far better than that of most private schools, well furnished and airy classrooms, state of the art ICT laboratories, with spacious a beautiful playgrounds yet majority of the parents do not want to have anything to do with them and. Teachers have continued to display nonchalant attitude to work which has contributed to students poor outings in external examinations. Okeke (2004) summarized teacher’s performance in secondary school to include
1. Commitment to the students and students learning
2. Commitment to the parents
3. Commitment to the community leadership and community
4. Commitment to the employer
5. Commitment to the professional knowledge, teaching practice-ongoing professional learning

There is an urgent need to restore people’s confidence in public school. One way to improve the system is through effective evaluation. Bronwyn (2001) in Ajie (2005) suggested that one of the objectives of performance assessment is to provide financial incentives for teachers to increase their effort it is important to ensure that an effective evaluation system is developed to motivate teacher to work hard in attempts to ensure that the aims and
objectives of education are achieved. According to Cole (1982, 382) the objectives of formal system of appraisal are

a. To identify current level of job performance
b. To identify employee strength and weakness
c. To enable employees to improve on current performance
d. To identify training and development needs
e. To identify potential performance
f. To provide the basis for salary reviews.
g. To encourage and motivate employees.

**Effective Evaluation**

A teacher’s primary goal is to facilitate student learning. Effective teaching evaluation is a key to helping teachers improve their teaching, which then improves student learning. Measuring teacher competence and simultaneously encouraging development growth is the purpose of effective evaluation of teachers. Quality evaluation will help teachers develop their course and curriculum to best meet students need. Effective teacher evaluation provide teachers with regular feedback to help improve professionally, provide feedback to school to administrators to help them build strong educational systems, identify professional development needs and identify clear learning need expectorations. It is a resource tool to help understand how students learn while determining effective teaching strategies. Appraisal is necessary to maintain standards set by the ministry. There is a need to examine the performance of teachers in public school generally.

Nigerian education system needs reform in the area of teacher evaluation to encourage greater commitment. Developing effective way to evaluate school teachers holds the promise for improving the school education experience for the millions of students who will be taught by these teachers. A central part of education reform today is the wide-ranging and unprecedented effort to either revamp existing teacher evaluation system or develop and implement entirely new systems. In the past three years, some countries have made some change to their teacher evaluation

- Providing clear lesson objectives.
- Understanding students’ background and comfort with the material.
- Using more than one delivery mechanism.
- Providing multiple examples.
- Providing appropriate number of examples (illustrations of the wrong way to do something).
- Maintaining an effective pace.
- Providing students with feedback about their learning.
- Engaging in timely use of guided practice.
- Explaining important concepts clearly.
- Keeping students actively engaged throughout a lesson.

Studies on the RATE system indicate that it discriminates between effective and ineffective teachers much better than some popular teacher evaluation models do (Strong, 2011). RATE’s list is references to such commonly cited elements as the teacher-student relationship and classroom management. These elements are recognized effective teaching. For example, in their review of the research on 228 variables identified as having measurable
relationships with student achievement, Wang, Haertel, and Walberg (1993) listed classroom management at the top. Classroom management has continued to be considered an important aspect of effective teaching (Good & Brophy, 2003). Likewise, the teacher-student relationship is prominently positioned in the theory and research regarding student behaviour (Evertson & Weinstein, 2006). Indeed, Sheets and Gay (1996) identified poor teacher-student relationships as the root cause of many, if not most, discipline issues.

Management and teacher-student relationships have research supporting their connections to important student outcomes. These elements are important correlates with student achievement—up to a point. If a teacher has not achieved a certain level of competence in these areas, student achievement will suffer. In addition to the elements mentioned other elements are appearance, composure, attitude towards supervision, punctuality, regularity to assemblies, classroom effectiveness—classroom control, performance of students in internal and external examinations, interpersonal relationship, involvement in curricular activities, distinguished achievement, sense of responsibility excuse duty, use of period, classes missed, relationship with staff and students, public, participation in staff and PTA meetings, integrity respect to constituted authority, self discipline and manners, professional growth.

The 41 elements in appendix 1 represent the diversity of strategies that a comprehensive model of teacher evaluation should include. Rapid Assessment of Teacher Effectiveness (RATE) was designed with an explicit measurement purpose—to effectively and efficiently determine teacher competence in the classroom (Strong, 2011). The model includes only 10 categories of teacher behaviour that appear sufficient to rank teachers in terms of pedagogical skill. Those categories are

**Purpose of the Study**

Performance appraisal is a management tool that attempts to ensure that the aims and objectives of education are achieved. In spite of huge investment by the government on education critics believe that there is fall in quality of education in public schools which is evident in students’ performance in external examinations such as WASCE, NECO, and JAMB.

It is observed that teachers are not performing their job satisfactory. However, education stakeholders are beginning to find some agreement in the idea that teacher appraisal can be a key lever for increasing the focus on teaching quality and continuous professional development for teachers, in keeping with the growing recognition that the quality of teaching affects student learning outcomes. Highly visible teacher appraisal also provides opportunities to assist recognize and reward teaching competence and high performance. This, in turn, may help address concerns about the attractiveness of teaching as a career choice and about the image and status of teachers, including teachers’ feelings that their work is not sufficiently valued. Since formative appraisal can also help to raise teachers’ self efficacy, it is a key component of effective teacher policies.

Effective teacher appraisal can also help schools to become sensitive to individual talent, performance and motivation by allowing teachers to progress in their career and take on new roles and responsibilities based on evaluations of their performance. As more and more parents demand quality education for their children, teacher appraisals provide a way for schools to be accountable for the quality of education in their classrooms and to address underperformance among teachers. There are large variations in approaches to teacher
appraisal, ranging from highly sophisticated national systems to informal approaches left entirely to the discretion of individual schools (in the private school sector). Issues of teachers’ working conditions, discipline and appraisal have been treated with levity. This attitude has affected the behaviour of teachers and their productivity generally. For any organizational system to achieve its purposes, adequate working condition and appraisal system must be formulated for the workers.

With dissatisfaction with the traditional approach to teacher performance appraisal and the need for educational reforms, it has now becomes imperative to reform and strengthen the evaluation system of teachers to encompass the new standards for teaching practice. The reason for this development is to enhance professional practice as a control for teachers’ performance appraisal.

Types of Evaluation

Performance management refers to the formal teacher-appraisal processes designed to ensure that individual and organizational goals are met. This includes all types of appraisal related to managing and developing a teacher’s career. As such, performance management is part of wider processes and systems for measuring, monitoring and enhancing the performance of teachers. It includes processes such as teacher registration, regular appraisals and appraisals for promotion.

Teacher registration, or certification, processes officially confirm teachers as competent for teaching. Advancement to fully registered teaching status typically occurs upon completion of a probationary period and/or following an appraisal against registration/certification criteria. The process typically involves external evaluators or a national agency responsible for teacher registration.

Regular appraisal is usually a process internal to the school, regulated by general labour-law provisions requiring teachers’ employers to regularly evaluate their employees’ performance. The process is generally connected to a discussion and plan regarding the teacher’s working conditions, responsibilities, professional development, and career and salary advancement.

Appraisal for promotion is a process that is separate from regular teacher appraisals in some countries. It is often voluntary and takes place in relation to decisions on employment status. Many countries do not have a specific process for this type of appraisal but integrate this function into regular teacher appraisals.

Reward schemes involve teacher appraisals that are explicitly designed to identify a selected number of high-performing teachers to acknowledge their teaching competence and performance through rewards or one-off salary increases.

System of Appraisal in Nigerian Schools

Governments everywhere in the world invest a lot of money on education for a purpose. They are therefore interested in the outcome of the system to ensure that the aims and objectives are achieved. Officials of ministries of education and school board go to schools from time to time to guide, help, advise and direct teachers and school heads in order to bring about an improvement in teaching and learning process. In Nigerian school system appraisal of teacher is undertaken by supervisors. A supervisor is a person formally designated by an organization to interact with members of the teaching staff in order to improve the quality of teaching and learning. Ogunsaju (1978) added that supervisors are mostly educational officers working with the ministry of Education charged with the following responsibilities.

In Nigeria there is no regular appraisal. Nigeria teachers’ evaluation system is summative: to determine teachers grade levels and salary. This appraisal for promotion is a
process that is separate from regular teacher appraisals in some countries. It takes place in
relation to decisions on employment status. Many countries do not have a specific process
for this type of appraisal but integrate this function into regular teacher appraisals. Teachers
are supposed to be evaluated once in three years. However it is lamentable that in actual
practice promotion interview is embarked on only when government is prepared to make
money available to the upward review of salary. It is commonly referred to as Promotion
interview promotion. It consists of oral and written tests. The written test tests teachers’
knowledge of social, general and current affairs as well as practice and principles of
education. Secondly the teachers’ lesson notes are examined, appearance, and
communication skill. Certificates are verified. Report of evaluation is never discussed
Pay has to be tied to performance. However, teachers are getting deferential pay now,
and they are getting it for things that do not matter, like pure seniority and academic
qualification which has resulted in teachers pursuing all sorts of part time academic
programmes the most common being sandwich programme. Each performance appraisal
must include at least one classroom observation. Post observation meeting to review the
result.

Purpose
There are several reasons for the recent interest in enhanced teaching quality. These include:
higher participation rates, increased costs of education, public demand for accountability,
and a need to develop practical skills Teacher evaluation is the cornerstone of new
performance based teacher compensation system. It should also be a way to improve
teaching practice, a way to help teachers get better. The extent to which any of this can
happen rests on evaluation that can consistently determine who are the more and less
effective teachers in our classrooms. Information to accomplish this comes from two
sources. First we can use teacher-related input to the education process such as classroom
teaching observations or classroom artifacts such as: lesson plan and teacher-designed
student assessment. From these measures promote student learning.

Second, we can measure outputs from teaching-learning process –actual student
performance and based on these measures make inferences about the teacher’s contribution
to that output. In each case doing this well for school teachers is a challenge. One of the
values of putting a meaningful teacher evaluation system in place is to help a teacher
understand where they are when teaching similar kids. From these a teacher would know
how he was doing if his failures were due to a student’s background or due to things he has
no control over. This is not all about performance pay or management- it’s all about giving
teachers real information about the jobs that they are doing. High-quality teacher evaluation
systems are seen as one lever for improving the teacher workforce and hence the outcomes
of students.

Structure of Effective Teacher Evaluation
Teacher evaluations are often design to serve two purposes: to measure teacher competence
and to foster professional development and growth. There are two types of evaluation,
formative and summative. Formative evaluation provides teachers with teaching skills;
summative evaluation determines salary or dismissal. Using both of these tools enhances
teachers’ satisfaction and professional development. Teaching involves the teacher, student
and the administrator. The structure of the evaluation should include

- Counsel with the administrator to achieve goals.
- These goals include clear communication with a teacher explaining how she will be
evaluated.
• The standards of objectivity, along with the teacher’s ability to relate to teaching
skills and opportunities for career development, are the determining points in the
effective evaluation.
• The teacher should be given the opportunity to be observed in many different lessons to
gain a fully rounded view of the teacher’s capability.
• Observation as well as review of her lesson plan should be included in the
evaluation. Asking other professionals to join in the evaluation process ensures a more
balanced view. Using peer evaluation, a valuable learning tool for teachers to receive
feedback by those who view her daily, adds to a more rounded evaluation.
• A teacher evaluation system should give teachers useful feedback on classroom
needs, the opportunity to learn new teaching techniques, and counsel from principals
and other teachers on how to make changes in their classrooms. To achieve these
goals, evaluators must first set specific procedures and standards.

The standards should relate to important teaching skills, be as objective as possible, be
clearly communicated to the teacher before the evaluation begins and be reviewed after the
evaluation is over, and be linked to the teacher’s professional development. Evaluators
should consider a variety of teaching skills. If the evaluators use several sources of
information about a teacher’s performance, they can make a more accurate evaluation. Some
procedures evaluators can use are to:

• Observe classroom activities. This is by far the most common form of data
collection of evaluation. The goal of class observations is to obtain a representative
sample of a teacher’s performance in the classroom. Evaluators cannot accomplish
this goal with a sample of only a few hours of observation or with an observation of
only one class. Observations can be formal and planned or informal and
unannounced. Both forms of evaluation can provide valuable information.
• Review lesson plan and classroom records. Lesson plans can reflect how well a
teacher has thought through instructional goals. Looking at classroom records, such
as tests and assignments, can indicate how well a teacher has linked lesson plans,
instruction, and testing.
• Expand the number of people involved in the evaluations. Most often principals and
department supervisors conduct evaluations. Again, many state laws and collective
bargaining agreements specify that the teacher’s supervisor evaluate their performance.
This system works well if the only goal of evaluation is to determine competence. If
the goal of the evaluation is to promote growth, however, other evaluators should
participate. Self-evaluators give teachers’ perspective on their work. Surprisingly, few
school systems require self-evaluators. Peer and student evaluations, if schools
administer them properly, can also benefit teachers.

Increase the awareness of parents and guardian of students concerning the effectiveness of
teachers. For example, the Rapid Assessment of Teacher Effectiveness (RATE) was
designed with an explicit measurement purpose—to effectively and efficiently determine
teacher competence in the classroom (Strong, 2011)

• Providing clear lesson objectives.
• Understanding students’ background and comfort with the material.
• Using more than one delivery mechanism.
• Providing multiple examples.
• Providing appropriate no examples (illustrations of the wrong way to do something).
• Maintaining an effective pace.
• Providing students with feedback about their learning.
• Engaging in timely use of guided practice.
• Explaining important concepts clearly.
• Keeping students actively engaged throughout a lesson.
• Teachers who want to improve their teaching are eager to know how other teachers and their students view them. These are the people who interact with the teacher every day; their perspective should not be ignored during the evaluation process. Boyd (1989)

Reporting the Results of the Evaluation
A post-observation conference can give teachers feedback on their strengths and weaknesses. Evaluators must remember to deliver the feedback in a positive and considerate way; offer ideas and suggest changes that make sense to the teacher; maintain a level of formalities necessary to achieve the goals of the evaluation and maintain a balance between praise and criticism. Give enough feedback to the useful and not so much that the teacher is overwhelmed. Rapid Assessment of Teacher Effectiveness (RATE) was designed with an explicit measurement purpose—to effectively and efficiently determine teacher competence in the classroom (Strong, 2011)

Teachers’ Concern in Reporting the Results
An evaluation is a process that when handled well can give much needed information or criticism. Giving feedback in a positive, compassionate, professional delivery enables the teacher to use the evaluation as a growing process. Not overwhelming the teacher with information that is not useful is a priority. Experienced teachers often state that the evaluations are not productive. Some of this dissatisfaction is based on experience which can be avoided.

Teachers do not have any inputs are not involved in the evaluation criteria. Criteria for evaluation are determined by school boards who usually decide how the criteria are tailored. This leads teachers to distrust the evaluation process and question the validity of the results it produces. To be more effective, teachers need to participate actively in the evaluation process. Evaluators should spend time to make sure quality information is gathered.

• Teachers are concerned that evaluators are not trained well nor have no teaching experience.
• An effective evaluation is meaningful for the teachers and the school system, providing information and enhancing students’ needs. Teachers’ capabilities and school ineffectiveness.
• Evaluators do not spend enough time on the evaluation. They should make out time to gather quality information and provide quality information and useful feedback.
• Evaluator should have special training to help them plan and carry out successful evaluation.
• Result of evaluation should be used to further teacher development. The result should figure into salary increases, promotions or any meaningful programme for professional development.
Teachers are an obviously critical component of the quality of that preparation. In years teachers are being evaluated, they do a better job. Students scores go up compared to off years. A school teacher should have a very good idea of how well he is doing. Periodically throughout the year, he should give his students opportunities to conduct anonymous written evaluation of himself. This feedback can be used to inform teachers and make some adjustments. He should give informative and summative assessment throughout the year to gauge student learning, have informal discussions throughout the school with students before school, after school and in the school library during planning period. Teachers do not bother to improve themselves and be authority but just mark time. There is a dear need to encourage teachers to work towards being authority in the area of their specialization, not just an ordinary class teacher. If we want to know how the teacher is doing it will help to ask the students. Student can be asked what they do in class. A simple self-report inventory that asks the students to state what they did - did they take note, talk to a classmate, ask questions?

**Benefits**

Quality teaching begins with a teacher’s formal education. The least educational qualification for one to teach in Nigerian schools is Nigerian Certificate in Education (NCE). However the teacher grows through a process of continuous improvement gained through experience, targeted professional development and the insights and direction provided through thoughtful, objective feedback about the teachers’ effectiveness. Teacher evaluation can result to teacher growth which promotes school effectiveness (Duke et al (1986).

- Provide schools a transparent and consist teacher evaluation system that ensures effective teaching and promotes professional teaching.
- Provide feedback and a support system that will encourage teachers to improve their knowledge and instructional skills in order to improve student learning.
- Provide a basis for making teacher employment decision.
- Provide an integrated system that links evaluation procedure with curricular standards, professional development activities, targeted support and human capital decisions.
- Encourage highly effective teachers to undertake challenging assignment.
- Support teacher’s roles in improving students’ educational achievements.

Linking evaluation and development is a difficult task for teachers, evaluators, and principals. Although there are few easy answers, evaluation can be used to work with teachers to set specific, achievable goals; provide constructive criticism and suggestions to improve weak areas and amplify strengths enlist experienced teachers to help improve the performance of less experienced teachers.

**Steps in the Evaluation Process**

How often will a teacher be evaluated? 2 years twice a year. 3-5 years 2 times. Each performance appraisal must include at least one classroom observation. Post observation meeting to review the result. Each performance appraisal must include at least one classroom observation. Post observation meeting to review the result.

**References**


Appendix 1
Figure 1 contains 41 classroom strategies and teacher behavior all of which have research supporting their relationship with student achievement.

Figure 1 a model of classroom strategy and behavior

1. **Routine Strategies**

   A. Communicating Learning Goals, Tracking Student Progress, and Celebrating Success

   1. **Providing clear learning goals and scales to measure these goals**
   2. **Tracking student progress**
   3. **Celebrating student success**

   B. Establishing and Maintaining Classroom Rules and Procedures

   4. **Establishing classroom rules and procedures**
   5. Organizing the physical layout of the classroom

2. **Content Strategies**

   C. Helping Students Interact with New Knowledge

   6. **Identifying critical information**
   7. Organizing students to interact with new knowledge
   8. **Previewing new content**
   9. **Chunking content into "digestible bites"**
   10. Processing new information
   11. **Elaborating on new information**
   12. **Recording and representing knowledge**
   13. Reflecting on learning

   D. Helping Students Practice and Deepen Their Understanding of New Knowledge

   14. **Reviewing content**
15. Organizing students to practice and deepen knowledge

16. Using homework

17. Examining similarities and differences

18. Examining errors in reasoning

19. Practicing skills, strategies, and processes

20. Revising knowledge

E. Helping Students Generate and Test Hypotheses about New Knowledge

21. Organizing students for cognitively complex tasks

22. Engaging students in cognitively complex tasks involving hypothesis generation and testing

23. Providing resources and guidance

3. Strategies Enacted on the Spot

F. Engaging Students

24. Noticing when students are not engaged

25. Using academic games

26. Managing response rates

27. Using physical movement

28. Maintaining a lively pace

29. Demonstrating intensity and enthusiasm

30. Using friendly controversy

31. Providing opportunities for students to talk about themselves

32. Presenting unusual or intriguing information

G. Recognizing and Acknowledging Adherence or Lack of Adherence to Rules and Procedures
33. Demonstrating "withitness"

34. Applying consequences for lack of adherence to rules and procedures

35. Acknowledging adherence to rules and procedures

H. Establishing and Maintaining Effective Relationships with Students

36. Understanding students' interests and backgrounds

37. Using verbal and nonverbal behaviors that indicate affection for students

38. Displaying objectivity and control

I. Communicating High Expectations for All Students

39. Demonstrating value and respect for low-expectancy students

40. Asking questions of low-expectancy students

41. Probing incorrect answers with low-expectancy students

Items in bold text may be used to rapidly rate teacher competence in the classroom—that is, as a measurement tool as opposed to a development tool.
COUNSELING UNDERGRADUATES TO EMBRACE ENTREPRENEURSHIP IN SOUTH EAST NIGERIA.

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Abstract
Changing the mindsets of undergraduates to embrace entrepreneurship through counselling might change the High graduate unemployment in Nigeria. This is a quasi-experimental study employing the Pretest Posttest Control Group Design. Using the Entrepreneurship Perception Questionnaire (EPQ), the baseline perception of 3000 undergraduates (1500 male, 1500 female) on entrepreneurship was obtained. 180 volunteer undergraduates with low perceptions towards entrepreneurship formed the study group. Their baseline perception was obtained. The treatment group was exposed to structured counseling program with Rationale Emotive Therapy and Cognitive Restructuring Technique at the base. The EPQ was re-administered on the study group at posttest and one month follow-up periods. Using percentage and t test, the results revealed a significant gender difference only at baseline, and a significant difference between the experimental groups at both posttest and follow-up periods. It was recommended that counseling undergraduates to embrace entrepreneurship should precede entrepreneurship studies in tertiary institutions in Nigeria. Implications of the findings and limitations of the study were highlighted. Further research should focus on changing the mindset of parents and teachers as well. Those in the control group were exposed to the treatment package at the end of the study to ensure that they benefited from the program.

Keywords: Entrepreneurship, counseling, entrepreneurship education, undergraduates, Nigeria.

Introduction
The Nigerian educational system with its emphasis on traditional job-based workplace is failing her graduates entry into the rapidly changing 21st century world-of-work. This situation is characterized by high graduate unemployment. The unemployment rate in Nigeria has risen over the years. In 1970 it was put at 4.3 percent; 1980 at 6.4 percent; 1992 at 40 percent and 2011 at 41.6 percent (Saluadeen, 2011). According to the National Bureau of Statistics (2011) unemployment rate for Nigerian youths ages 15-24 was put at 34.2 percent in 2009. Another source put the unemployment rate in Nigeria as rising from 4.9% in 2007 to 19.7% in 2010 (Aganga, 2010). Irrespective of the varying statistics, the unemployment rate is alarming. This was exacerbated by the current global economic meltdown which has resulted in employment becoming increasingly fluid with very high unemployment rate (IAEVG, 2010). Kumar (2010) and Babalola (2007) have proposed that the solution to the challenges in the workplace is raising a generation with new skills for future jobs and creating opportunities for jobs for themselves since neither the government nor business enterprises is prepared to do that for them.

Many nations experiencing the global economic recession have responded proactively to the global unemployment problem. U.S. government has long recognized that small businesses are the engine of the US economy providing a substantial number of employment
opportunities and unlimited opportunities for potential entrepreneurs (Di Zhand and Bruning, 2011). India quickly integrated entrepreneurship education into their educational system (I.N.D.I.A Trust, 2009). Zhang Li and Yang Liu (2011) and Linan, Rodriguez-Cohard and Rueda-Cantuche (2011) consider entrepreneurship as a key instrument to drive employment by increasing the entrepreneurial attitude of both potential and nascent entrepreneurs.

Entrepreneurship is a combination of mindsets, knowledge and skills. As mindsets are formed at the early stages of life entrepreneurship should be fostered early in life. Entrepreneurship education is designed to equip trainees with the necessary skills, knowledge, ability, interest, and motivation to become entrepreneurs (Azubuike, 2006). The sole motive is to enable them to become self-employed to impact positively on sustainable development and reduce poverty. Entrepreneurship refers to an individual’s ability to turn ideas into action. It includes creativity, innovation and risk-taking as well as the ability to plan and manage projects in order to achieve objectives. An entrepreneur is one who is highly creative and who imagines new solutions by generating the opportunities for profit. He innovates, introduces new technologies, increases efficiency, productivity or generates new products or services.

As a result of the emphasis on entrepreneurship as the catalyst for economic development and job creation (Gibb, 1996, Minniti, 2009), many nations have developed a wide array of measures to foster entrepreneurial spirit in their systems. Key among them is the call for academic institutions such as universities to contribute to the solutions of the problem by providing appropriate educational programmes. Entrepreneurship education is designed to equip trainees with the necessary skills, knowledge, ability, interest and motivation to become entrepreneurs (Azubuike, 2006). The sole motive is to enable them to become self-employed to impact positively on sustainable development and reduce poverty. According to I.N.D.I.A. Trust (2009) the way to success is to teach students about new sources of employment and convince them that being a business man or woman is one way of entering the labour market. A general approach would be to expose them to motivational experiences during the early stages of university life. The growing rate of unemployment makes it imperative for graduates to imbibe the spirit of entrepreneurship if they must survive and make their impact in the globalized world. Entrepreneurs bring change into the business environment with the help of technology and trained employees to maximize benefits (Sajjad, Shafi & Dad, 2012).

Entrepreneurship education has been canvassed as an effective means of entrepreneurial learning. It has become an obvious complement to venture capital and incubators as tools to propelling economic advancement (McMullan, Chrisman & Vesper, 2003). Daudu (2007) investigated the relevance and modalities of utilizing entrepreneurship education as a strategy for channeling the energies of youth in Nigeria away from paid employment to self-employment. He suggested the introduction of counseling for entrepreneurship to the Nigerian system of education at all levels. The basic assumption of focusing on education in order to develop entrepreneurship is based on the idea that entrepreneurial competencies are changeable and can be learned in a short period. Special entrepreneurship education became evident as the labour market got saturated and was no longer able to absorb those that graduated from the Nation’s tertiary institutions. Entrepreneurship education can very well perform the important function of improving entrepreneurial and managerial skills. This is to harmonize graduate competencies with the necessities of emerging knowledge-driven economy of the 21st century (Papayankiz, Rastelli, Damigos & Mavrotas, 2008). Entrepreneurship education in Universities was introduced to increase the motivation and
competencies of their graduates to become key persons in innovative and entrepreneurial activities (Rasmussen & Sorheim, 2009).

Wen Wu (2009) captured entrepreneurial competencies as the aggregation of all entrepreneur’s essential traits including attitudes, values, beliefs, knowledge, skills, abilities, characteristics, wisdom, expertise (social, technical, managerial) and mental and behavioural tendencies. The interest in entrepreneurial competencies derives from the assumed relationship between competencies and starting a business, existence and growth of investment (Mitchelmore & Rowley, 2010). Katrin, Paivi, Merle, Tonis, Natalia, Mervi, Arnis, Leena, and Urve (2011) identify such aspects of entrepreneurial competencies as knowledge and experience, motivation, capabilities and personal characteristics that enable a person to undertake and succeed in entrepreneurship. They believe that such competencies are learnable.

As a possible solution to the graduate unemployment quagmire, the National universities Commission, the regulating body for Nigerian Universities, introduced entrepreneurship education into the curriculum of Nigerian Universities as a compulsory (General studies) course for all undergraduates. The aim is to cultivate a durable culture of entrepreneurship in higher institutions of learning. Obiora (2002) considers entrepreneurship education as a viable alternative to wage employment founded on the premise that entrepreneurship is the engine that drives the economy. In spite of the value of entrepreneurship education, the impact is not yet felt among recent graduates in the country considering the high graduate unemployment in Nigeria.

The burden of this study therefore is that despite the introduction of entrepreneurship education in Nigerian universities, those who have undergone the programme do not seem to reflect the benefits of entrepreneurship education in their attitudes and perceptions towards entrepreneurship. The value of entrepreneurship education does not seem to have sufficiently impacted on them to spur them to imbibe entrepreneurial spirit and be motivated to create or wish to create their own employment after graduation. The researcher postulates that the absence of a mandatory orientation counseling program for entrepreneurship for all undergraduates before they undergo the entrepreneurship education might be the reason for their inability to benefit from the entrepreneurship education. The current trend in the global economic landscape requires a change of mindset. There is need to influence the mindsets of the undergraduates by creating awareness on the alternative career options in the informal sector. Herr (2003), UNESCO and ILO (2002) and Bhuyan (2007) identify the vital role counseling plays in creating psychologically conducive environment that engenders and fosters entrepreneurship spirit in young ones. Daudu (2007) and Papert (1996) identify the role of counseling in creating an environment where each student will be special and utilize the opportunity to carve out a niche for himself/herself and make positive impact in the world. They suggested the introduction of counseling for entrepreneurship education into the Nigerian educational system at all levels. The purpose was to introduce counseling as a strategy for economic empowerment. The premise that underlies this study is that if counseling is provided, entrepreneurship skills can be grasped and then honed. This will bring about transformations in perceptions on entrepreneurship issues. The counselor is perceived as a vibrant, dynamic and holistic empowering change agent. Counseling is a facilitating and helping process where a professional counselor provides skills, attention and time to assist clients to explore and identify issues causing problems and provide conducive environment where change is possible. Obi, (2011) identified the counselor’s role as working on students’ mindsets and stimulating their interest in self-employment and business creation and emphasizing unlimited opportunities for them.
in the 21st century. The counselor will utilize counseling skills and strategies garnered through training, experience and practice to proactively address the issue. During counseling, essential skills-personal and professional will be spotlighted. Some of such skills are risks taking, openess, decency, selflessness, interpersonal communication skills and selling and promoting own products and services. Others include seeing new trends, predicting them and grabbing the opportunity. Identify gaps in existing products and services as well as networking should be stressed. Frugality, self discipline, self-confidence and engaging in life-long learning are the hallmark of entrepreneurs and should be encouraged during counseling.

The purpose of this study is to explore how counseling could influence the mindsets of undergraduates to embrace entrepreneurship after graduation. Specifically, the study sought to identify the level of perception and intention towards entrepreneurship and job creation. It will evaluate the gender differences at baseline and assess the treatment effects at both posttest and follow-up periods after counseling. One research question aimed at finding the level of perception of undergraduates on entrepreneurship guided the study. Four hypotheses guided the study namely:

- There is no significant gender difference on entrepreneurship perception at pretest.
- There is no significant difference between the entrepreneurship perception of those in the treatment of group and control at pretest.
- There is no significant difference between the entrepreneurship perception of those in the treatment of group and control at posttest.
- There is no significant difference between the entrepreneurship perception of those in the treatment group and control group at follow-up period.

If youths are captured and counseled to accept entrepreneurship as a viable alternative to wage employment, they will become meaningfully engaged after graduation. The economy will be stimulated positively. Poverty will reduce. The standard of living will be raised and above all violence will reduce. Then, psychology and its allied psychological sciences would have made invaluable contributions to a strong and virile economy.

**Method**

**Participants:** The Participants included a total of three thousand undergraduates (1500 male, 1500 female), mean age 23.4; SD 0.342 sampled through simple random sampling. They have all taken the entrepreneurship course in their various institutions. They completed the consent form. The study was conducted at five Universities in five states in South East Nigeria. The participants completed the Researcher generated Entrepreneurship Perception Questionnaire (EPQ). The level of their perception was thus obtained. One hundred and eighty (180) volunteer undergraduates thirty (30) from each state whose responses were low on the EPQ were enlisted into the experiment. One hundred and twenty (120) were male while sixty (60) were female. They also signed the consent form agreeing to participate in the experiment.

**Instrument:** The Entrepreneurship Perception Questionnaire (EPQ) was used for this study. The first section of the EPQ contained demographic details. The second section contained 20 items focusing on entrepreneurship perceptions and intentions. The EPQ was constructed by the researcher and face-validated by sending it to Counseling Psychologists and experts in Measurement and Evaluation informing them of the purpose. The reliability index for the questionnaire was 0.85 obtained after test-retest at two-week interval using
Cronbach Alpha confirming its suitability. Positive attributes for entrepreneurship perception were scored 2 while negative ones were scored 1.

**Treatment:** This is a quasi-experimental design adopting the pretest posttest control group design. Ninety (90) males and ninety (90) females were randomly assigned to the treatment and control groups. Structured counseling program with Rational Emotive Therapy (RET) and Cognitive Restructuring technique at the base were exposed to the treatment group in group counseling sessions. The aim was to increase their awareness on the value of entrepreneurship and the need for them to embrace entrepreneurship as a viable employment and as an alternative to wage employment. This was provided in six sessions as group therapy for the treatment group. The treatment sessions involved initial establishment issues, rapport building, group cohesion, delineation of counseling goals, roles and responsibilities of clients and counselors, establishment of ground rules for group therapy, information gathering and discussions, tasks and assignments, decision-taking based on information, and termination of group activities. The control group was kept in the waiting list. The sessions were scripted and rehearsed by the research assistants (counselors) to reduce therapist factor. The EPQ was juggled and re-administered on the treatment group and control after 4-week posttest and 8-week follow-up periods. The data collected were analyzed using t test. At the end of the 8-week follow-up, those in the control group were exposed to the same treatment to ensure they benefited from the program. Percentage was used to determine their level of perception on entrepreneurship while t test was used for the hypotheses.

**Results**

**Table 1**

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>LOW %</td>
</tr>
<tr>
<td>1500</td>
<td>922 61.47</td>
</tr>
<tr>
<td>578</td>
<td>38.53</td>
</tr>
</tbody>
</table>

Based on the survey, the result obtained from the respondents’ perception on entrepreneurship revealed that 992 representing 66.47% of male was low while 578 representing 33.53% was high. This shows that more of the male respondents have low perception of entrepreneurship as a viable alternative to wage employment. A total of 872 female respondents representing 58.13% had low perception of entrepreneurship while 628 (41.87%) had high perception of entrepreneurship as a viable alternative to wage employment.

**Table 2**

<table>
<thead>
<tr>
<th>Group</th>
<th>No.</th>
<th>Mean</th>
<th>SD</th>
<th>SEM</th>
<th>Df</th>
<th>t.cal.</th>
<th>t.crit.</th>
<th>Stand. Error</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>120</td>
<td>1.18</td>
<td>0.0529</td>
<td>0.004483</td>
<td>178</td>
<td>6.9197</td>
<td>1.96</td>
<td>0.012</td>
<td>Do not Reject</td>
</tr>
<tr>
<td>Female</td>
<td>60</td>
<td>1.26</td>
<td>0.1024</td>
<td>0.013220</td>
<td>178</td>
<td>6.9197</td>
<td>1.96</td>
<td>0.012</td>
<td>Reject</td>
</tr>
</tbody>
</table>

P≥0.05
The t test calculations reveal a statistically significant difference between male and female at pretest. The calculated t-value of 6.9197 which was greater than the critical value of 1.96 at 0.05 alpha levels indicated a statistically significant difference.

Table 3
t-test calculations for mean differences for treatment and control groups at pretest

<table>
<thead>
<tr>
<th>Group</th>
<th>No</th>
<th>Mean</th>
<th>SD</th>
<th>SEM</th>
<th>Df</th>
<th>t.cal.</th>
<th>t.crit.</th>
<th>Stand. error</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>90</td>
<td>1.44</td>
<td>0.742</td>
<td>0.0782</td>
<td>178</td>
<td>0.5886</td>
<td>1.96</td>
<td>0.119</td>
<td>Reject</td>
</tr>
<tr>
<td>Control</td>
<td>90</td>
<td>1.37</td>
<td>0.850</td>
<td>0.0896</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P≥0.05</td>
</tr>
</tbody>
</table>

The table above shows that there is no statistically significant difference between those in the treatment group and control before treatment. This is shown by the t calculated of 0.5886 which is less than the table value of 1.96 with a P value of 0.05.

Table 4
t-test calculations for mean differences for treatment and control groups at posttest

<table>
<thead>
<tr>
<th>Group</th>
<th>No</th>
<th>Mean</th>
<th>SD</th>
<th>SEM</th>
<th>Df</th>
<th>t.cal.</th>
<th>t.crit.</th>
<th>Stand. error</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>90</td>
<td>1.74</td>
<td>0.14</td>
<td>0.0148</td>
<td>178</td>
<td>24.0427</td>
<td>1.96</td>
<td>0.022</td>
<td>Do not Reject</td>
</tr>
<tr>
<td>Control</td>
<td>90</td>
<td>1.22</td>
<td>0.15</td>
<td>0.0158</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P≥0.05</td>
</tr>
</tbody>
</table>

Table 4 above shows that the calculated t. value of 24.0427 is greater than the table value at P value of 0.05. This shows that the result is statistically significant. This is an indication of positive treatment effect at posttest.

Table 5
t-test calculations for mean differences for treatment and control groups at follow-up period

<table>
<thead>
<tr>
<th>Group</th>
<th>No</th>
<th>Mean</th>
<th>SD</th>
<th>SEM</th>
<th>Df</th>
<th>t.cal.</th>
<th>t.crit.</th>
<th>Stand. error</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>90</td>
<td>1.76</td>
<td>0.0875</td>
<td>0.0092</td>
<td>178</td>
<td>27.8517</td>
<td>1.96</td>
<td>0.019</td>
<td>Do not Reject</td>
</tr>
<tr>
<td>Control</td>
<td>90</td>
<td>1.24</td>
<td>0.1540</td>
<td>0.0162</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P≥0.05</td>
</tr>
</tbody>
</table>

The table above shows that there was a significant difference between those in the treatment and control groups at follow-up. This is shown by the t.calculated value of 27.8517 which is greater than the table value of 1.96 at 0.05 levels of significance. The null hypothesis was thus not rejected.

Discussions
The significant gender difference observed at baseline is reflective of gender disparity in most spheres of human endeavor. Though entrepreneurship is a human universal (Minniti, 2009), the invisibility of women’s entrepreneurship potentials is portrayed in literature. This might account for the entrepreneurial landscape which seems to vary between men and women. The result of the study is in line with Shinner, Giacomin and Janssen’s (2012) study
which found gender differences in entrepreneurial perception. For Eddleston and Powell (2012) entrepreneurship should remain a gendered process. Informal economy plays a significant role in entrepreneurship, especially as it relates to women entrepreneurs in the rural areas (Barhat & Patgoankar, 2011). Women are always at the base stimulating other economic indices. The ripple effect of women’s participation in economic development should be emphasized in order to harness the benefits for entrepreneurial development. The significant difference between the treatment group and control group at both posttest and follow-up periods is a reflection of treatment effect. It shows that the counseling provided achieved its aim of positively influencing the mindsets of undergraduates in the treatment group to embrace entrepreneurship after graduation. This confirms extant views on the matter in literature (Herr, 2003; Bhuyan, 2007; Papert, 1996; Romer-Pakkanem, 2011 and Daudu, 2007).

Though entrepreneurship education is necessary to equip youths to fit into the 21st century world of work (INDIA Trust, 2009; Katrin et al, 2011; Papayankiz et al, 2011), it has become imperative to sensitize the students on entrepreneurship before offering them the opportunity to learn the rubrics of entrepreneurship. They have to first change their mindsets about wage employment that has been hard-wired into their psyche before accepting entrepreneurship as a viable replacement.

**Conclusion**

Based on the results of this study, the conclusion is drawn that counseling undergraduates to embrace entrepreneurship will contribute greatly in changing the mindset of undergraduates about entrepreneurship. Counseling undergraduates should precede the introduction of entrepreneurship studies. This will enhance and equip them to change their mindsets on entrepreneurship and enable them to benefit from the introduction of entrepreneurship studies. They will be then able to find a pathway into the 21st century world-of-work. This paper therefore recommends among other things that counseling undergraduates should precede entrepreneurship studies in all tertiary institutions in Nigeria. There should be paradigm shift in career counseling at all levels of our educational system to reflect the new face of employment history. In addition, Governments should create conducive environments for entrepreneurship.

**Limitations and directions for future research**

Like most studies, there are limitations to this study. The study was conducted in only five institutions in Nigeria. The study was thus limited both in scope and dept. As a human variable, outcome of group counseling may vary. Therapist factor is a major variable that may to a large extent determine the outcome of therapy. The group sessions were however scripted and rehearsed by the counselors involved. Another limitation is the small number of sample used for the study (180). This study should be replicated using larger samples and across the country. Future research in this area should focus on counseling and enlightening parents on the need for entrepreneurship, and a longitudinal study to follow-up on participants.

**Implications for counseling practice and training**

The findings of this study are particularly relevant to counseling practice and to entrepreneurship development. The findings highlight the need for counselors to be aware of their responsibilities toward creating a psychologically conducive environment for entrepreneurship development. There is need for them to increase their knowledge and skills especially in the area of career counseling to be able to provide clients with adequate career services that will satisfy clients’ needs for the 21st century world of work. The importance of advocacy for policy review in the area of entrepreneurship is evident from the findings of
this study. The introduction of entrepreneurship studies into all tertiary institutions in Nigeria is a noble idea intended to reduce graduate unemployment. Such laudable objectives will hardly be achieved without changing the mindsets of the students prior to the introduction of the course. This is an important omission and should be added to policy.

References
Kumar, R. (2010). G-20 Labour Ministers for faster job creation to spur recovery. IANS. Washington DC.


DEVELOPMENT AND VALIDATION OF TEACHER MOTIVATION ASSESSMENT SCALE FOR QUALITY ASSURANCE IN UNIVERSITIES IN ANAMBRA STATE

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ABSTRACT

The main purpose of this study was designed to develop and validate an instrument titled “Teacher Motivation Assessment Scale (TMAS) for quality assurance in universities in Anambra State. Thus, this is an instrumentation study. From literature, five constructs that constitute the major elements of human motivation were identified. The constructs include attitude, reward, commitment, punishment and interest. Initially, a 50-item Motivation Assessment Scale was developed by the researcher for the purpose of face validation and field trial. The initial draft of the instrument was subjected to face validation by 2 specialists in educational research, 5 specialists in educational administration and 2 specialists in measurement and evaluation. Their comments and suggestions were then incorporated in a second draft of the instrument still consisting of 50 items. This was subjected to field trial using fifty lecturers drawn from tertiary institutions in Enugu state. The data from the field trial were subjected to factor analysis to determine the items that were valid and therefore qualified to be included in the instrument for use in the actual study. Based on the factor analysis, 30 items were found to be well loaded. Thus, the draft that was administered to the research subjects consisted of 30 items. Data from the research subjects were analyzed using factor analysis, the Cronbach Alpha and t-test. Out of the 30 items, 8 were dropped. The remaining 22 items were grouped into 9 factors. Out of the 9 factors extracted, only five factors have items substantially loaded on them while four factors did not have up to the minimum loading of four items on them and were therefore ignored (Meredith 1969). The 22 acceptable items were grouped under five motivational constructs with their item loadings. The test of reliability using the 22 items that survived the validation test revealed that the instrument is reliable. The determination of internal consistency of the instrument based on the influence of school location and job experience showed that most of the items of the instrument were stable across school location and job experience. The researcher therefore recommends that the TMAS be used by the management of universities, Deans of faculties and Heads of departments including teachers for quality assurance in universities in Anambra State. It is also recommended that the instrument be used for all categories of tertiary institution for quality assurance irrespective of personality or environmental variables.

INTRODUCTION

Motivation has been conceived from an array of both theoretical and empirical perspectives. It has been viewed from the path-goal orientation (Obi, 1997 Georgapoulos, 1957); from the expectancy viewpoint (Vroom 1964); from the dynamic approach (Maslow, 1965; Alkinson and Birth, 1989) and from the Herzbergs’s Motivation – Hygiene
perspectives (Enyi, 2000). Although each school of thought convey a divergent view of motivation, all the theoretical and empirical explanations coverage at a unified point where motivation is generally agreed to be the process of arousing, sustaining and regulating the activities of an organism in a given contact. The study of motivation, therefore, is primarily concerned with how behaviour is energized, sustained, directed and stopped. The dominant approaches to motivation during the 1940s and 1950s view behaviour as regulated by stimulus-response associative bonds that develop through reinforcement processes (Udokama 1997; Koestner and McClelland, 1994). The psychology of motivation, falling as it does across the road of many different scholarly interests, has long needed a clear-cut definition. It is generally believed that an internal feeling acts behind the human behaviour. This internal feeling or activated force motivates an individual to achieve a goal. In other words, the process of activation, as a result of motivated force, is termed motivation. According to Obi (1997, Azubike, 2013) motivation maybe-seen as the perceptions, methods, activities used by the management for the purpose of providing a climate that is conducive to the satisfaction of the various needs of the employees so that they may become satisfied, dedicated and effective task performer. Therefore, motivation is an embracing factor in an employee’s development to accomplish personal as well as organizational goals.

Herberg’s Motivation-Hygiene theory makes a distance between two sets of job factors. One set is related to the actual doing of the job, the job content, or the intrinsic aspect of the job (Anyanwu, 2002: Enyi, 2000). These factors are called motivators and they include: achievement, recognition, works itself, responsibility, and advancement. The other set of job factors is related to the environmental setting or extrinsic factors of the job. These factors are termed hygiene and they include: policy and administration, interpersonal relations, supervision, salary, working conditions, status, security, possibility of growth and personal life. All these factors, both intrinsic and extrinsic determine, to a great extent the functioning of a classroom teacher on the job.

Teacher motivation, according to Diyoke (2005) is an individual phenomenon. By this he means teachers’ emotional and mental reactions to his work, which affects the amount of work he does. Teachers want security and comfortable living, pleasant working conditions and a sense of belonging, treatment, a sense of achievement, a feeling of importance and a part of policy formulation.

This trend, therefore, shifted the attention of educators to teachers job orientation. While emphasis on strategies for enhancing teacher effectiveness on the job continues to dominate in current literature and while also there seem to be a convergence of ideas on the role of motivation in teacher effectiveness, the exact quantification of teacher motivational states has been merely speculative. In the same vein, it is possible that no current theory of motivation has been able to explain, and more importantly predict the behaviour of an individual consistently. Available theories, at best, could only predict group behaviour with a fair amount of errors at some levels of probability (Arvey and Neel 2004).

While weaving fanciful propositions, replete with exotic hypothetical constructs to explain past behaviour most of the existing theories tend to be versions of an approach, which argues that two opposing forces inhere in an individual’s life and interact to motivate that person. None has been able to quantify, in an individual the amount of force towards equilibrium and the extent of drive the individual has to seek change or disequilibrium. One would expect that a teacher’s motivational behaviour towards his job would be influenced by a number of factors. Such factors include the location of the school where he teaches and the length of the teacher’s professional experience. These factors have been extensively
studied in the developed countries where there is limited literature on work that has been done on these two factors with regard to how they influence teachers motivation in carrying out their jobs. For instance in his own work Murdock (1994) found that the location of a school whether in an urban or rural area did not make any significant difference in levels of teachers motivation on the job. Murdock's study is interesting because he used a large secondary school sample drawn from across the United Kingdom. The influence of location of a school on motivation was found not to be significant in a study reported by Akpan (2007).

In a national survey on the role of professional experience as a factor of motivation on the job, carried out in Nigeria by Onyedinma (1989), it was found that the professional experience of a teacher was not a significant factor that influence teacher motivation on the job. From the foregoing, it is clear that more studies are needed in the area of teacher motivation especially in developing countries including Nigeria. It is possible that one reason why such studies have not been carried out in developing countries like Nigeria is because of paucity of valid and reliable instrument for measuring motivation of teachers. Yet, such studies are important for their contributions in understanding and improving the role of teachers in our educational systems.

The perennial problem of teacher poor work orientation sympathized by truancy, dereliction of duty, apathy, lateness to duty (Ibeakor, 1997, Edochie 2008) tend to raise a number of issues which bother on the implementability and survival of the new educational programmes being implemented by the Nigeria Federal Government. Although educators (Afolabi, 2009; Iheonumekwu, Anyatonwu & Eze 2012, Haruna, 2007) have linked these problems to internal disposition of teachers emanating from poor work conditions, their arguments appear not to have been substantiated. In the same vein, in as much as it would not be said that poor teacher job orientation stems from the poor motivation of teachers it could also not be established with a fair amount of certainty that teachers are adequately motivated. This is as a result of the paucity of instruments for measuring teachers' level of motivation. Not even the application of the Structural Equation Model (Anastasi, and Urbina 2008) or the Alkinson’s (1984) Schema Approach quantity the extent of teacher motivation.

As such, a major problem in motivation studies is its measurability. In response to this problem, this study is faced with the task of developing and validating an instrument, which could be generally applied with a fair amount of certainty in the measurement of motivational status of teachers.

**Research Question**

The following research questions guided this study.

1. How valid are the items of the TMAS in terms of their factor loadings?
2. What is the reliability coefficient of the Teacher Motivation Assessment Scale (TMAS)?
3. What influence has school location on the Motivation of teachers?
4. What influence has teacher job experience on the motivation of teachers?

**METHODOLOGY**

The population of the study comprised all the lecturers in Faculties of Education in the three universities in Anambra state. The universities include Nnamdi Azikiwe University, Awka (Federal); Anambra State University, Uli (State) and the Madonna University, Okija (Private). The sample of the study comprised 60 lecturers purposively selected from
Faculties of Education in the three universities. Twenty (20) lecturers were selected from each university Faculty of Education. This study adopted an instrumentation research design. According to Mehrens and Lehman (1991), an instrumentation research is the type which aims at developing and certifying the efficacy of an instrument for the measurement of a given behaviour or construct.

The instrument developed in this study was the Teacher Motivation Assessment Scale (TMAS). The initial draft copy of TMAS has fifty items. The draft is a 4- point modified likert type scale divided into two sections. Section ‘A’ was designed to seek background information of the respondents. Section “B” was designed to seek information based on motivation constructs. The rating scale options are strongly Agree (SA = 4); Agree (A = 3); Disagree (D =2); and Strongly Agree (SD=1). The instrument was duly validated by experts in educational research and educational administration. The reliability was assessed using factor analytic approach. The researcher employed the direct delivery technique in the administration of the instrument to the research subjects. The principal factor solution, Cronbach Alpha and mean scores were employed in the data analysis.

RESULTS

Research Question 1
How valid are the items of the Teacher Motivation Assessment Scale (TMAS) in terms of their factor loading?

Responses of the teachers who were used for this study were subjected to data reduction procedures (ie. Factor analysis) using principal component analysis and factor matrix. For the TMAS the normal varimax method of rotation was done with reference to the principal factor solution for the thirty items. Summary of the varimax rotated factor loading for the thirty items/variable is shows in the appendix.

Summary of data revealed that out of the nine factors extracted, only five factors (factors 1,2,3,4 and 5) have items substantially loaded on them. Out of the 30 items used for this study, twenty-two items had at least a minimum loading of 0.35. Four factors, (6, 7, 8 and 9) did not have enough items substantially loaded on them. On the other hand, items 9 and 15 were not loaded on any factor while six items (items 2, 3, 12, 13, 20 and 24) were loaded on more than one factor and were considered factorially impure. These items were discarded. Factors 1,2,3,4 and 5 were accepted as valid. According to Meredith (1969) the minimum number of items for accepting a factor is four. The five factors and the associated twenty-two items considered to be factorially valid are specified in table 1 (see appendix).

Research Question 2
What is the reliability coefficient of the teacher motivation assessment scale?

After the data reduction using the varimax method of rotation, it was found that two items were not loaded. The items were 9 and 15. However items 2, 3, 12, 13, 20 and 24 were loaded on more than one factor. Therefore the eight items (2, 3, 9, 12, 13, 20 and 24) were considered factorially impure. The eight items were discarded. Thereafter the remaining twenty-two items were subjected to test of internal consistency, using the Cronbach Alpha. The summary is shown in table 2 at the appendix.

Research Question 3
What influence has school location on motivation of teachers?
The result of the influence of location on the motivation of teachers is shown in table 3. (see the appendix).

Teachers in rural areas agreed with the views on items 7, 16, 17, 18, 19 and 21. Teachers in urban and rural areas recorded the lowest means responses of 1.57 and 1.39 respectively on item 30 of TMAS. This item tried to find out whether teachers are given assistance in solving their personal problems. On the other hand, both teachers in the urban and rural areas recorded their highest mean responses of 3.50 and 3.67 respectively on item 21 of TMAS, which was on whether basic duties are made available to teachers.

Research Question 4

What influence has teachers’ job experience on the motivation of teachers?

The result of the influence of job experience on the motivation of teachers is shown in table 4. (see the appendix). The result in Table 4 shows that both experienced and less experienced teachers disagreed with the views on items I, 4, 5, 6, 10, 11, 14, 22, 23, 25, 26, 27, 28, 29, and 30 while the agreed with the views on items 7, 17, 18, 19 and 21. The experienced and less experienced teachers recorded the lowest mean of 1.1 and 1.49 respectively in item 21 of the TMAS, which found out whether basic allowances accruing from extra duties are made available to teachers.

Summary of Finding

The analysis of the data revealed the following findings:

Out of the 30 items of the TMAS subjected to factor analysis, 22 items met the requirements for acceptance as valid items. The remaining eight items were dropped because they were not up to the cut-off or minimum acceptable value of 0.35. They are items 2, 3, 9, 12, 13, 15, 20 and 24. While items 2, 3, 12, 13, 20 and 24 were considered factorially complex or impure because they were loaded on more than one factor. Items 9 and 15 did not attain a minimum loading of 0.35 on any factor. The 22 valid items were distributed along the five factors, which explains motivational constructs. The 22 – items of the TMAS that emerged as acceptable items substantially high internal consistency of 0.74, indicating that the instrument is a reliable measure of motivation among teachers.

Furthermore, school location affect the responses on TMAS. Since urban and rural responses differed significantly much in the same vein, length of experience of the teacher affected their responses on TMAS since experienced and less experienced responses were found to vary significantly.

Discussion of Findings

The initial 30-item Teacher Motivation Assessment Scale (TMAS) was subjected to factor analysis using the varimax rotated factor loading. As shown earlier, nine factors were extracted by the PC but only five factors had items substantially loaded on them. Item 2, 3, 9, 12, 13, 15, 20 and 24 were dropped completely from the second draft of the teacher motivation assessment scale. Specifically, item 2 was loaded on factors 1 and 7 while items 3 and 12 were loaded on factors 1 and 6. Also item 13 was loaded on factors 6 and 7 while items 20 and 24 were loaded on factors 1 and 8, 6 and 8 respectively. Since they appeared in more than one factor, they were described as factorial complex. 1 items 9 and 15 were not loaded on any factor and were also dropped. Meredith (1969) recommended that a loading of 0.35 should be the minimum for accepting any item. The five constructs representing the
five factors in which the items were loaded are attitude, commitment, reward, punishment and interest. Factor 1 has to do with motivation resulting from attitude to job. Factor 2 has to do with items that addresses the dimension of motivation that has to do with commitment. Factor 3 reveals that aspect of motivation that relates to reward. Factor 4 has to do with the construct that pertains to punishment. While factor 5 linked with interest in the job.

During factors analysis, eight items did not meet the criteria for accepting items as valid in the instrument. These items are 2, 3, 9, 12, 13, 15, 20 and 20. Items 2, 3, 12, 13, 20 and 24 were dropped from the instrument because they were loaded on more than one factor. Item 9 and 15 were dropped because they were not adequately loaded on any factor. The surviving twenty-two items were subjected to a test of internal consistency using Cronbach alpha. Reliability is referred to the degree of consistency of a measuring instrument (Mehren and Lehman 1991). Since the instrument is of the Likert-type, the Cronbach test of internal consistency was considered most. The summary of the test revealed alpha of 0.74. This indicates that the instrument has high inter-item consistency and therefore reliable.

Research question 3 reflected particularly on school location. Thus, the influence of school location on the motivation of teachers. Subsequently, Table 3 showed mean responses. The surviving 22 items for both urban and rural recorded the lowest mean response of 1.57 and 1.39 respectively on item 30 of TMAS. Also both teachers in urban and rural disagreed with the views on items 1, 4, 5, 6, 10, 11, 14, 22, 23, 25, 26, 28, 29 and 30 while the teachers in urban areas disagreed with the view on item 8. In addition, both teachers in urban and rural agreed with the views on items 7, 16, 17, 18, 19, and 21. Furthermore, both teachers in the urban and rural areas recorded their highest mean response of 3.50 and 3.67 respectively on item 21 of the TMAS. Thus, school location has significant influence on the scores of teacher motivation.

However, the results agree with earlier findings of researchers like Ogbodo (1993) and Okeke (1994). These researchers observed that teachers in rural areas and those in urban areas are not equally motivated. Due to environmental circumstances, the interest, commitment, attitudes, reward and punishment of these teachers vary. Although, researchers have already established remarkable differences in line with their differences in 15 items as against 6 that agreed, it must be appreciated that for some aspects of their job, there must be convergence especially when the construct measured are not environmentally dependent. Murdock (1994), Obunadike (2008) noted that the location of a school whether in urban or rural did not make any significant difference in levels of teacher motivation.

The influence of job experience on the Teacher Motivation Assessment Scale was also explored. Summary of data analysis presented in table 4. Table 4 showed that both experienced and less experienced teachers disagreed with the view on items 1, 4, 5, 6, 10, 11, 14, 22, 23, 25, 26, 27, 28, 29 and 30, while they agreed with the views on items 7, 17, 18, 19 and 21. Both experienced and less experienced teachers recorded the lowest mean of 1.51 and 1.49 respectively on item 30 of the TMAS. Nevertheless, the experienced and less experienced teachers recorded their highest mean of 3.55 and 3.59 respectively on item 21 of the TMAS. Obi (1997) noted that interest in the teaching profession develops with teaching profession develops with time or declines with time. His argument is that, in as much as teaching as a profession is concerned, interest in the job is time dependent.

Out of the 30 items that were used for the actual study, only 22 items survived. These 22 items were grouped according to their motivation constructs. Already five
motivation constructs were identified from the literature. These constructs are: Attitude, Commitment, Reward, Punishment and Interest.

ATTITUDE:
ITEMS
1. Adequate instructional facilities are always made available to enhance our job performance.
6. There is a fair consideration for all teachers in assignment of responsibilities.
19. The government and school authority, usually stimulate and encourage teachers to greater work efficiency.
26. Conditions of service for teachers are stream-lined to enhance their performance.

COMMITMENT
ITEMS
10. The authority provides enough incentives to challenge teacher productivity
16. Teachers are allowed to express their feeling about their jobs.
17. There is approval for teachers who apply for in-service training
30. Teachers are usually given assistance in solving their personal problems.

REWARD
ITEMS
4. Adequate leisure activities/programmes are enjoyed by teachers.
7. Teachers receive adequate commendation for jobs well done
14. Teachers who go for further studies are recognized by the authority through instant promotion or higher rank when they successfully complete their studies
22. Teachers are promoted regularly without prejudice.
23. Teachers are paid monies to enable them attend seminars and workshops.

PUNISHMENT
ITEMS
11. Usually, there is poor human relationship between teachers and the school authority.
21. Basic allowances accruing from extra duties are not made available to teachers.
25. Erring teachers are not included in school activities that yield money to participants.
27. Teachers are derived compensations that are due to them.
28. Teachers are denied up-to-date information about their jobs.

INTEREST
ITEMS
5. The authority often uses constructive criticism in correcting defualting teachers.
8. Teachers’ social status are often compromised
18. Teachers enjoy adequate welfare scheme
29. There is a special package for teachers whose students excel in examinations.

CONCLUSION
The following conclusions are drawn from this study
a. Twenty-two item Teacher Motivation Assessment Scale was developed from the initial draft of 30 items. Five factors were found to explain teacher motivation and the represent the following constructs; interest, attitude, reward, punishment and commitment.
b. The inter-item consistency analysis of the instrument using the Cronbach procedure, reveals that the TMAS has high internal consistency of 0.7 as such reliable.

c. The instrument is stable with respect to school location and job experience. The responses on the instruments did not deviate much from the initial findings about the variable and the constructs on which the items were loaded.

Educational Implications of the Study

This study has interesting implication not only for teaching and learning but also for quality assurance in universities. The study has developed a valid and reliable instrument, which measures teachers motivation. The implication is that the problem of how best to measure teacher level of motivation can be addressed. This will go a long way in resolving the quality assurance questions in our universities. Most universities find it difficult to assess the motivational status of their teachers because they have no suitable measuring instrument. With this instrument available, the motivational status of teachers could be assessed from time to time in Anambra State and Nigeria in general for quality assurance in the educational programmes.

University administrators can now determine when there is need to motivate their subordinate so as to enhance productivity. This newly developed instrument going by their psychometric attributes and conference with established theories and research findings has been shown to exhibit relative stability across location and job experience. This implies that from now onward teacher motivation can be most effectively assessed without expectations of bias and the quality of our university products will be high.

Recommendations

Based on the findings of this study, the researcher made the following recommendations

a. The Teacher Motivation Assessment Scale should be used by universities administrators in assessing the teacher motivation level.

b. Since the instrument does not discriminate across school location and job experience, it is recommended that the instrument be used for all categories of teachers, especially in for quality assurance.

REFERENCES


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**TABLE 2 Cronbach Alpha Test on 22 items of TMAS, for its internal consistency**

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Reliability coefficients for 22 items:

Alpha = 0.7385 Standardized item alpha = 0.6036

**TABLE 3 Mean of the Responses of Teachers in Urban and Rural on the 22 Items of the TAMS**

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TABLE 4 Mean of the Responses of Teachers Experienced and Less Experienced on the 22 items of the TAMS

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Grand Mean for Experienced = 2.31; Grand Mean for Less Experienced = 2.26.
RESOURCES FOR EARLY CHILDHOOD EDUCATION (E.C.E)

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Abstract
The central theme of this paper is resources for early childhood education. The paper highlights issues such as purpose and benefits of E.C.E. It also discusses human, material and financial resources and gives detailed instructional resources for effective teaching at this level of education. The benefits of E.C.E. are that there is a positive relationship between E.C.E. life performances of the recipient of this level of education. Good E.C.E. inculcates the spirit of enquiry and creativity through exploration of nature and the local environment. It teaches them cooperation, team spirit and good habit. It also prepares them for primary education. The study also examined the importance of play, things to look for in preschool curriculum which are human resources, materials and finance. Quality support system should include educational training for programme personnel as well as ongoing technical assistance programme providers and individual care providers. Personnel who are well prepare through education, training and support are essential to achieving high quality

1. Introduction
Education begins from the moment a child is born and continues for the rest of his life. The learning capabilities of children continue for the rest of their lives but not at the intensity that is demonstrated in the preschool years. Early childhood education refers to the formal teaching/learning of young children by people outside the family (except when family member(s) is/are professional teacher(s)) and in settings outside the home. It includes crèche nursery and kindergarten (Federal Ministry of Education, 2004).

Early childhood is referred usually to the age of normal schooling years in most nations. Babies and toddlers need positive early learning experiences to help their intellectual, social and emotional development and this lays the foundation for later school successes.

A child is endowed with some powers that enable him to construct and develop his personality. A child learns a language without conscious effort. He picks a language just by hearing it. Behavioural theories of child development focus on how environmental interaction influences behavior and are based on the works of theorists such as John B. Watson and Ivan Pavlon among others. These theories deal only with observable behaviors. Development is considered a reaction to rewards, punishment, stimuli and reinforcement. The areas of development according to Piaget (n.d.) are

- Physical Development
- Cognitive Development
- Language Development and
- Emotional Development

Bowbly (n.d.) believes that early relationships with caregivers play a major role in child development and continues to influence social relationships throughout life.
Early childhood education focuses on child learning through play. It has been thought that the child learns more efficiently and gains more knowledge through play-based activities such as dramatic play, art and social games. Early childhood education is crucial to child development and should be entered into cautiously with the one that will benefit the child. Children must receive attention and affection to develop in a healthy manner. Many believe that education at preschool ages can significantly affect a person’s ability to deal successfully with later life.

Theory of Development Interaction
Ogbonnaya (2010) noted that early childhood education can be traced to the efforts of prominent educationists like Rousseau (1712-1788) and Pestalozzi (1948-1927). He also added that one of the modern educationist Maduewesi (1977) holds the view that there is positive relationship between good early childhood education and future life performance of the recipient of this level of education. According to Piaget in Montessori (2009), there are four major stages of cognitive development:

- Sensor Motor: This stage occurs between birth and two year of age.
- Preoperational: The second stage occurs between the ages of 2-7 years
- Concrete Operations: This development stage occurs between the ages of 7 and 12
- Formal Operation: This stage of cognitive development takes place from ages 12 and beyond.

2. The Purpose
Early childhood education is the education received by the child prior to primary education. An important thing to remember when it comes to children and nature is to provide them with positive experiences of the natural world around them. It allows the children to explore and discover for themselves the magnificence of nature by making sure they have adequate opportunities to play outdoors with the guidance of the teachers and caregivers. With innate power of curiosity and imagination they will find ways to connect with nature on their own by exploring worms, dirt, leaves, sticks and rock. The mission of ECE is to provide leadership and support to schools, organizations, educators, families and communities in implementing programmes that assist all children from birth through age 8 to become successful lifelong learners.

3. Benefits of Early Childhood Education

- It is an undeniable fact that this aspect of education is the bedrock upon which all levels of education are anchored. The level of access a child has of early childhood education will definitely determine the ease with which the child can advance through other levels of education (World Bank 2000, Project Ministry of Health, 2004).
- In addition, Highscope Perry preschool study (2005, p.2) stated that it inculcates in the child the spirit of enquiry and creativity through the exploration of nature and the local environment.
- It teaches cooperation and team spirit
- It teaches good habits.
- It prepares them for primary level education
- It provides adequate care and supervision of the children while their parents are at work.
A study conducted in Ypsilanti Michigan, (1962-1967) found that adults who had preschool programme had higher earnings, were more likely to hold a job, had committed fewer crimes, and were more likely to have graduated from university than adults who did not have it. (2005,p 3)

4. Things to look for in a Preschool Curriculum

Curriculum
Effective education requires both relevant curriculum and practitioners who understand and are able to implement the curriculum. Children develop rapidly during the early years physically, intellectually, emotionally and socially. They are entitled to provisions which support and extend knowledge, understanding, skills, and confidence, and help them to overcome any disadvantage. Scientifically based, comprehensive curriculum to help you plan and implement a developmentally appropriate programme that promotes children’s socio - emotional development and learning in the core area of literacy, mathematics, science and social studies should be used.

- Teachers need to arrange environments that are symbol rich and interesting without being overwhelming to infants and toddlers.
- Well prepared teachers
- Small teacher – child ratios
- Stimulating and developmentally appropriate curricula and setting

Structure
- To be effective, an early curriculum needs to be carefully structured. In that structure there should be provision for the different starting points from which children develop their learning, build on what they already do, relevant and appropriate content matches the different levels of young children’s needs, and planned purposeful activities which provide opportunities for teaching and learning both indoors and outdoors.
- Ensure that children have access to various activities throughout the day. Look for assorted building blocks and other construction materials, props for pretend play, picture books, paints and other arts materials, and table toys such as matching games, peg boards and puzzles. All the children should not necessarily be doing the same activities at the same time.
- Teachers work with individual children, small groups, and the whole group at different times, during the day. They do not spend all their time with the whole group.
- Classroom is decorated with children’s original art work, their own writings with invented spelling, and stories dedicated by children to teachers.
- Children learn numbers and alphabets in the context of their everyday experiences. The nature world of plant and animals and meaningful activities (like cooking, taking attendance or serving snacks) provide the basis for learning activities.
- Children work on project and have long periods of time (at least one hour) to play and explore. Work sheets are used little, if at all.
- Children have an opportunity to play outside every day. Outdoor play is never sacrificed for more instructional time.
• Teachers read books to children individually or in small groups throughout the day, not just at group story time.
• Curriculum is adopted for those who are ahead as well as for those who need additional help. Teachers recognize that children’s different backgrounds and experiences mean that they do not learn the same things at the same time, in the same way.
• Children and their parents look forward to school; parents feel secured about sending their children to the programme. Children are happy to attend; they do not cry regularly or complain of feeling sick.

5. Quality Standard
Quality support system includes education and training for programme personnel as well as ongoing technical assistance to programme providers and individual care providers. Research supports the widely held views that personnel who are well prepared through education, training and support are essential to achieving high quality. Most of these teachers do not have bachelor’s degree. Another important component of quality support system is technical assistance – on site consultation and training that help staff at schools, as well as individual providers, to explore different approaches to working with children and address areas in which quality improvements are needed. This type of assistance provides opportunity for hands-on learning and problem solving in areas such as classroom design, effective use of teaching materials, and working with children with unique needs. Technical assistance also serves to reduce the isolation experienced by smaller programmes and individual providers and to assist personnel in continuously upgrading their knowledge and skills.
Programmes are rarely evaluated rather schools are more interested in programme expansion.

Resources for early childhood education
The purpose of early childhood learning resources is to develop a set of high quality, innovative early childhood resource materials which nurture and support the development of early literacy and numeracy in children from birth to five years. These resources should be based on sound contemporary international research. These informative and practical materials should suit a range of early childhood settings and should provide examples of how parents, caregivers and practitioners can create stimulating environment for their children, thereby making use of the most critical period of rapid development in learning.

Resources are the supplies that need to be available to improve their productivity. Availability of resources (human, materials and finance) is critical to the successful implementation of any educational programme. This is because resources are needed to provide a conducive teaching and learning environment, purchase relevant instructional and learning materials and pay staff. The quantity and quality of resources available for any educational programme would therefore determine the school's capacity to implement the type of educational programme.

Resources are the materials, staff and finance available to realize the goal of early childhood education. For any educational programme to achieve its goals, it must be supported with adequate resources. Adediji in Ukala (2012) defined educational resources as the sum of everything that goes into the educational system. This includes human, infrastructure and finance. Early childhood education is capital intensive. It is requires to be adequately equipped with vital input in order to achieve its goal. Physical facilities are land
mark for school existence. As a matter of fact, preschool environments, classrooms, provisions of infrastructural materials are essential for meaningful interaction. The educational environment must be conducive enough to facilitate children interaction with their environment that enables them construct experience.


6. Human Resources
Qualified staff
All children are special so it stands to reason that the people who are responsible for educating them in their early years need to be pretty special themselves. Not only must they have the ability to connect with children and understand the world from their point of view, they must also be able to give the children the attention they need to develop skills and worthwhile learning experiences. Caregivers and teacher should have knowledge of cultural supports for the language and literacy learning of the children and families they are serving. They need to have sufficient skills in guiding children, give full attention to individual young children's language and literacy efforts. They need to be able to draw out shy children while they help very talkative children begin to listen to others as well as to speak. They should be aware that children are not empty vessels. Their goal is to bring out the hidden potentials in them. They are to bring the children to the highest possible intellectual, social, moral and cultural levels.

Qualified, well trained and dedicated teachers, care givers and administrative staffs are the most important and fundamental resources for effective early childhood education. They must be motivated and adequately remunerated to achieve their goals.

7. Material Resources
Infrastructure is the most basic level of organizational structure in a complex system that serves as a foundation of the rest.

Infrastructure
Infrastructure needed to support high quality early education services has three fundamental roles such as:
1. Establish and enforce programme and child outcome standards
2. Create and sustain a system to support elements of quality
3. Ensure quality through mechanisms for accountability and continuous quality improvement. Gallagher and Clifford (2000) noted that states and communities lack adequate structures to ensure that these activities are carried out effectively. The issue of quality in early childhood education is critical with the proliferation of private schools. There is great deal of evidence to show that only those programmes that meet high standards produce significant and lasting benefits to the children they serve. They also observed that one of the most striking characteristics of the current programmes for young children outside the home is the absence of a comprehensive infrastructure. Demand for child care is rising because of a variety of factors, including economic conditions that have made it
necessary for mothers to work, woman attaining higher education with improve income, the
number of children particularly in child care has shadily grown. With the increasing
important role that child care plays in our society, demand is also rising for evidence that
these programes provide high quality educational experiences.
There should be established minimum criteria for safety and quality in early childhood
education through its approval standards. While the adoption of voluntary standards has
been instrumental in raising the quality of programme, there are still significant gaps between
standards for the best practice and the quality of services provided by most schools. Funding
these is often viewed less essential than funding that directly supports slots
Adequate indoor play space and workspace for teacher and children are essential. Standard
classroom, Cross ventilated, well lit with inbuilt storage cupboards, with access windows.
Walls painted in two or three bright colours, staff offices with furniture. Environment
should be lovely, structured and orderly. There should be a beautiful atmosphere

**Instructional aids**

**Importance of Play**
Child development experts agree that play is very important in learning and emotional
development of all children. It provides children with hand-on experiences with water,
sand, plastering, mud, shells, and twigs. Play is multifaceted. However, it should be fun for
the child, often many skills can be learned through play. Play helps children learn
relationship and social skills, and develop values and ethics. Play should always be
considered as an essential part of a child’s early education.

Functional play helps children to develop motor and practice skills. This kind of play
is normally done with toys or objects that are stackable, can be filled with water or sand or
playing outdoors. Water play and sand play are favourite among preschool children and a
valuable teaching tool. This type of play can make up about 50% of the type of play toddlers
to three years old children practice.

Constructive play is characterized by building or creating something. Toys that
encourage this type of play are simple puzzles, building blocks, easy craft activities and
puppets. Normally four to five years old children enjoy this type of play, but it continues to
be enjoyable into the first and second grades of school. Hands and fingers are the best first
art tools. Soon they will manage with paint brushes, wedges of sponge, wax, crayons, and
hunky chalks. It is advised to avoid rushing a child into making something in particular.
Letting them do what they want encourages individuality and decision making. Toddlers also
enjoy dough because they can get hands and fingers in to it for poking, rolling and shaping.
This type of play develops thinking and reasoning skills, problem solving and creativity.

Pretend play allows children to express themselves and events in their lives. It helps them
process emotion and events in their lives. Allow them to pair materials stick and twigs, rock
and pebbles, shells and leaves can be sorted, counted, used to build amazing structure,
explore with magnifying glasses and use in art projects. Observe nature and ask them what
they see.

**Active Play**
Children develop large muscle coordination through active play; some equipment stimulates
gross motor activities that encourage the development of rhythm, hand-eye coordination and
balance. A variety of active play toys like bean bags for tossing, parachutes for lifting, mats
for tumbling and soft foam balls for passing games. (number mats, safety trampoline bike pan, learn to craw tunnel folding bike.

After school and summer learning
Curriculum based learning should not stop when the child is on vacation. Provide grade – appropriate learning materials in an after school and summer learning environment. It is an important element in helping pupils remember what they have learnt during the school day. Children need ongoing opportunities to learn and practice essential skills

i. Language Arts test prep in a flash Test Prep- Cards provides comprehensive practice for grade – level language art skills
ii. Shuffling into maths – Fun family
Maths games book games that help children learn basic counting numeration skills, addition etc.
iii. Electronic Learning Games becomes a word master with an electronic touch
iv. Monopoly Game: Trading game

Arts and Craft
These activities allow young children to develop creative expression, practice fine motor skills, experiment with shapes, line and colours.
2 station Art Easel
Colour washable Tempera Paint
Creative design brushes
Chubby Brushes
Paint and clay texture kit
Colour Diffusing Paper
Crayon

Assessment and Evaluation
Evaluation result helps professional and parents to plan learning experiences, evaluate programme goals and improve young children’s social and emotional development. Early learning accomplishment profile kit measures development in six domains.

Block Play
Block play offers a rich opportunity for early mathematics and science learning and the development of social, emotional language motor and cognitive skills.

Totter Tower
Building activity that helps children develop a sense of geometry, and hand-eye coordination e.g. Primary Toddler Blocks. Dado Planks

Carpets and rugs
Children need softness in their physical surrounding to relax and feel comfortable. Carpets and rugs in bright colours create cozy classroom areas.

Phonics speaking carpet teaches the alphabet.

**Children’s Books**
Help children develop a close and enjoyable relationship with books: factual book, fantasy, books about people of different races, cultures ages and abilities. Build your classroom library.

**Classroom Essentials**
Create a bright, colourful print-rich environment for young learners
- Bulletin board displays
- Decorative prints: art work, favourite characters
- Scalloped edge bordettes for the edges of the board
- Fanciful recycle bag
- Classroom clock.

**Clearance**
Nursery Rhymes Bulletin Board set
**Differentiated Instruction**
Differentiated instructional materials help them different ideas or words. E.g. sound chart, Colour chart.

**Furniture**
Table, Chairs, Storage Units
Nature storage shelve
Rest mats
Standard cot

**Language and Literacy**
Teachers read books to children individually or in small groups throughout the day, not just at group story time.
A-Z Pegboards set. Large letter shaped pegboards is a fun way to learn letter recognition and improve – eye coordination.
**Mathematics**
To explore quantity, size and shape, Abacus encourages fine motor play e.g. count and sort game.

**Play Ground**
Wilkins (2002) identifies play ground, games and toys and other instructional materials as essential for successfully handling of children. Outdoor play maintains health and fitness and enhances learning and creativity. Children have an opportunity to play outside every day. Outdoor play is never sacrificed for more instructional time.

**Puzzles and Games** Encourage critical thinking, problem solving foster language development and refine the basis for learning activities. Children work on project and have long periods of time (at least one hour) to play and explore. Work sheets are used little, if at all.

**Bilingual Books**
Curriculum is adopted for those who are ahead as well as for those who need additional help. Teachers recognize that children’s different backgrounds and experiences mean that they do not learn the same things at the same time, in the same way.

Music and Video

Tool peg puzzle Map jigsaw puzzle Bilingual number floor puzzle

**Resource Books**
Create a good professional library with a balanced collection of books on variety of early childhood subject by subject.
Curriculum and activity books
Books on child development theory and practice

**Sand and Water**
Children learn about measurement and natural science as they experiment with sand and water. Toys that encourage children to dig, scoop, fill and pour enhance learning.
Transparent sand and water table
Dump truck
Sand exploration toddler set
Science Health
Young children become aware of the wonders around them, develop interest in and concern for our environment. E.g. sorting shells, magnet.

Social Emotional
Character education curriculum should be designed.
Songs children tend to develop emotional attachment to what is familiar and comfortable to them. If they are to develop a sense of connectedness with the natural world, they need frequent positive experiences with the outdoors.

Social studies
Inflatable labeling globe

Technology
Kid safe computer Digital camera Computer mouse Keyboard

Supplies
Water: good source of water, treated borehole and water dispenser. Constant supply of water must be ensured.
Toilet: classroom toilets with wash hand basins of appropriate height. Separate for boys and girls. Sickbay and first aid box should be equipped. There should be a well trained nurse.

**Conclusion**

. The mission of ECE is to provide leadership and support to schools, organizations, educators, families and communities in implementing programmes that assist all children from birth through age 8 to become successful lifelong learners. It is an undeniable fact that this aspect of education is the bedrock upon which all levels of education are anchored. The level of access a child has of early childhood education will definitely determine the ease with which the child can advance through other levels of education. Quality support system includes education and training for programme personnel as well as ongoing technical assistance to programme providers and individual care providers are imperative to ensure quality delivery. Personnel who are well prepared through education, training and support are essential to achieving high quality

**References**


Children interest and concerns: a study of Anadra elemety schl pupils


Montessori classroom activities for early years -training workbook (2009). Lagos: Chelis book concept


SECONDARY SCHOOL STUDENTS’ ASSESSMENT OF INNOVATIVE TEACHING STRATEGIES IN ENHANCING ACHIEVEMENT IN PHYSICS AND MATHEMATICS

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Abstract
The study employed a descriptive survey to investigate senior secondary school students’ assessment of innovative teaching strategies in enhancing achievement in physics and mathematics. By the use of purposive sampling 190 out of a population of 394 senior secondary school year one physics and mathematics students from two co-educational senior secondary schools in Umuahia North LGA of Umuahia Education Zone of Abia State was used. The instrument for data collection was the researchers developed structured questionnaire of the Likert type on senior secondary school students’ assessment of innovative teaching strategies in enhancing achievement in physics and mathematics. Two (2) research questions and one (1) hypothesis tested at 0.05 level of significance guided the study. The instrument was validated and the reliability index of 0.86 was obtained. The research questions were answered using mean while the hypothesis was tested with chi-square statistics. Results showed that inquiry method, discovery learning, discussion, role play, simulation, games, team teaching, brainstorming and other similar strategies were agreed to be innovative teaching strategies that can enhance achievement in physics and mathematics. A recommendation that physics and mathematics teachers should be encouraged to use these innovative teaching strategies in the teaching of physics and mathematics was made.

Key Words: Innovation, Teaching Strategies, Science, Mathematics and Physics

Introduction
Science is a dynamic human activity which is concerned with the working of the world. It is the bedrock on which modern day technological breakthrough is built. This is why developing countries like Nigeria are working hard to develop scientifically and technologically since the world is a scientific and technological global village where all proper functioning of lives largely depends on science. Science according to Ting-Kueh (2006) plays major roles in creating new knowledge, economic development and wealth creation. This assures social wellbeing by eradicating poverty and providing better health care which improves the quality of human living in several ways. Science finds its application in all facets of life such as agriculture, medicine, energy and power supply, biotechnology, space research and nuclear technology. This means that the understanding of science helps man to know more about the universe and things around us. Nigeria as a nation appreciates the importance of science in its quest to transform its economy successfully. This can be seen in the mission statement of the new National Policy on Science, Technology and Innovation.
(FRN, 2012), which seeks to evolve a nation that develops and utilizes science, technology and innovation to build a large, strong, diversified sustainable and competitive economy that will guarantee a high standard of living and quality of life for all its citizens. Without the application of science, it will be very difficult for man to live and adjust in a fast scientifically developing world.

Science comprises the basic discipline such as Physics, Chemistry, Mathematics and Biology. Physics which is one of the core sciences is crucial to understand the world around us, the world inside and the world beyond us. It is the most basic and fundamental science. Physics challenges our imagination with concepts like relativity and strong theory which leads to great discoveries and technologies that change our lives. Its importance cannot but over emphasized hence the need for all citizens to study the subject with utmost understanding.

Mathematics which is a science that draws necessary conclusions also provides special skills required by an individual to solve his day to day problems, communicate effectively, reasons appropriately and makes necessary connections (Harbour – Peter 2000; Obodo, 2000; Kolanole and Oluwata 2005; Borasi, 2008). The British National curriculum (2004) asserted that mathematics equips pupils with uniquely powerful tools to understand and change the world. The importance of mathematics can be seen in its applications to science and technology, medicine, the economy, the environment and in public decision making. The implication is that for effective functioning in the society, there is need for all the citizens to study and understand science and mathematics.

In spite of the importance and usefulness of physics and mathematics, secondary school students’ achievement in the subjects is very discouraging. Researchers have shown that secondary school students exhibit dwindling interest in the subjects (Esiobu, 2005). Studies have also revealed that the performance of mathematics in ordinary level physics and mathematics was generally and consistently poor in the years (Agwagah, 2005)

Poor academic achievement in physics and mathematics could be attributed to many factors among which are the teachers’ teaching strategies. This means that physics and mathematics concepts cannot be well understood if students are not taught with effective teaching strategies. Many researchers have blamed this poor achievement in physics and mathematics on the use of inappropriate teaching strategies which might lead to lack of interest and retention of physics and mathematical concepts (Agommuoh, 2004; Agwagah, 2005; Harbor –Peters, 2000; Ifeanacho, 2012; Iji and Harbour –Peters, 2005; Kurumeh, 2004; and Ogbonna 2007).

Current studies on how students learn science and mathematics revealed new and innovative instructional approaches in the teaching of science and mathematics (Agommuoh, 2010; Ifeanacho, 2012; and Ogbonna, 2007). Science and especially physics and mathematics teaching have undergone a paradigm shift from a passive process to an active construction and interpretation of experiences. Screeden and Sudler (2011) explained that learning is a treasure within, and scientific knowledge is being actively built up and constructed by the learners. This is the constructivist view of learning science and mathematics. The constructivists see learning as an interaction between the learner and his environment. During this interaction between the learner and his environment his prior knowledge becomes the basis for him to interpret and construct new knowledge. The implication is that learning is a process in which the learners invent and develops new ideas. This means that learning physics and mathematics is a process of conceptual change and knowledge navigation. Learning in this case involves the restructuring of student conceptions. Teachers must learn to appreciate the ideas students bring into the learning
situation, understand the processes by which the conceptual change occurs in order to design the learning programmes. Learning is learner centered which makes the learner an active participant in the learning environment. New learning in this case depends on the learners’ previous knowledge that may at times interfere with the understanding of the new information.

The teaching and learning of physics and mathematics must aim at achieving the aims and approaches of physics and mathematics education which are as follows;

- Development of process skills like observation, classification, communication, measurement, estimation and prediction.
- Acquisition and understanding of knowledge development of the skills for problem solving and investigations.
- Ability to think logically as well as to draw conclusion on the basis of experiment.
- Development of the ability to reach generalization and to apply them for solving life problems.
- Development of understanding of inter-relationship of science and mathematics.
- Fostering creativity for innovations in science and mathematics.

The minds of the young need to be exposed to critical thinking, analysis and problem solving strategies in a fast-changing world like ours. The teaching and learning of science especially mathematics and physics requires a unified and comprehensive approach relying on teachers that are professionally trained and equipped with requisite knowledge and skills. The adoption of student-centered instructional strategies which includes the inquiry method, discussion, role play, simulation, games and other similar strategies have been shown to enhance the active participation of students in the teaching and learning of physics and mathematics. According to Screeden and Sudler (2011) some other approaches for effective physics and mathematics teaching includes;

1. Orientation – Here the teacher introduce the topic.
2. Elicitation of ideas which involves opportunities provided for the students to explore and explain their ideas.
3. Classification and Exchange where students are given a chance to realize scientific and mathematical ideas in examining their own ideas.
4. Exposures to conflict situation which involves students being provided with situation which will enable them test their ideas and recognize the limitation of these ideas.
5. Constructions of new ideas- students are provided with opportunities to restructure (extend, modify or replay their ideas.
6. Evaluation involves students being provided with opportunities to test the validity of their newly construct ideas.
7. Applications of ideas – students are provided opportunities to apply their idea in new situations to reinforce the ideas.
8. Review change in ideas which involves students being given opportunity to refer upon how and why their ideas have changed.

Effective teaching according to Obi (2003) is a process related to the teachers’ consciousness of the individuality of each child, including his needs, strengths, weaknesses, growth patterns and background of experiences. This means that an effective teacher has to create an atmosphere for a wholesome teaching and learning. Stressing further on this
Anyachebelu (2005) explained that effective teaching as a situation whereby the teacher is vast in attainment, knowledge and skills as well as possession of certain pre-requisites and acceptable practices within the codes of ethics of teaching profession. Obi (2003) identified five components of effective teaching to include:

1. Knowledge of subject matter
2. Ability to help students with their works
3. Presenting subject matter appropriately
4. Motivating students to excel and
5. Firmness/fairness in preparing marking guides and grades of examination.

For effective and successful physics and mathematics teaching, teachers must understand how students think and construct scientific and mathematical knowledge. The implication is that physics and mathematics teachers need to teach these subjects effectively for a successful preparation of today’s individuals for tomorrow (Zakaria & Iksan, 2007). The teacher must know how students learn these subjects and how best to teach them. Physics and mathematics teaching is not for knowledge depositing and information thrusting but should inculcate scientific temper and values. For effective teaching, the learner is provided with opportunities to have an optimal learning experience through constructing his own knowledge. The teacher must provide a democratic climate in the classroom for effective teaching and learning of physics and mathematics. This democratic climate creates a conducive environment for the students to enable them freely state their point of view. This encourages active participation of the students in the classroom. The focus is for the teacher to use learner centered innovative pedagogical strategies in the teaching and learning of the subjects. Such innovative strategies include peer tutoring, simulation, team teaching, brainstorming, cognitive apprenticeship, discovery learning, inquiry and role play strategies. The secondary school physics and mathematics curriculum is designed to provide students with knowledge and skills that will enable them solve problems and make decision in everyday life (Ministry of Education Malaysia, 2002). Students need knowledge, problem-solving skills, creative and critical thinking for proper adjustment into a fast scientifically and technologically developing society like ours. Students must therefore be taught to meet up with the challenges ahead and demand by daily living. This is very imperative since lecture based instruction which is teacher centered has been identified as a major shortcoming in the teaching and learning of physics and mathematics (Madu, 2004). This is because according to Kurumah (2004), lecture method emphasizes passive acquisition of knowledge by students who do not have conceptual understanding but memorize the learning content. Bearing in mind the nature of physics and mathematics, there is therefore, the need for the teacher to use innovative teaching strategies in the teaching of the subjects so as to enable the students learn and acquire positive attitudes and values, process skills and problem-solving skills. Hence the need for the study.

The study therefore investigated senior secondary school students’ assessment of these innovative teaching strategies in enhancing achievement in physics and mathematics.

**Research Questions**

The following research questions guided the study.

1. What are the mean scores of senior secondary school students’ assessment of innovative teaching strategies in enhancing achievement in physics and mathematics?
2. What are the mean scores of male and female senior secondary school students’ assessment of innovative teaching strategies in enhancing achievement in physics and mathematics?

**Hypothesis**
The hypothesis below tested at P< 0.05 significant level guided the study
1. There is no significant difference in the scores of male and female senior secondary school students’ assessment of innovative teaching strategies in enhancing achievement in physics and mathematics.

**Method**
The study adopted a descriptive survey. By the use of purposive sampling one hundred and ninety (190), 98 males and 92 females out of a population of three hundred and ninety four (394) senior secondary school year one physics and mathematics students from two (2) co-educational senior secondary schools in Umuahia North LGA of Umuahia Education zone of Abia State was sampled. The instrument used for data collection was the researchers developed structured questionnaire of the Likert type on senior secondary school students’ assessment of innovative teaching strategies in enhancing achievement in physics and mathematics. The responses were Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) weighted 4, 3, 2,1 respectively. It is a ten-item questionnaire that is made up of innovative teaching strategies that can be used in the teaching of physics and mathematics. The instrument was face and content validated by three experts in the physics and mathematics education of the Department of Science Education of the Michael Okpara University of Agriculture, Umudike Umuahia Abia State, Nigeria. The reliability index was determined by cronback alpha and found to be 0.86. The questionnaires were distributed by the researcher and collected back and so the percentage return was 100%. Two (2) research questions and one (1) hypothesis tested at 0.05 level of significance guided the study. The research questions were answered using means, while the hypothesis was tested using chi-square statistics.

**Results**

**Table 1:** Mean scores of senior secondary school students’ assessment of innovative teaching strategies in enhancing achievement in physics and mathematics.

<table>
<thead>
<tr>
<th>S/N</th>
<th>ITEM</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>X</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Peer Tutoring</td>
<td>80</td>
<td>60</td>
<td>35</td>
<td>15</td>
<td>3.08</td>
<td>Agree</td>
</tr>
<tr>
<td>2.</td>
<td>Simulation</td>
<td>85</td>
<td>66</td>
<td>25</td>
<td>14</td>
<td>3.17</td>
<td>Agree</td>
</tr>
<tr>
<td>3.</td>
<td>Team Teaching</td>
<td>88</td>
<td>68</td>
<td>23</td>
<td>11</td>
<td>3.23</td>
<td>Agree</td>
</tr>
<tr>
<td>4.</td>
<td>Brainstorming</td>
<td>90</td>
<td>70</td>
<td>20</td>
<td>10</td>
<td>3.26</td>
<td>Agree</td>
</tr>
<tr>
<td>5.</td>
<td>Experiential Learning</td>
<td>85</td>
<td>65</td>
<td>25</td>
<td>15</td>
<td>3.16</td>
<td>Agree</td>
</tr>
<tr>
<td>6.</td>
<td>Cooperative Learning</td>
<td>84</td>
<td>64</td>
<td>30</td>
<td>12</td>
<td>3.16</td>
<td>Agree</td>
</tr>
<tr>
<td>7.</td>
<td>Cognitive apprenticeship</td>
<td>85</td>
<td>72</td>
<td>20</td>
<td>13</td>
<td>3.21</td>
<td>Agree</td>
</tr>
<tr>
<td>8.</td>
<td>Discovery Learning</td>
<td>86</td>
<td>67</td>
<td>23</td>
<td>14</td>
<td>3.18</td>
<td>Agree</td>
</tr>
<tr>
<td>9.</td>
<td>Inquiring Learning</td>
<td>88</td>
<td>70</td>
<td>21</td>
<td>11</td>
<td>3.24</td>
<td>Agree</td>
</tr>
<tr>
<td>10.</td>
<td>Role Play</td>
<td>68</td>
<td>90</td>
<td>20</td>
<td>12</td>
<td>3.13</td>
<td>Agree</td>
</tr>
</tbody>
</table>
Table 1 above clearly showed that all the items have mean values greater than 2.5 which is the mean value of the four point scale used in the study meaning that all the students agreed that these items are innovative teaching strategies that can enhance achievement in physics and mathematics.

**Table 2:** Mean scores of male and female senior secondary school students’ assessment of innovative teaching strategies in enhancing achievement in physics and mathematics.

<table>
<thead>
<tr>
<th>S/N</th>
<th>ITEM</th>
<th>MALE</th>
<th>REMARKS</th>
<th>FEMALE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (X)</td>
<td>Mean (X)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Peer Tutoring</td>
<td>3.30</td>
<td>Agree</td>
<td>2.85</td>
</tr>
<tr>
<td>2.</td>
<td>Simulation</td>
<td>3.21</td>
<td>Agree</td>
<td>3.12</td>
</tr>
<tr>
<td>3.</td>
<td>Team Teaching</td>
<td>3.35</td>
<td>Agree</td>
<td>3.10</td>
</tr>
<tr>
<td>4.</td>
<td>Brainstorming</td>
<td>3.30</td>
<td>Agree</td>
<td>3.28</td>
</tr>
<tr>
<td>5.</td>
<td>Experiential Learning</td>
<td>3.42</td>
<td>Agree</td>
<td>2.88</td>
</tr>
<tr>
<td>6.</td>
<td>Cooperative Learning</td>
<td>3.06</td>
<td>Agree</td>
<td>3.26</td>
</tr>
<tr>
<td>8.</td>
<td>Discovery Learning</td>
<td>3.42</td>
<td>Agree</td>
<td>2.94</td>
</tr>
<tr>
<td>9.</td>
<td>Inquiring Learning</td>
<td>3.26</td>
<td>Agree</td>
<td>3.22</td>
</tr>
<tr>
<td>10.</td>
<td>Role Play</td>
<td>3.36</td>
<td>Agree</td>
<td>2.88</td>
</tr>
</tbody>
</table>

Result in table 2 shows that all the items have mean values greater than 2.5 meaning that all the students both males and females agreed that the ten items listed above are innovative teaching strategies that can enhance achievement in physics and mathematics.

**Table 3:** $\chi^2$ values of male and female secondary school students’ assessment of innovative teaching strategies that can enhance achievement in physics and mathematics.

<table>
<thead>
<tr>
<th></th>
<th>MALE</th>
<th>FEMALE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>98</td>
<td>92</td>
<td></td>
</tr>
<tr>
<td>SA</td>
<td>451</td>
<td>388</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(432.7)</td>
<td>(406.3)</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>393</td>
<td>299</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(356.9)</td>
<td>(355.1)</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>99</td>
<td>143</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(124.8)</td>
<td>(117.2)</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>37</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(65.5)</td>
<td>(61.5)</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>980</td>
<td>920</td>
<td>1900</td>
</tr>
</tbody>
</table>

$\chi^2_{\text{cal}} = 50.6$, $\chi^2_{\text{crit/tab}} = 7.815$, df = 3.

Table 3 above clearly showed that $\chi^2$ calculated value of 50.6 is greater than the $\chi^2$ critical/ table value of 7.815. The null hypothesis of no significant difference was rejected and the alternate hypothesis accepted. This therefore means that there is a significant difference in the mean scores of male and female secondary school students’ assessment of innovative teaching strategies that will enhance achievement in physics and mathematics.

**Discussion:**

Tables 1 and 2 showed that all the items have mean values greater than 2.5 which means that all the students both males and females agreed that peer tutoring, simulation, team teaching, brainstorming, experiential learning, cooperative learning, cognitive apprenticeship, discovery learning, inquiring learning and role play are innovative teaching strategies that can enhance achievement in physics and mathematics.
strategies that will enhance their achievement in physics and mathematics. This result is in agreement with Akinbobola (2008) who opined that new approach of communicating science and mathematics is by involving students and making sure that they participate fully rather than listening to talks and taking notes. Science teaching has been shifted from the teacher centered approaches to student centered approaches of learning such as inquiring and problem – solving methods (Akinbobola, 2008).

This result also agrees with Akinbobola and Ado (2007) who explained that these innovative strategies which include brainstorming, peer tutoring and role play help the learner to acquire appropriate skills, abilities and competences as equipment for the individual to solve life problems and contribute to the development and growth of the society. According to Bransford, Brown and Cocking (2000) the major goal of teaching is to prepare students to be able to adopt knowledge to various problems and setting and using multiple context. This can only be achieved by using innovative teaching strategies that will involved students full participation in the teaching and learning environment. Effective teaching of physics and mathematics puts a great emphasis on students’ participation in the learning process which implies that students have to be active rather than simply passive recipients of information from the teacher, textbook or any other source of information involved in the learning contexts. Active participation and involvement of the students in the learning situation can only be through the use of a wide range of innovative teaching and learning strategies such as peer tutoring, simulation, team teaching, brainstorming, experiential learning, cooperative learning, cognitive apprenticeship, discovery learning, inquiring learning and role play.

Conclusion
The job of the teacher requires that he assists the learner to learn. The teacher can do this by effectively by making the teaching environment stimulating, challenging and dynamic. The aim of teaching is not only to transmit information but also to transform passive students into active receptors of knowledge and constructor of their own knowledge. The use of innovative teaching and learning strategies in educational institutions has the potential to improve achievement, empower students and galvanize the effort to achieve the human development goals for the country.

Recommendation
For the enhancement of achievement in physics and mathematics through effective teaching and learning, the following recommendations are made;
1. Innovative teaching strategies such as team teaching, brainstorming, peer tutoring etc should be reflected in physics and mathematics teacher education curriculum to enable new graduate teachers be fully equipped for teaching and learning of the subjects.
2. Conferences, workshops, and seminars should be organized for the practicing and serving science and mathematics teachers to update their knowledge/ skills in the application of these strategies which will enhance quality teaching and learning of the subjects.
3. Science and mathematics students should be encouraged to be actively involved in the learning environment by engaging in these innovative teaching and learning strategies.

References


ACADEMIC STAFF CHALLENGES TO EFFECTIVE UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN TEACHING/LEARNING OF AGRICULTURAL EDUCATION

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College of Agricultural & Science Education Michael Okpara University of Agriculture Umudike Umuahia, Abia State of Nigeria.

Abstract

ICT has offered great potential, especially as an aid to every aspect of human endeavor. Inspite of the roles played by ICT especially in teaching/learning, there are still some impediments to its effective utilization by the academic staff. This work examined the academic staff challenges to effective utilization of ICT in teaching and learning of Agricultural Education in Federal Universities in South East geopolitical zones of Nigeria. Forty respondents were purposively sampling from universities and used for the study. Three research questions guided the study. A 35-item researchers’ developed questionnaire was used for data collection. Instrument validation covered face and content validity by two experts in educational management and agricultural education. While reliability index values of 0.86, 0.85 and 0.92 were obtained using Cronbach alpha. Means and grand means were used to analyze the research questions. The findings revealed a low extent utilization and inadequate ICT tool literacy among the academic staff in the federal universities in south east geo-political zone of Nigeria. It is therefore recommended that the academic staff avail themselves the opportunity of various conferences and workshops to acquire the needed skills for effective utilization of ICT tools.

Keywords: ICT utilization, Academic staff, teaching, learning, and Agricultural education.

Introduction

Agriculture has long been accepted as means of ensuring food security as well as empowering citizens of a nation economically. Early 60s in Nigeria experienced economic boom through agricultural produce which had been the major sources of Nigerian economy until this recent era of oil boom. The fact that Nigeria is presently monoeconomic nation has continued to be a source of worry, as it appears to be over-stretched for the maintenance of every sector of the nation. This gave rise to the need of repositioning agriculture for food security and national economic sustainable development, one of the strategies for the repositioning which led to the introduction of agricultural education as a programme of study in Nigerian tertiary institutions. Inability of teachers to utilize ICT to enhance effective teaching and learning has been the major problem of attaining the goals of agricultural education in Nigeria. It is in recognition of this that the urgent need to integrate ICT into university education arises. Inspite of the roles played by ICT in teaching/learning, there are still some impediments to its effective utilization by the academic staff.
Academic Staff and ICT Utilization

Hornby (2000) defined utilization as the process of practical and effective usage of something. ICT learning and utilization is one of the concern of educational issues around the world and for a number of years, there has been evidence in the training and development area as noted by Edwards et al, (2006). This development can only be achieved if the use of computer (ICT) is effectively utilized. According to (Wikipedia, 2011) is used to describe how resources are deployed and allocated which is comprised of a planned effort for the future and the actual effort in the past. ICT utilization therefore allows learners to displace the teacher at the center of learning experience and take responsibility for their learning to be learner-centered. This places a vital role on the teacher as the utilization depends on the teachers.

These teachers are referred to as academic staff at the tertiary level. These academic staff therefore has been described by Modebelu and Onyali, (2011) as group of individuals that are employed in the universities and other tertiary institution to train and groom students through higher level manpower training needs. They are generally categorized into male and female. They are professional whose duties are to teach, instruct, train, educate and facilitate students’ knowledge, learning and performance. As experts and professionals, these staff is expected to be versatile, creative, resourceful and innovative. But Inspite of the characteristics of these staff, it has been noted that the academic staff has not been able to produce or turn out quality graduates as much as expected of them due to their inability to utilize new technologies in teaching and up-dating of lesson resources. Modebelu et al (2013) rightly pointed out therefore that the academic staff is expected to utilize their expertise online training to ensure the achievement of quality in their products that will in turn help to achieve the set goals of Agricultural education as enshrined in the national policy on education, (2004). No doubt, effective utilization of the ICT tools in the tertiary institutions by the academic staff especially in teaching and learning of Agricultural education will help to produce efficient and effective graduates, to solve the problem of hunger.

Challenges to Effective Utilization of ICT Tools

Empirical studies have indicated that even teachers who have competence in the use of ICT do not integrate them in their teaching. Problems of quality and lack of resources are compounded by the new realities faced by higher education institutions battle to cope with every increasing student’s numbers. Not only have higher education systems expanded worldwide, the nature of the institution within these systems has also been shifting, through a process of differentiation (World Bank, 2000 as cited by Ololube, Ubogu & Ossai, 2007). According to Pelgrum (2001), obstacles for ICT implementation include the following: Insufficient number of computers, teachers’ lack of ICT knowledge/skills, difficult to integrate ICT to instruction, scheduling computer time, insufficient peripherals, not enough copies of software, insufficient teacher time, not enough simultaneous access, not enough supervision staff and lack of technical assistance. Similarly, Azuh (2013) noted the barriers also to include limited equipment, inadequate skills, minimal support, time constraints and the teacher’s own lack of interest or knowledge about computer. Kwacha (2007) also noted that the most common problems associated with the effective implementation of ICT are lack of qualified ICT personnel, cost of equipment, management attitudes, inconsistent electric power supply, inadequate telephone lines, particularly in rural areas and non-inclusion of ICT programmes in teacher’s training curricula and at the basic levels of education.
Also, these problems stated can affect or hinder the effective use of ICT by undergraduates if they are not properly implemented. For undergraduates in Nigerian universities to be abreast with the present information age, these facilities need to be put in place to enhance the teaching-learning process.

**Prospects Of ICT Use In Universities**

Despite the fact that Nigeria and in fact most African countries came late into the ICT world, the adoption of the Nigerian policy for information technology in 2001 is the right step in ICT application in every sector of the nation’s life and in particular in education. The policy is designed to ensure that Nigeria as a nation recognizes the strategic importance of ICT for national development. Successful application in every sector can only be assured through adequate coverage of needed areas. Identified gaps can be filled through the environment of important stakeholders/actors such as the teacher and managers of education.

Specifically, Kwacha (2007) indicated the following are some required urgent steps towards the adoption and use of ICTs in education.

- The adoption of ICT international standards and its inclusion in the Nigeria curriculum and in particular in the teacher’s education curriculum. Continuous and provide training of teachers on computers and ICT skill acquisition.
- Development and training of ICT experts, specifically for instruction design and development, who will work in partnership with educators and teachers.
- Funding: Government at all levels should make ICT a matter of priority; improve the funds specifically needed for the training of teachers/students in computer education who will be equipped with ICT knowledge and skills.
- There is need for the Nigerian government to address seriously the issues of the erratic electricity power supply while on the other hand schools wishing to adopt the integration of ICT in their teaching – learning process should as a matter of urgency procure a generating set, that can supplement Power Holding Company (PHCN) for supply of power.

**Research Questions**

The following research questions guided the study.

1. To what extent does the academic staff utilize the available ICT tools for effective teaching and learning of Agricultural Education?
2. What are the academic staff challenges to effective utilization of the ICT tools to enhance effective teaching and learning of Agricultural Education?
3. In what ways can the challenges to effective ICT tools utilization be redressed for effective teaching and learning of Agricultural Education?

**Methodology**

The study adopted a descriptive survey design meant to assess opinion responses on the present situations. Two federal universities out of five federal universities in the south east geo-political zone were purposively sampled because they offer agricultural education. A total of 40 academic staff consisting of (17 male and 23 female), were selected from the two federal universities. Three research questions guided the study. Researchers’ self designed questionnaire titled Academic Staff ICT Utilization for Effective Teaching and Learning Questionnaire (ASIUETLQ) was used
for data collection. The 35-item questionnaire was built on a 4-point scale. The instrument was validated by two experts in Educational Administration and Agricultural Education on face and content validity. A pilot test was conducted using 10 academic staff from 2 state universities in the same geopolitical zone in Nigeria. A Cronbach alpha reliability values of 0.86, 0.85, and 0.92 were obtain for the three clusters. All the 40 copies of the IUETLQ administered to 40 respondents were returned through the assistance of a trained Research Assistants and it was used for the analysis. Means and grand means were used to answer the research questions. Items scoring 2.50 and above were accepted as positive responses to the items while items scoring below 2.50 were regarded as negative responses. ANOVA statistical tool was used to test the hypothesis at 0.05 levels of significance.

Results

Table 1: Mean responses of academic staff on the extent of ICT tools utilization for effective teaching and learning.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Extent Of Utilization</th>
<th>Male response</th>
<th>Female Response</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Internet</td>
<td>3.35</td>
<td>3.13</td>
<td>HEU</td>
</tr>
<tr>
<td>2</td>
<td>Teleconferencing</td>
<td>1.41</td>
<td>1.61</td>
<td>LEU</td>
</tr>
<tr>
<td>3</td>
<td>Skype</td>
<td>1.71</td>
<td>1.87</td>
<td>LEU</td>
</tr>
<tr>
<td>4</td>
<td>Power point presentation</td>
<td>1.41</td>
<td>1.69</td>
<td>LEU</td>
</tr>
<tr>
<td>5</td>
<td>Computer</td>
<td>3.00</td>
<td>3.22</td>
<td>HEU</td>
</tr>
<tr>
<td>6</td>
<td>Video recorder</td>
<td>1.76</td>
<td>1.69</td>
<td>LEU</td>
</tr>
<tr>
<td>7</td>
<td>Interactive white board</td>
<td>2.47</td>
<td>2.69</td>
<td>LEU</td>
</tr>
<tr>
<td>8</td>
<td>Television set</td>
<td>1.94</td>
<td>2.00</td>
<td>LEU</td>
</tr>
<tr>
<td>9</td>
<td>Public address system</td>
<td>2.65</td>
<td>2.52</td>
<td>HEU</td>
</tr>
<tr>
<td>10</td>
<td>Overhead projector</td>
<td>2.59</td>
<td>2.65</td>
<td>HEU</td>
</tr>
<tr>
<td></td>
<td>Grand Mean</td>
<td>2.23</td>
<td>2.31</td>
<td></td>
</tr>
</tbody>
</table>

The result in table 1 above revealed that items 2, 3, 4, 6, 7 and 8 have their mean responses below 2.50 indicating low extent utilization of the ICT tools enumerated. While on the other hand, only items 1, 5, 9 and 10 have their mean responses above 2.50. The table also revealed grand means of 2.23 and 2.31 for male and female academic staff respectively. Both grand means score below
the 2.50 indicating academic staff general agreement that the items enumerated are utilized in their institutions to a low extent.

Table2:
Mean responses of academic staff on challenges to effective utilization of ICT tools for effective teaching and learning of agricultural education.

Result in table 2 reveals grand means of 2.69 and 2.67 of male and female academic staff respectively. Both grand means scored above 2.50 (weighted mean) indicating academic staff general agreements that 9 out of the 13 enumerated items are the impeding factors to effective utilization of ICT tools. Four Items (3,5,6, and 11) does not serve as an impediment since they scored below 2.50, therefore the 9 items (1,2,4,7,8,9,10,12 and 13) are the academic staff challenges to ICT tools utilization of for effective teaching and learning of agricultural education. Item analysis revealed that academic staff inadequate ICT tool literacy is the most serious factor
that challenged ICT utilization in the federal universities in south east geopolitical zone of Nigeria.

Table 3: **Mean ratings of the Academic Staff on the ways of redressing the challenges of ICT tools utilization for effective teaching and learning of Agricultural Education.**

<table>
<thead>
<tr>
<th>S/N</th>
<th>Ways of redressing the challenges include:</th>
<th>Academic staff response</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Allocating enough time for training in ICT.</td>
<td>3.45</td>
<td>Agree</td>
</tr>
<tr>
<td>2</td>
<td>Provision of adequate hardware.</td>
<td>3.52</td>
<td>Agree</td>
</tr>
<tr>
<td>3</td>
<td>Adequate organization of ICT resources.</td>
<td>3.30</td>
<td>Agree</td>
</tr>
<tr>
<td>4</td>
<td>Government should provide more funds for ICT.</td>
<td>3.37</td>
<td>Agree</td>
</tr>
<tr>
<td>5</td>
<td>Inclusion of ICT education into school curriculum.</td>
<td>3.52</td>
<td>Agree</td>
</tr>
<tr>
<td>6</td>
<td>Establishment of effective ICT system to cater for large audience</td>
<td>3.50</td>
<td>Agree</td>
</tr>
<tr>
<td>7</td>
<td>Creating of proper awareness on the role of ICT.</td>
<td>3.55</td>
<td>Agree</td>
</tr>
<tr>
<td>8</td>
<td>Training of staff on ICT utilization through in-service training.</td>
<td>3.57</td>
<td>Agree</td>
</tr>
<tr>
<td>9</td>
<td>Provision of adequate ICT Centre in schools for free training.</td>
<td>3.45</td>
<td>Agree</td>
</tr>
<tr>
<td>10</td>
<td>Encouraging online training</td>
<td>3.37</td>
<td>Agree</td>
</tr>
<tr>
<td>11</td>
<td>Administration should ensure that every staff owns a laptop and the accessories.</td>
<td>3.47</td>
<td>Agree</td>
</tr>
<tr>
<td>12</td>
<td>Regular training for the staff.</td>
<td>3.67</td>
<td>Agree</td>
</tr>
<tr>
<td></td>
<td><strong>Grand Mean</strong></td>
<td><strong>3.48</strong></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 reveals grand mean of 3.48 on the ways of redressing the challenges of the Academic Staff on ICT tools utilization for effective teaching and learning. Since the grand means scored above 2.50 and item by item analysis scored also above 2.50. This indicated that the academic staff generally agreed that all the 12 items serve as ways of redressing the challenges of the Academic Staff on ICT tools utilization for effective teaching and learning of Agricultural education in Nigeria federal Universities.

**Discussion**

The findings of this study were organized according to the research questions and they are presented below.

Table 1 addresses the extent of utilization of the ICT tools for quality teaching and learning. The findings has shown that ICT tools that are expected to promote quality teaching and learning.
of agricultural education in Universities are utilized only to a low extent by the academic staff in south east geopolitical zone of Nigeria. This confirms the report of Effiong (2005) and Jegede and Owolabi (2008) that ICT materials such as computers, radio set, Skype, printers, scanners, video recorder, teleconferencing and books on ICT are not available and are not adequately being utilized in Nigerian secondary schools for computer education. Again, the findings agree with that of Seiden (2000) and Uhaegbu (2001) for Nigeria which revealed a low level of usage of ICT equipment and facilities in secondary schools. However, as a comparison, the findings are in contrast with that of Becker (2000) that found US primary and secondary schools use computers in all subjects, particularly in the teaching of languages and mathematics.

The findings from research question two on the challenges to effective utilization of ICT in teaching and learning revealed the major challenges to include the following: Inadequate ICT tool literacy, Inadequate time for training in ICT, ICT tools are not compactable with the course contents, Inadequate technical support, Resistance to change / negative attitude, Age barriers, Epileptic power supply, Poor funding to procure ICT, Lack of adequate awareness, High cost of ICT tools., Lack of interest, Inadequate access to ICT tools, High cost of ICT tools, Lack of interest, Inadequate access to ICT tools. This is in accordance with the ideas of Pelgrum (2001), obstacles for ICT implementation include the following: Insufficient number of computers, teachers’ lack of ICT knowledge/skills, difficult to integrate ICT to instruction, scheduling computer time, insufficient teacher time, not enough simultaneous access, not enough supervision staff and lack of technical assistance. Similarly, it agree with the findings of Azuh (2013) that noted the barriers to include limited equipment, inadequate skills, minimal support, time constraints and the teacher’s own lack of interest or knowledge about computer. Kwacha (2007) also noted that the most common problems associated with the effective implementation of ICT are lack of qualified ICT personnel; cost of equipment, management attitudes, inconsistent electric power supply etc.

Result in table3 indicates that the respondents generally agreed that Allocating enough time for training in ICT, Provision of adequate hardware Adequate organization of ICT resources, Government should provide more funds for ICT, Inclusion of ICT education into school curriculum, Establishment of effective ICT system to cater for large audience, Creating of proper awareness on the role of ICT, Training of staff on ICT utilization through in-service training, Provision of adequate ICT Centre in schools for free training, Encouraging online training, Regular training for the staff. The findings agree with Sundarajan (2005), Evoh (2007), and Nwana (2008a, 2008b, 2009a, 2009b) that teachers should have adequate training for computer education. Also, that necessary facilities and ICT tools should be provided for effective curriculum implementation in secondary school.

Conclusion

The study x-rayed that the Utilization of ICT in teaching and learning of Agricultural Education by the Academic Staff has not been fully effective in Federal Universities in South East geopolitical zone of Nigeria due to Inadequate ICT tool literacy, inadequate ICT tools, Inadequate time for training in ICT, ICT tools are not compactable with the course contents, Inadequate technical support, Resistance to change / negative attitude among other challenges. The study also revealed twelve ways of redressing the challenges-Regular training for the staff, Allocating enough time for training in ICT, Provision of adequate hardware, Adequate organization of ICT resources, Government should provide more fund for ICT, Inclusion of ICT education into
school curriculum, Establishment of effective ICT system to cater for large audience, Creating of proper awareness on the role of ICT, Training of staff on ICT utilization through in-service training, Provision of adequate ICT Centre in schools for free training, Encouraging online training, Administration ensuring that every staff owns a laptop and the accessories. It is therefore recommended that the academic staff avail themselves the opportunity of various conferences and workshops to acquire the needed skills for effective utilization of ICT tools.

Recommendations

Based on the findings, the following recommendations were made:

Academic staff of universities should be encouraged to acquire the needed skills for the effective utilization of ICT facilities in our universities. They should be massively upgraded as a means of assuring effective teaching and learning

Government should encourage ICT tools utilization by ensuring adequate provision of ICT tools and technologies necessary for promoting ICT tools effective utilization

Academic staff of these higher institutions should be assisted to have access to these technologies and opportunities to acquire the needed skills through sponsorship of their attendance to workshops and conferences.

Government, university management and philanthropists should contribute towards adequate provision of ICT tools in universities.

REFERENCES


http://www.heros.inc.org/knowledgehtm
THE STATE OF GENDER REPRESENTATION IN PHYSICS IN FEDERAL COLLEGE OF EDUCATION, PANKSHIN-NIGERIA

Macmillan Mafulul Josiah,
Department of Physics
Federal College of Education Pankshin
P.M.B. 1027
Plateau State-Nigeria

ABSTRACT

This paper delved into ascertaining the state of the art of gender representation in Physics in Federal College of Education, Pankshin-Nigeria. The data used in the study were obtained from admissions made into the Department of Physics in the College for the academic sessions 2008/2009 to 2012/2013. A total of 257 samples were used and the simple percentage statistic was employed to analyze the data. The results revealed the persistence of female under-achievement in Physics. Recommendations were proffered, which when followed, may reduce or eliminate female under-representation in Physics. Such recommendations included sensitizing parents and the Nigerian society on the need to desist from stereotyping and religious beliefs that are harmful to education.

Keywords: Gender, Representation, Physics, Federal College of Education, Pankshin-Nigeria.

INTRODUCTION

Gender, as defined by Merriam-Webster Incorporated (2006), is the behavioural, cultural, or psychological traits typically associated with one sex. In the context of this work, gender is a term employed to distinguish between male and female human beings based on their differing physiological structures. It has been documented that the female gender has been a victim of discrimination in all works of life. This discrimination has led to organizing conferences such as the World Summit for Children, New York in 1990, World Conference on Education for All (EFA) in 1990, the Pan-African Conference on Education of Girls (in Ouagadougou) in 1993 and the United Nations Conference on Women Development (in Beijing, China) in 1995 (Ogunleye-Adetona, 2003).

Gender discrimination manifests itself in varying faces. Some of these faces, as outlined by John and Davou (2008), include discrimination in profession. Women are always at the receiving end or discriminated against when it comes to issues of occupational choice. Ogunleye (2001) concurred that female students are unanimous in calling for Nigerian Government to provide equality of opportunities and job career prospects for the female gender to study Physics.

The important of Physics as a requirement for the socio-economic development of any nation cannot be over-emphasized. Such a development hinges on scientific and technological development. Ogunleye (2001) is of the strong opinion that the technological potentials of any nation could be more accurately gauged by the quality of its Physics
education, for without Physics, the technological culture of her citizens cannot be firmly rooted.

A mere observation of the female gender in science world-wide indicates a gross under-representation of women in science. In a study on the participation of women in science courses in Nigerian Colleges of Education, Oyedokun (2001) ascertained that only 25.95% of the total 1,029 students admitted to study Physics in the 1997/1998 academic session were female. In the 1998/1999 session, only 36.38% of the total 962 students admitted to study Physics were female. Out of the 192 Physics lecturers in Colleges of Education in Nigeria during the 1997/1998 session, only 18 (9.38%) of the lecturers were female. During the 1998/1999 session, a decrease in number of the female lecturers was observed even though there was a slight increase in the number of Physics lecturers in the Colleges. Only 15 (7.69%) of the 195 Physics lectures were female.

In a study carried out by Trisma and Josiah (2008) on coping with gender inequality in academic achievement in Physics, it was revealed that only 20.83% of the total students admitted into Federal College of Education (FCE), Pankshin-Nigeria from 2000/2001 to 2004/2005 academic sessions to study Physics were female. This signifies female under-representation in Physics. Nsofor (2001) noted that a number of studies revealed that there are relatively few female students studying Physics in Nigerian schools. It is worthy of mention that the female students studying Physics achieve, on the average, significantly same as their male counterparts in post-secondary school level (Trisma and Josiah, 2008).

Regardless of the under-representation of the female gender in Physics in Nigeria, African-American women found in Physics have immensely contributed to the scientific and technological growth of their nation. Deborah J. Jackson was involved in the development of photonic flight hardware for the Cassini space probe. Ann T. Nelms wrote a book that is used extensively by the Atomic Energy Commission to speed up its experiments. Rosa Clark Webster centered on optimizing the optical properties of ion-implanted gallium-arsenic-iridium light emitting diodes (LEDs); the photovoltaic properties of ion-implanted gallium-arsenic solar cells; and the electro-optical properties of p-n junction devices. Shirley Ann Jackson was the first African-American woman to receive doctorate in Theoretical Physics from M.I.T. She was appointed chair of the Nuclear Regulatory Commission in 1995. (Bryant,Jnr & Swinton, 2001). This is just but a mention of the African-American women contributing to the growth of science and technology through Physics.

Based on the afore-mentioned the researcher considered it important to conduct another study to ascertain the state of gender representation in Physics in recent years in Federal College of Education, Pankshin-Nigeria.

**RESEARCH QUESTION**

The study attempted to find solution to the question: Has the gender gap existing in the Physics classroom situation in Nigeria been bridged?

**METHODOLOGY**

**Population and Sample**

The study population consisted of all the students admitted to study Physics at both the Nigerian Certificate in Education (NCE) and undergraduate (Degree) levels in Federal College of Education, Pankshin-Nigeria from 2008/2009 academic session to 2012/2013 academic session. A total of 257 students (comprising 193 male students and 64 female students) formed the population.

The population formed the sample.

**Instrumentation**
To gather data for the research question, the researcher interacted with the information files of the sample in the Department of Physics, Federal College of Education, Pankshin-Nigeria. Information on the number of male and female samples was obtained from the personal Department files of the sample.

**Data and Method of Data Analysis**

The data used in the study were the number of male and female students at both the NCE and Degree level students for each academic session from 2008/2009 academic session to 2012/2013 academic session.

The simple percentage statistic was employed to analyze the data collected.

**ANALYSIS OF DATA**

Table 1 shows the numbers and percentages of Physics students in both Degree and NCE programmes by gender in FCE Pankshin-Nigeria from 2008/2009 to 2012/2013 academic sessions.

Table 1: FCE, Pankshin-Nigeria: Statistics of Physics students’ enrolments from 2008/2009 academic session to 2012/2013 academic session by gender.

<table>
<thead>
<tr>
<th>Academic Session</th>
<th>Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>2008/2009</td>
<td>28(82.35%)</td>
<td>6(17.65%)</td>
</tr>
<tr>
<td>2009/2010</td>
<td>34(66.67%)</td>
<td>17(33.33%)</td>
</tr>
<tr>
<td>2010/2011</td>
<td>25(75.76%)</td>
<td>8(24.24%)</td>
</tr>
<tr>
<td>2011/2012</td>
<td>54(72.00%)</td>
<td>21(38.00%)</td>
</tr>
<tr>
<td>2012/2013</td>
<td>52(81.25%)</td>
<td>12(18.75%)</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>193(75.10%)</td>
<td>64(24.90%)</td>
</tr>
</tbody>
</table>

Table 2 indicates the numbers and percentages of Physics students in the Degree programme by gender in FCE, Pankshin-Nigeria from 2008/2009 academic session to 2012/2013 academic session.

Table 2: FCE, Pankshin-Nigeria: Statistics of Degree Physics students’ enrolment from 2008/2009 academic session to 2012/2013 academic session by gender.

<table>
<thead>
<tr>
<th>Academic Session</th>
<th>Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>2008/2009</td>
<td>7(100.00%)</td>
<td>0(0.00%)</td>
</tr>
<tr>
<td>2009/2010</td>
<td>14 (73.68%)</td>
<td>5(26.32%)</td>
</tr>
<tr>
<td>2010/2011</td>
<td>12 (92.31%)</td>
<td>1(7.69%)</td>
</tr>
<tr>
<td>2011/2012</td>
<td>24 (70.59%)</td>
<td>10(29.41%)</td>
</tr>
<tr>
<td>2012/2013</td>
<td>15 (88.24%)</td>
<td>2(11.76%)</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>72(80.00%)</td>
<td>18(20.00%)</td>
</tr>
</tbody>
</table>

Table 3 provides the numbers and percentages of Physics students in the NCE programme by gender in FCE, Pankshin-Nigeria from 2008/2009 academic session to 2012/2013 academic session.

<table>
<thead>
<tr>
<th>Academic Session</th>
<th>Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>2008/2009</td>
<td>21 (77.78%)</td>
<td>6 (22.22%)</td>
</tr>
<tr>
<td>2009/2010</td>
<td>20 (62.50%)</td>
<td>12 (37.50%)</td>
</tr>
<tr>
<td>2010/2011</td>
<td>13 (65.00%)</td>
<td>7 (35.00%)</td>
</tr>
<tr>
<td>2011/2012</td>
<td>30 (73.17%)</td>
<td>11 (26.83%)</td>
</tr>
<tr>
<td>2012/2013</td>
<td>37 (78.72%)</td>
<td>10 (21.28%)</td>
</tr>
<tr>
<td>Grand Total</td>
<td>121 (72.46%)</td>
<td>46 (27.54%)</td>
</tr>
</tbody>
</table>

DISCUSSION

In an attempt to proffer solution to the research question raised, it was discovered that only 24.90% of the total students enrolled into Federal College of Education, Pankshin-Nigeria from 2008/2009 academic session to 2012/2013 academic session to study Physics were women (Table 1). From table 2, out of the 90 students enrolled into the Physics Degree programme of FCE, Pankshin-Nigeria from the 2008/2009 to 2012/2013 academic sessions only 18 (20.00%) of the students were women. Table 3 revealed that only 27.54% of the 167 students enrolled into the NCE Physics programme of FCE, Pankshin-Nigeria from the 2008/2009 to 2012/2013 academic sessions represented the female gender.

The revelations signify female under-representation in Physics, a concurrence with earlier findings of Okeke (2001), Onwuakpa & Akpan (2001) and Trisma & Josiah (2008). Another revelation is that the female under-representation in Physics is persistent. This indicates that Nigeria has quite a long way to traverse toward the drastic reduction or elimination of the female gender under-representation in Physics. Possible explanations for the persistence in the female gender under-representation in Physics have been tendered by some researchers (Gonzuk & Chagok, 2001; Ivowi & Oludotun, 2001). Factors such as biological differences, religious beliefs and stereotyping are among many that are perceived to inhibit the female gender from studying Physics as a course.

Advances have been made on genetic deficits of the female gender. The generic deficits centre on biological components of the female as causal factors. However, according to Ibitoye (1998), in spite of the fluctuations in hormonal secretions in the female body coupled with accompanied changes in women female learners are not deficient in their ability in Physics. Trisma & Josiah (2008) also found out that achievement in Physics is not affected by gender.

In Nigeria, stereotyping rare its head in childrearing practices and societal expectations. These factors are perceived to inhibit the female gender from studying Physics. In the course of primary socialization process in the country, female children are protected and discouraged from engaging in explorative and risk-taking activities. The boys engage in activities that involve physical strength, challenging their mental power, their power of imagination and ingenuity. The girls, on the other hand, play with toys at home and assist in cooking food in the kitchen. It is such activities that the boys engage in that serve as building block for learning Physics in schools.

The society perceives Physics as a masculine subject. It expects women to operate in the home, keeping the house tidy and cooking food for the family. Okeke (2001)
supplemented that marriage, bearing and rearing children are considered central in the role expectations for Nigerian women. Nigerian women must then have to fit into such stereotypes, constructed for them by the society in order to be accepted. They prefer to ignore Physics, other science subjects and science-related subjects.

Religious beliefs in Nigeria are known to hinder the female gender from studying Physics. In fact, in some contemporary Nigerian regions, female education is still regarded as a taboo. Women are given out in marriage very early in life, and once married they are restricted to the house. Even if a female child nurses the intention of studying Physics, she may be hindered by such beliefs

**RECOMMENDATIONS**

- Parents and the society should be sensitized on the need to change their attitudes on upbringing of children. Stereotyping must, indeed, be stopped if the female gender under-representation is to be addressed.
- Religious beliefs which are anti-female and anti-western education should be discouraged.
- Women, themselves, need to be counseled by government and the few female Physics teachers on the beauty of studying Physics.

**CONCLUSION**

In view of the fact that the importance of Physics as a requirement for the socio-economic growth of any nation cannot be under-estimated, the female gender in Nigeria should be encouraged to take up Physics as a course of study in schools. By so doing the gender gap in existence will be drastically reduced, if not eliminated; the female gender would also be seen to be contributing its quota to the socio-economic development of the country, through science and technology.

**REFERENCES**


TEACHER EDUCATION AS A VIABLE TOOL FOR NATIONAL DEVELOPMENT

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Abstract

The quality of a nation depends upon the quality of its citizens the quality of its citizens depends not exclusively but in crucial measure upon the quality of education and the quality of education depends more than upon any single factor upon the quality of their teachers. This shows that it is imperative to invest in the preparation of teachers so that the future of the nation is secure. The study reviewed the concept of teacher education, challenges facing the teacher education program which could hinder its contribution to national development; recommendations were made based on the findings of this study.

Keywords: Challenge, Competent, Education, Teacher Education, National Development

Introduction

An educational institution performs a significant function of providing learning experiences to lead their students from the darkness of ignorance to the light of knowledge. The key personnel in the institution who play an important role to bring about this transformation are teachers. As stated by the national council for accreditation of teacher education (NCATE) in 1998, that the teacher is the most important element in any educational program.

It is the teacher who is responsible for the implementation of the educational process at any stage. This shows that it is imperative to invest in the preparation of teachers so that the future of the nation is secure. The importance of competent teachers in the nation’s school system can be in no way over emphasized. Unless teachers in service are capable
and committed, the education system cannot be a suitable and potential instrument in national development.

Teacher education is a broad and comprehensive program which is meant to be involved in every community programs and extensive activities, namely adult education and non formal education programs, literacy and development activities of the society. Teacher education is ever evolving and dynamic. In order to prepare teachers who are competent to face the challenges of the dynamic society, teacher education has to keep abreast of recent developments and trends. The crux of the entire process of teacher education has on its curriculum - design, structure, organization and transaction modes as well as the extent of appropriateness (Kanayo, 2012). One potent tool that has been adopted by government in her developmental effort is education. Indeed, the main role of education is national development as has been variously postulated by scholars. The wealth and the power of a nation depend on the successful education of its citizens and in the number of highly talented men and women within the national compass, a nation succeeds in providing superior and divergent education (Aboyi, 1994). He adds “Among the factors necessary for ushering in and consolidating contemporary development the factor of education stands in a class by itself.

The national policy of education as the counter piece of national development, the government has at various times packaged and tried different educational programs and systems. Blazing the trail of this respect is the universal primary education (UPE) that started in 1976. There have also been the special educational program - education for gifted children, inclusive education, 6-3-3-4 education system, adult and non formal education, open and distance education, nomadic education teacher education program and recently the universal basic education program though none of these education programs can be tagged unqualified success for various reasons, and none can either be called a woeful failure. For our purposes here in this study, we shall be examining teacher education and its role in national development.

Among the many objectives of this study are

1. To examine the teacher education in the country and its relevance to national development
2. To determine score of the challenge facing the teacher education program which could hinder its contribution to national development and
3. To make appropriate recommendations

**Teacher Education**

It is well known fact that the quality and extent of learner achievement are determined primarily by teacher competence, sensitivity and teacher motivation. Teacher education is a program of education, research and training of persons to teach from pre primary to higher educational levels. Teacher education is a program that is related to the development of teacher proficiency and competence that would enable and empower the teacher to meet the requirement of the profession and face the challenges there in (Kanayo, 2012). Teacher education is all the formal and informal activities and experiences that help to qualify a person to assume responsibilities of a member of the educational profession (Orubu, 2003). The researchers view teacher’s education as encompassing teaching skills, sound pedagogical theory and professional skills.
**Teaching skills** include providing training and practice in different techniques, approaches and strategies that would help the teachers to plan and impact instructions, provide appropriate reinforcement and conduct effective assessment. It includes effective classroom management skills, preparation and use of instructional materials and communication skill.

**Pedagogical theory** includes the philosophical, sociological and psychological considerations that will enable the teacher to have a sound basis for practicing the teaching skills in the classroom.

**Professional Skills** include the techniques, strategies and approaches that will help teachers to grow in the profession and also work towards the growth of the profession. The amalgamation of teaching skill, pedagogical teaching and professional skills will serve to create the right knowledge, altitude and skills in teacher thus promoting holistic development. Teacher education is based on the theory that teachers are made not born. In contrary to the assumption teachers are born not made. Since teaching is considered an art and a science, there is need for teacher education. The focus of teacher preparation had to shift from training to education. If it had to make a positive influence on the quality of curriculum transaction in classrooms.

**THE CONCEPT OF NATIONAL DEVELOPMENT**

National development goes far beyond the acquisition of technological products like computers, cars, planes etc or constructing the most beautiful buildings and architectural wonders nor does it mean having good access road, bridges, airports, dams among others. These are bye products of development. The United Nations first Decade said that development is equal to economic growth plus social change which can be translated at the level of the individual / and the society at large. It includes such important human activities at levels of food and nutrition, employment and poverty, reduction within the frame work of equality, dignity and justice; not merely the economic prescription of per-capital income, gross national products and annual grow rates (Opubor, 1986) concurs. He insists that the basic common denominator for any development is the beneficial change for the change for the individual. He therefore concludes that any national development manning must have their greatest beneficial impact on the rural areas must involve labor intensive project . . . provide a capacity for the neglected majority of the rural Africans to better their lives largely through their own effort (p 186)

The focal point of national development in the above submissions are individual and societal change with such indications as quality food; gainful employment; power reduction within the ambit of such frame work as equality, dignity, social justice and equity. A nation cannot therefore be said to have developed when a significant percent of her population are not literate and there is decay in the country’s educational system. National development must therefore route for change in all areas of culture which include the economy, technology and environmental in such a way
that the physical and mental abilities of the citizenry are best positioned to achieve beneficial change. This repositioning has to be culturally derived from the internal resources of the country to avoid the perennial problem of Western imposed development paradigms which are promethean and therefore antagonistic to indigenous third world post-colonial development efforts (Betiang, 2005: 20).

TEACHER EDUCATION AND NATIONAL DEVELOPMENT

Teacher education received strong emphasis in the national policy document because of the belief that no education can rise above the quality of teachers (Balogun, 1991). Thus in the white paper are aims of teacher education are spelt out as follows:

- To help teachers to fit into the social life of the community and the society at large and to enhance their commitment to national objectives.
- To provide teachers with the intellectual and professional backgrounds adequate for their assignment and to make them adaptable to any changing situation not only in the life of their country but in the wider world.
- To produce highly motivated conscientious and efficient classroom for all levels of educational system.
- To encourage further the spirit of enquiring and creativity in the teacher.
- To enhance teachers commitment to the teaching profession.

The policy also required teachers across all the educational levels to be professionally trained with the minimum teaching qualification being the Nigeria Certificate in Education (NCE). All teachers with lesser qualifications were to be assisted to rise to at least the Nigeria Certificate in Education (NCE) level and those who could not would have to leave the service (FGN, 1999). The policy went further to describe some of the conditions of service (such as opportunities for promotion at all levels) to enhance career structure and nationwide harmonization of the condition of service, the establishment of a teachers council to care of accreditation, registration, certification, discipline and regulation guiding the teaching profession. The teacher’s council was then to compile the list of registration nationwide.

Amucheazi (1980:9) advises that “certainly for Nigeria to develop truly Nigerians must . . . and evolve institutions which will enable the individual find his fulfillment. One such institution that can enable the individual find his fulfillment is education. Education without doubt is at the heart of development. Education develops an individual by equipping him/her both intellectually and vocationally to face the realities of life in the larger society. The United Kingdom Department for Intellectual Development (DFID) has stressed the importance of education in national development in its 2002 annual report thus:

Education is at the heart of development. The countries which made the greatest progress in reducing poverty in recent decades are those which have combined effective and equitable investment in education with sound economic policies. Education enables people to use and extend their capabilities develop skills improve their livelihood and increase their earning potential
Amplifying the same view literature has it that education is the single most important distinguishing factor between human and animals. Using building as a paradigm, it points out that because of education, human beings have passed through dwelling in caves to huts, shelter, mud houses and today man uses various kinds of building made of concrete, blocks, bricks, stones, glasses and woods. But there is no education among animals; weaver bird for instance, makes the same kind of nest its ancestors made millions of years ago.

Education has increasingly become important to success of both individuals and nations. Growing evidence demonstrates that among all educational resources, teacher’s abilities are especially critical contributions to students’ learning and consequently the success of a nation to advance in its economic, social and political spheres (Darling Hammond, 2006). Throughout the world, reform and innovation initiatives by nations have triggered much decision about the structures of teacher education and training programs (Herbert 2001).

If the child is the centre of educational system, teachers are the hub of the educational process. For it is upon their number, their education and training their quality and devotion to duty, their effectiveness and efficiency and their competence and their productivity depend on the effectiveness, the capability and the possibilities of the entire educational system and enterprise. The realization of the potentialities of organized education as a veritable instrument for change and national development depends largely on the teachers. Excellent educational policies are meaningless unless there are equally excellent teachers to see to their realization. Various governments may vote sufficient funds as enabling resource for education, adequate materials resources may be procured, but unless the teachers are properly prepared and positively motivated, little productivity will occur. The enabling resources will wasted, the material resources will gather dust and decay and little productive will take place. The researchers maintained that for a developing nation like Nigeria, teachers are the most crucial, critical, vital and strategic professional body for national development.

Challenges:
The following have been articulated as challenges and possible solutions to enhance teacher education in Nigeria.

1. Inadequate Remuneration of Teachers:
This is particularly a vexed issue, because teachers are the best paid workers in Switzerland and some other developing countries of the world. A teacher is better paid in Togo, Ghana, Uganda, etc, than in Nigeria. Evidently, teaching is not considered attractive in this country, because of the attendant neglect and poor remuneration. Adequate incentive and motivation are required to put practitioners on a proper pedestal.

2. Recruitment and Training of Teachers:
The method of recruitment of people into teaching profession and their subsequent training skills lack seriousness and vision. School dropouts still find their way into teaching, thus turning teacher training institutions into a dumping ground for those who
could not make headway elsewhere. The successful implementation of any nation’s educational policy depends to a large extent on the quality and quantity of its teaching force. Dunces should no longer be allowed into the noble profession and government should recruit only trained and qualified teachers into educational system.

3. Poor teaching and learning facilities:
If teacher education should yield great results, then adequate provision of facilities and infrastructure must be boosted by all stakeholders in the teaching profession. It is not unusual to see student-teachers having their training under tree, due to lack of adequate classrooms (Ofoejebe, 2006).

4. Inadequate professional development of teachers:
There is no massive investment in the professional development of teachers and this leads to the raise of quacks and incompetent teachers in the field. There should be massive investment in the professional development of teachers, to ensure that only the professionals are in the field. Any more waste of time in the full professionalization of teaching is not in the interest of our future generation. The quality of education will definitely improve drastically, when this is done.

5. Curricular problems:
In the colonial era the schools curricular undermined the Nigeria indigenous culture and our integrity and rather enslaved the students and products of the school system with alien ideals. Sadly the effect has injured on even after a national policy and indeed two decades after that policy. The reasons for this statement range from socio-economic through poverty of spirit and values, dependency in the language of learning and communication, to stock ignorance of the teachers. Teachers can only be effective agents of change if they have the wherewithal in terms of knowledge and resources.

6. Teacher-related problems:
Many teachers took teaching as a last resort having been rejected as misfit in the other professions. Due to acute shortage of teachers, mediocrity has stepped in to the extent that teachers now teach subjects other than that which they are specialists in. Teacher education has had to contend with pedagogy problems of making effective classes from the situation in the school for so long. Professionalization of teaching and a national registration for teachers will help minimize teacher related problems

7. Economic problem:
The economic down turn caused by the glut in the oil market since the early 1980s has not helped matters for teacher education, indeed for education generally and all over the country. The Nigerian leaders who had been in power in the 1960s and who had no value for education stole and hoarded the little money in the treasury and misappropriated whatever little was left for education. This vicious attitude as reported in Ojerinde (1967), the military high-handedness and unconcealed contempt for the teachers led the military government of 1972 to send university teacher packing out of their quarters within a few hours of the notice because of industrial disharmony over poor wages and unfavorable work conditions.
Conclusion
The paper examined teacher education, its relevance to national development and the challenges facing the teacher education program that mar its contribution to national development. Attention has been drawn to the importance of teacher education for the development of a nation, capable, dedicated, competent, effective and efficient teachers are indispensible for our success and progress since no nation can rise above its educational system and it teachers.

Recommendations
The following recommendation are made based on the research findings
1. The government should promptly pay teachers their salaries, allowances and promote them as and when it is due
2. Workshops and seminars should be organized for teachers in different subject areas at least once in a term
3. Teachers should be strictly supervised to assure that effective teaching and learning is taking place
4. Government should recruit only qualified teachers and the unqualified and quack teachers should be identified and flushed out of the system

References
Amuchaezi, E C (1980). The problem of National Development: social sciences Enugu fourth dimension publishers
Darling Hammond, L (2001). The challenges of staffing on school Education leadership 58(8) pp12-17
Herbert F.M (2001). Teachers as the Agents of change Educational leadership 50/7 pp 12-17

EFFECTIVE PREDICTIVE PARENTING FOR POSITIVE ACADEMIC PERFORMANCE IN CHILDREN: IMPLICATIONS FOR PROFESSIONAL COUNSELLING

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Abstract
The quality of training a parent gives to his child at home goes a long way in determining his academic performance at school. Predictive parenting promotes intellectual curiosity, motivation and the desire to achieve academic excellence. This paper highlights the concepts of parenting, predictive parenting and academic performance of children, tips on effective predictive parenting such as setting objectives for the family, instituting effective parent-child communication and building harmony in the home. It equally highlights the role of professional counselling in helping parents adopt predictive parenting in families through the use of proactive counselling strategies such as school-Based family counselling, behaviour modification, parents fora and others. The paper recommends among other things that efforts should be intensified by governmental and non-governmental organizations to give adequate information to parents on predictive parenting that leads to positive academic performance in children.

Key words: parenting, predictive parenting, academic performance and counselling.

Introduction
Children are gifts from God to human parents-gifts with the responsibility to keep and position well for useful existence. These days, useful existence for children includes providing them good conditions for positive academic performance at school. It also involves removing those hindrances to academic excellence. This means bringing up children so that they do not grow up to become unruly, notorious nuisance and or constant sources of sorrow and shame to both parents and the society. And bringing up a child in this positive manner depends largely on the type of parenting technique that exists in the child’s family.

The parenting technique used in child rearing accounts for not only the differences in personality and needs in children but also differences in academic performance (Imona, 2006). Okeke (2001) opined that it also influences children’s career choice, social interaction, life decisions, academic expectations as well as going a long way to determining how the development of our country could be measured. Hence the need for parents to jettison exploitative parenting styles that hinder academic progress in children and adopt better parenting technique such as predictive parenting. And for proper adoption of predictive parenting, professional family counselling cannot remain complacent.
Concept of parenting

Parenting is a promise to devote time, resources and best efforts to the emotional, physical, intellectual and social development of a child. Parenting is also considered as bringing up a child in orderly manner so that the child on getting to school will see school activities as complimenting what is learnt at home and so is better able to achieve positive transfer of knowledge and skills from home to school to enhance his academic performance. NTI (2009) noted that positive transfer that facilities academic success is possible when knowledge and skills acquired in one learning environment (home being the first learning environment for a child) is similar to the ones in another environment such as school environment. This is the reason for Okon (2009) to assert that the home determines a child’s level of academic performance in school.

Parenting is the art of carrying out the responsibility to keep and position children for useful living. It is an art of raising up a young person, hence psychologists (Baumrind (1992), Cowen (2003) and Coleridge (2009) related that parenting is a process of raising and nurturing a child. They explained further that parenting also involves the process of caring for your child’s academic performance.

Parenting is the process of bringing up a child in a manner that he will not be deprived of his education and other basic rights no matter the level of economic depression in the country. It involves nurturing that does not over labour the child so that he would be strong and able to cope with his academic activities. Imon (2006) reported that children who are over laboured are most times found sleeping in classes because of tiredness, which is a hindrance to positive academic performance in children.

Prominent among the factors that influence parenting generally are: relationship, communication between co-parents and the academic values that are upheld and promoted by both father and mother in a home. This is similar to good communication between parents and their children in facilitating consistency parenting and the values that are promoted by both parents, which provide clear guidance and expectation for the child’s academic performance and other forms of his behaviour, (weiss and scotwarz, 1996). All these indicate that parenting involves many responsibilities such as setting rules and regulations as a guild for the children to follow, providing educational resources that ensure consistency in school attendance, motivating, encouraging them especially when their spirit is low, forming friendship with them among others.

Predictive parenting and academic performance

Predictive parenting is a conscious purposeful effort to influence the attitudes, beliefs and performances of our children. Nwazor, (2006) related that predictive parenting refers to setting up the best and most positive condition for the child’s positive academic performances in the course of bringing up the child. She also explained that predictive parenting prevents academic failure.

In predictive parenting, parents look for opportunities to build their child’s subconscious mind. Thus in predictive parenting parents aim at the following:

- Giving the child a more positive direction. This is achieved through performing all that predictive parenting requires such as quality time and personal sacrifice for the child’s academic success and his general welfare. Predictive parents pray for their children’s success at school, discuss with their children concerning their academic experiences on daily basis, check and assist them in completing school
assignments, care, play with them at their leisure moments, monitor and mentor them.

- Creating more self confidence or self esteem in children: In predictive parenting, parents show their children unreserved love and focus on the good aspect of their children’s life. This serves as a source of encouragement to them. Parents have a question and answer rapport with their children consistently, sharing their own experiences especially as it concerns academics with their children.

Predictive parents do not allow their children to labour for their upkeep at school. And even when their child is serving as a babysitter to a close relative, Predictive parents monitor school task given to their children as well as the general education provided to their children. According to Nwazor (2006), in predictive parenting, parents avoid nagging and undue criticisms even when the child has not done it well or he has missed the goal he aimed at. Their criticisms are always constructive. Feedback is given out of love. It is very tempting for most parents to criticize everything a child does and keep on describing him negatively (e.g. giving the child derogatory names that depict failure). This makes the child to lose self confidence. In predictive parenting, parents appreciate the good parts and praise their child so that he does not get frustrated even when he has performed unevenly in his academics (capability in one area and extremely weak in others). On noticing such an uneven performance in school work, the predictive parent does everything he can to create more self confidence and high self esteem in the child by making the child to still place high value on himself that will ensure huge success next time around. This is why when Olayinka (1998) related that good parents cannot afford to remain dormant while the constraints in the academic performance of their children persist, he was referring to predictive parents.

Other things predictive parenting aims at for positive academic performance in children are:

- Giving the child proper understanding of the rules of personal responsibility. This means that children should be taught by parents to take direct responsibility for their actions. The principle of personal responsibility states that each individual is responsible for his own actions. When a child knows this right from home he will be more careful about what actions to take to enhance his academic performance and boost his self-esteem. This in turn develops in children attitudes and habits that lead to self-sufficiency and success in all life endeavors including schooling Wilkerson, (2007), Okonkwo, (2009) opined that it helps in preventing academic failure as well as in promoting positive academic performance in children.

Academic failure is a process whereby a child (e.g. a student) slips farther and farther behind his peers and gradually disconnects from educational system. Academic problems are many and diverse. If ignored and unresolved such problems and dilemma are capable of distorting and thwarting the capabilities and potentialities of the student involved. It helps children in making decisions against involvement in various dimensions of examination malpractices. Nwankwo, (2005), believes that the quality of academic performance among children these days that is nothing to write home about stem from poor parenting techniques that exist in families. The consequences of children’s massive academic failure and its end product are grave and far reaching towards the development of our country, yet, predictive parenting/technique that addresses them is underutilized due to ignorance (Nwazor, 2006).
Tips for effective predictive parenting

Tips for effective predictive parenting as identified by (Nwazor, 2003) include:

- Setting objective for the home.
- Effective parent-child communication and
- Building harmony in the home.

Examples of the objectives predictive parents must set in homes include:

- A home where children will want to spend enough time for vigorous scholastics activities such as studying their books without having to be persuaded to do so.

- A peaceful mutual supportive environment in the home where children are guided for the right choice of school subjects.

- A home where the children develop spirit of co-operation and mutual understanding that find it fulfillment in shunning elements of involvement in examination malpractices at school.

- A home where the children are helped to form good study habit.

- A home where the children learn to develop a strong sense of likeness for school subjects and school teachers.

- A home where children are aided to develop strong hatred for absenteeism, truancy, laziness to school.

- A home where children learn to develop a strong sense of self confidence. A child that has high self confidence does not resort to outside help in examination in order to appear an academic “success” (Nwideh, 1999).

- A home where children learn to be honest and assertive rather than being conforming children. Children who learn right from home to be honest and assertive, hardly conform with the bad eggs in the class (Ngelelota, 1998)

- A home where children acquire skills for good academic success.

- A home where children learn to develop a strong sense of personal responsibility and accomplishment. In other words, predictive parents set up a home where children are motivated for greater performances.

This aspect of predictive parenting have influenced many scholars such as Morrisen and Melnytynyre (1993), Nwazor (2006) Wilkerson (2007), Cool (2008) who supported that in teaching and training our children in the homes, that parents must have objectives and goals; they should be realistic and systematic and that the children should be taught everything about life including the essence of going to school, the need for high academic performance at school and the avoidance of those attitudes that hinder positive academic performance, such as laziness, loitering, truancy among others.

Koo (2008) opined that every parent should adopt predictive parenting that aims at training children to have the courage to say “No” even when all around them are going the popular but wrong way, such as conforming to carry out examination malpractices. Sears, Maccoby and Levin (2003) confirmed this by observing that child-rearing practices involving predictive parenting affect the academic performance of individuals in schools. Morrison and Melnytynyre (1993) asserted that success at school work involves the innovation which allows one to capitalize upon one’s education, especially where there is no gap in communication between parents and their children.

Effective Parent-Child Communication

This simply refers to the exchange of thoughts and ideas between parents and their children that could make the understanding of school work possible. Nwazor (2003)
insists that to ensure effective predictive parenting, parents should develop the habit of conversing and listening to their children – ask questions that will draw them out for discussions that are dominated by school tasks. It is through this way that parents get to know the challenges to their children’s academic performances and make serious efforts to help them face the challenges squarely. Horward (2006) related that in predictive parenting, children are helped to develop the fortitude to face learning problems and tackle them squarely. Therefore for effective predictive parenting, parents should be open to their children so that the children can discuss their academic problems with them as if they trust them as their friends (Imon and Asita, 2012).

There are tools for effective parent-child communication. Nwazor (2006) introduced a single mnemonics that predictive parents can use (as tools) to remind themselves about issues that enhance parent-child communication for positive academic performance of their children as “T-A-L-K”. viz. T stands for Time for the child. This means that parents need to make out time regularly to interact with their children especially as it concerns their academics. “A” stands for Assurance. This means that children need to be assured of their parent’s presence and availability. This is why predictive parents often visit schools of their children to ascertain how far they are coping with the academic challenges and what they can do to facilitate the children’s learning in the schools. “L” stands for Listen. This means that parents need to attentively listen to what their children have to say. Children generally want to be assured of their parent’s availability to listen to what they want to talk about. And so parents need not dismiss the concerns of children with a wave of the hand. “K” stands for Keen interest. Parents need to show keen interest in what children want to say. This usually encourages children to talk more freely with parents concerning hindrances to positive academic performance such as lack of text books, writing materials, late payment of fees and others. This is why in predictive parenting; there are tools for living that focus attention to academic activities. For positive performance in children parents could readily pick one at a time and discuss with their children. Examples include: school work; the role of parents in the academic performances of children; the reason for going to school among others.

Building harmony in the home:

Harmony means peace. It is a kind of peaceful existence (agreement) that motivates members of a family especially children to positive academic achievement while home is the house or flat or apartment that one lives with one’s family (Hornby, 2000). The home environment sets the tone of what impression the children acquire about academics as they are being reared. Harmony in the home enhances the confidence of children in their parents that facilitates their performances at school. It also helps children to frequently contribute to the peace in the home through high academic performance. Nwaoba, (2011), Koo’s, (2008) finding showed that at different times, parents have all missed the mark and have aided to the disharmony in the homes that hinder their children’s positive academic performances.

In stressing the need for creating harmony in the home for children’s positive academic performance (Nwazor, 2006) outlined some of the major ways of building harmony in homes, viz:

- Keeping your voice down even when you are giving a major correction in your child’s academic work.
- Giving each child a turn to talk about his experiences at school at meal time.
Always treat every child with equal respect. Do not look down on any child even those who are performing academically below expectations.

Set rules in the home concerning academic achievement and stick to them and others.

**Theoretical framework**

This paper is based on the Gestalt theory because its view and methods of application seem most appropriate to the writer’s aim and purpose. The Gestalt theory is an essential form of psychotherapy that emphasizes personal responsibility, individuals’ experiences in the present moment and self-regulating adjustments people should make as a result of their overall situations. The theory itself emphasizes self-acceptance, change and actions rather than talks which are very essential ingredients in performing successfully in academic life. This theory is very relevant to the paper because the objectives are to enable individuals such as parents to become more fully aware of and creatively alive to the type of parenting (technique) that facilitate positive academic performance in their children. A child that performs poorly in academics can be made to be aware of his poor academic status and the need to shift from poor to good and be free from failures without losing his self value.

**Academic performance and parenting**

Positive academic performance is perceived as the child’s ability and efforts to score high in school courses of instruction. Many Nigerians are worried today because of recent mass failure in examinations which is traced to poor child rearing techniques in the homes. Hence William (2000) posited that child rearing practices seriously determine the academic performances of individuals in the school and so defined academic success in terms of the acquisition of different types of knowledge and cognitive skills. Popo (1998) defined academic performance as the duty of an individual to attend school according to set standards or rules guiding school or class attendance. A child who is inconsistent in school attendance, often late to school, plays truancy and sleeps in class due to over labour can at best perform below average academically no matter how intelligent he is naturally. The same thing applies to a school child who is educationally neglected by his parents or guardian.

**Implication for professional counselling**

Counselling is a helping relationship between the counsellor and the counsellee. It aims at helping learners adjust properly to school programme by helping them to solve problems that hinder their academic performance; be it problem from home or school. Thus, professional counselling services can not be over looked if school children are to perform excellently in their academics. This informs Adewuyi’s (2009) assertion that professional counselling involves consultation, discussion, deliberation, exchange of ideals and helping to change situations that are maintaining people’s problems through the inculcation of self understanding in the people concerned. Part of the duty of a professional counsellor in the school system to effectively enhance excellent performance in learners include helping parents of the school children to understand how exploitative most of the parenting techniques that exist in their various homes are, (Nwazor, 2006), the need to adopt predictive parenting (technique) and what predictive parenting involves in order to facilitate excellent academic performance in children.

The quest for academic excellent is in the Nigeria National Policy on Education (2004:51) which states that Educational services facilitate the implication of educational policy, the attainment of policy goals and the promotion of effectiveness of educational
system” This is in line with Anagbogu (2004), Onwuasanya and Okeke,(2008) when they in their various studies, related that the role of professional counselling in a school whose students perform poorly cannot be over emphasized; in that when an effective professional counsellor is able to counsel with the parents of the students and uses his expertise to treat the students whose behavioural problems emanate from the home, using appropriate behaviour modification techniques both the students’ academic performance and the tone of the school will definitely change for better. Anagbogu (2004) enumerated such problems as poor school attendance, lack of concentration, negative self-concept, lesson in-attentiveness, uneven performance among others. Moreover, Castaldi (2007) noted that lack of school based-family counselling is manifested when pupil’s academic performance is poor due to lapses on the part of parents and guardians. All these imply the use of proactive counselling techniques such as school-based-family counselling and behaviour modification programmes, parent fora and others in helping parents to adopt predictive parenting in their homes, facilitated through the strategy of home-visits.

School based-family counselling is a kind of treatment technique based on advice and information given by a professional counsellor who is an expert in family issues. The professional counsellor does this by integrating school counselling models to solve problems that affect a child’s academic performance in order to reinforce positive change in the child. Home-visit in which the counsellor enters into counselling relationship with the parents in their residence or office to exchange ideas on how best to aid a child in his academics is part of it. It enables parents take active part in whatever wise decisions and choices their children are helped to make with the school counsellor towards ensuring positive academic performance, such as decisions against lateness to school, truancy, non-payment or late payment of school fees, lack of concentration and others (Nwaobu, 2011). A child who is physically abused by his parents or guardian through overlabour, child leasing, child abduction among others that hinder his positive academic performance could be helped using these methods.

Organizing parents Fora during Parents-Teachers Association Meetings (PTA) and open days in school could constitute teachable moments for a professional counsellor to help parents develop the needed interest to adopt predictive parenting. Family life education is part and parcel of the School based-family counselling. In this, a professional counsellor uses his expert knowledge to drill parents on the programme of predictive parenting/technique accompanied with a clarion call for its adoption in families by oral presentations, video clips of predictive parents and their children or talks by invited resource persons.

Moreso, while the professional counsellor is using his expertise to help parents adopt predictive parenting he is also working on the school children for positive behavioural change to ensure improved academic performance using behaviour change programmes that are curative in nature.

Conclusion
The development of our country could also be measured by how far our children progress academically Goldman, (2005) related that “one reason most of our children are poor in academics is that as a society, we have not bothered to make sure that every child is reared well right from the home front”. Nwadinobi, (2008) opined that the home teaching should complement the school programme. Thus to ensure positive academic
performance in all our children, effective predictive parenting must be practiced in homes.

**Recommendations**

1. Counsellors are encouraged to initiate school-based-family counselling programmes in schools.
2. Counsellors’ talks during PTA meetings and open days in school should centre on the need to adopt predictive parenting (techniques) in bring up children in homes: In other words, counsellors should intensify efforts to give adequate information to parents on the predictive parenting that leads to excellent academic performance in children.
3. Governments (Federal and state) non-governmental organizations and school authorities should give potential support to school counsellors that will enable them organize effective workshops, seminars, parent Fora from time to time on predictive parenting (technique) of child rearing in schools. They should provide adequate fund for counsellors to procure appropriate guidance materials such as TV’s, video clips, posters and others to be used in driving home the real implication of predictive parenting (technique) to children’s academic performance.
4. Professional counsellors should be posted to schools and be allowed to practice fully.
5. The training programme for professional counselling should be diversified to incorporate skills in school-based –family counselling for all counselling specialties’ rather than being restricted to family counselling.
6. Predictive parenting should be integrated into some school subjects/courses like social studies, health education and civic education among others.
7. Parents should be encouraged to have discussion on predictive parenting (technique) with positive mind.
8. The Federal and state ministries of education, health and social welfare should mount more intervention programmes on predictive parenting technique of child up bringing in the country.

**References**


National Policy on Education (2004). In FRN.


LECTURERS’ APPRAISAL OF APPLICATION OF ANDRAGOGICAL LEARNING PRINCIPLES DURING INSTRUCTIONS IN TERTIARY INSTITUTIONS

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Abstract
The purpose of this study was to assist lecturers self-appraise their application of andragogical learning principles during instructions in tertiary institutions in Anambra State. Evaluative survey research design was adopted for the work. The area of study was all government-owned tertiary institutions in Anambra State. Two research questions were used in the study. A total of 350 lecturers constituted the sample of the study. Principles of Adult Learning scales (PALS) was the instrument used for the study. PALS was duly validated and the alpha co-efficient reliability index obtained using Cronbach method was 0.90. Data was analyzed using mean and standard deviation to answer research questions. The findings indicate among other things that lecturers’ appraisal of their application of andragogical learning principles during instructions were learner-centred. Based on the findings, recommendations were made which includes that management of various institutions of higher learning should constantly monitor and assess the performance of lecturers to ensure proper application of right principles of teaching and learning especially as it affects adult learners.

Introduction
Education is the most valuable tool used by nations of the World to realize their individual and collective goals and aspiration. It also helps to eradicate mass illiteracy and to achieve better development of the human person (Yesufu, 1991). To a large extent, education, both formal and informal, equips man better to face the challenges of life and to contribute ones quota towards the development of the society. To ensure that those who for one reason or another were deprived of opportunities for early life education, adult education arrangement was devised at all levels of education.

Evidence from adult education literature shows that adult learners do not learn in the same way children do (Knowles, 1973, 1984). Invariably, adult learners cannot be taught using the same techniques originally prepared for use with children (Knowles, 1990, 1984; Beder and Darkenwald, 1982). Following from above, teachers of adult learners are therefore expected to apply andragogical learning principles appropriate for adults as a foundation for new knowledge, attitude and skill acquisition (Conti, 1981, 1990, Smith and Haverkamp, 1977). In his efforts to stress that adult learners be treated like adults, Lieb (1991) enunciates the following as principles of adult learning:

- Adults are people with years of experience and a wealth of information. Focus on the strengths learners bring to the classroom, not just gaps in their knowledge. Provide opportunities for dialogue within the group. Tap their experience as a major source of enrichment to the class.
Adults have established values, beliefs and opinions. Demonstrate respect for different beliefs, religions, value systems and life styles. 

Adults are people whose style and pace of learning has probably changed. Use a variety of teaching strategies such as a small group problem solving and discussion. Most adult prefer teaching methods other than lecture. 

Adults relate new knowledge and information to previously learned information and experiences. Assess the specific learning needs of your audience before your class or at the beginning of the class. 

Adults are people with bodies influenced by gravity. Plan frequent breaks, even if they are 2 minutes ‘stretch’ breaks. 

Adults have pride. Support the students as individuals. Self-esteem and ego are at risk in a classroom environment that is not perceived as safe or supportive. People will not ask questions or participate in learning if they are afraid of being put down or ridiculed. 

Adults have a deep need to be self-directing. Engage the students in a process of mutual enquiry. Avoid merely transmitting knowledge or expecting total agreement. 

Adults tend to have a problem-centred orientation to learning. Emphasize how learning can be applied in a practical setting. 

It appears however from observation that most of the teachers of adult learners take the conventional way they teach children/adolescents in teaching adults too. In other words, most lecturers use teacher-centred (pedagogical) approach rather than learner-centred (andragogical) approach in their instructional activities with adult learners. In a study carried out by McCollin (2000), on the extent to which lecturers employed different teaching styles for traditional and non-traditional students, the researcher observed that there was a significant difference between the teaching styles of lecturer of traditional and non-traditional students. 

In a nutshell, based on some theories on adult education, the following adult learning principles have been articulated as a guide to adult instructions: 

- Increasing and maintaining ones sense of self-esteem and pleasure are strong secondary motivators for engaging in learning experiences (Zemke, 1988). 
- Adult learning must be problem and experience centred (Gibb, 1960 as quoted in Brookfield, 1986). 
- Adult will generally learn best in an atmosphere that is non-threatening and supportive of experimentation and in which different learning styles are recognized (Smith, 1982). 
- Adult learning is facilitated when the learners’ representation and interpretation of his own experience are accepted as valid, acknowledged as an essential aspect influencing change and respected as a potential resource for learning (Smith, 1982). 
- Adult learning is facilitated when teaching activities do not demand finalized, correct answers and closure; expressed a tolerance for certainty, inconsistency and diversity, problem-finding and problem-solving. (Brundage & Mackeracher, 1982). 
- Adult skill learning is facilitated when individual learners can assess their own skills and strategies to discover inadequacies or limitations for themselves (Brundage & Mackeracher, 1982).
Adult learning is facilitated when the teacher can give up some control over teaching processes and planning activities and can share these with learners (Brundage & Mackeracher, 1982).

Collaborative modes of teaching and learning will enhance the self-concept of those involved and result in more meaningful and effective learning (Brundage & Mackerancher, 1982).

The principles of learning to govern adult learning should be learner-centred or andragogical. Knowles felt that adult learning could not follow the principles of traditional pedagogy in which teachers are responsible for making decisions about what will be learned, how it will be learned and when it will be learned (i.e. teacher-centred). On the other hand, andragogy supports learning situations where the adult learners are sufficiently motivated to see the relevance of what is being learnt and be involved in deciding what to learn, planning how to learn it and evaluating both themselves and the system of instructions.

Consequent upon the use of conventional practices by most lecturers, some adult learners do not succeed in achieving their objectives for enrolling into adult education programme (Carp. Peterson & Roelfs, 1974; Charmley, Osborn & Withnall, 1980). The end point is the proliferation of half-baked graduates for the nation which portends a very bleak future for the country and adult education programme.

Since it has shown and documented severally that andragogical approaches enhance adult learners enthusiasm and participation in learning, there is need to appraise lecturers’ application of andragogical learning principles during instructions in tertiary institutions in Anambra State. It is important to examine the extent to which lecturers apply andragogical/adult-learning principles in their classroom instructions. This is because the right application of the principles of adult learning, will go a long way towards smoothening the realization of different objectives for which each of the adult learners came to study at the adult age.

**Purpose of the Study**

The purpose of this study was to assist lecturers self-appraise their application of andragogical learning principles during instructions in tertiary institutions in Anambra State. Specifically, the study sought to determine:

i. Lecturers’ appraisal of their application of andragogical learning principles during instructions;

ii. The extent to which the lecturers’ appraisal of the application of andragogical learning principles is influenced by disciplines/areas of specialization.

**Research Questions**

To achieve these purposes, the following research questions were posed:

1. To what extent do lecturers apply andragogical-learning principles while instructing as measured by their mean ratings in Principles of Adult Learning Scales (PALS)?

2. Are the lecturers’ appraisal of their application of andragogical learning principles influenced by disciplines/areas of specialization?
Methodology

This study adopted an evaluative survey design aimed at appraising lecturers’ application of andragogical learning principles during their instructions.

Sample and Sampling Technique

Proportionately stratified random sampling technique was used to draw 350 lecturers from three out of the five government-owned tertiary institutions in Anambra State. This constituted the sample for the study.

Instrument for Data Collection

Principles of Adult Learning Scale (PALS) constructed by the researcher were the instrument used for the study. It is comprised of parts A and B. Part A is information forms used to gather demographic information about lecturers. Part B is a 44 item questionnaire for the lecturers divided into seven sub-scales. PALS as an instrument solicited for lecturers’ self-report/perception on the extent to which they applied the adult learning principles during instructions. PALS were adopted from Conti (1978). A higher score on PALS indicates a learner-centred approach while a low score indicates a teacher-centred approach.

Validation of Instrument

PALS was duly face validated by two experts each of Adult Education and Education Psychology in the Faculty of Education, Nnamdi Azikiwe University, Awka. Also an internal consistency co-efficient of 0.90 using Cronbach Alpha was computed for PALS to test the reliability of the instrument. The score was considered healthy enough.

Method of Data Analysis

Descriptive statistics was used to answer the research questions. Specifically, the two research questions were answered using mean and standard deviation.

Decision Rule

PALS (Questionnaire) instrument is a 5-point scale. Its responses are scaled from 0-4 points. Any item with a mean score of 2.50 and above is taken to be learner-centred and any item with a mean less than 2.50 is taken to be teacher-centred.

Results

The results of the study are presented in accordance with the research questions.

Research Question One: To What Extent Do Lecturers Apply Andragogical Learning Principles While Instructing as Measured by Their Mean Ratings in PALS?

Table I: Mean and Standard Deviation of Lecturers’ Appraisal of their Application of Andragogical Learning Principles as Measured by the PALS.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Seven Sub-Scales</th>
<th>X</th>
<th>SD</th>
<th>Remark</th>
</tr>
</thead>
</table>
|     |                  |     |    |        | LECTURERS N = 350
|     |                  |     |    |        |
From Table I, item mean ratings of the lecturers’ appraisal of their application of andragogical learning principles during instruction were presented in their sub-scales. Out of the seven sub-scales considered, only number one item with mean score of 2.39 was teacher-centred while six others were learner-centred. Since the grand mean is 2.52 and is greater than the cut-off point of 2.50, we conclude that lecturers’ appraisal of their application of andragogical learning principles during instruction is learner-centred.

Research Question Two: Are the Lecturers’ Appraisal of their Application of Andragogical Learning Principles Influenced by Disciplines/Areas of Specialization?

Table 2: Mean and Standard Deviation of Lecturers’ Appraisal of Their Application of Andragogical Learning Principles as Per Their Discipline/ Areas of Specialization

<table>
<thead>
<tr>
<th>S/N</th>
<th>Seven Sub-Scales</th>
<th>Education (N = 117)</th>
<th>Arts (N = 117)</th>
<th>Sciences (N = 116)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Learner-centred Activities</td>
<td>2.72</td>
<td>2.34</td>
<td>2.04</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.96</td>
<td>1.04</td>
<td>1.14</td>
</tr>
<tr>
<td>2.</td>
<td>Personalizing instruction</td>
<td>3.13</td>
<td>2.84</td>
<td>2.23</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.97</td>
<td>0.95</td>
<td>1.14</td>
</tr>
<tr>
<td>3.</td>
<td>Relating to experience</td>
<td>3.36</td>
<td>3.15</td>
<td>3.08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.87</td>
<td>0.85</td>
<td>0.87</td>
</tr>
<tr>
<td>4.</td>
<td>Assessing Needs</td>
<td>3.42</td>
<td>3.18</td>
<td>0.82</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.89</td>
<td>0.82</td>
<td>3.09</td>
</tr>
<tr>
<td>5.</td>
<td>Climate Building</td>
<td>2.84</td>
<td>2.58</td>
<td>2.54</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.97</td>
<td>0.95</td>
<td>1.19</td>
</tr>
<tr>
<td>6.</td>
<td>Participating in the learning process</td>
<td>3.18</td>
<td>3.34</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.72</td>
<td>0.75</td>
<td>3.36</td>
</tr>
<tr>
<td>7.</td>
<td>Personal Development</td>
<td>3.17</td>
<td>3.12</td>
<td>0.84</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.89</td>
<td>0.84</td>
<td>3.11</td>
</tr>
<tr>
<td></td>
<td>Grand Mean</td>
<td>3.05</td>
<td>2.82</td>
<td>2.59</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.92</td>
<td>0.92</td>
<td>1.04</td>
</tr>
</tbody>
</table>

From Table 2, the Mean and Standard Deviation of the Lecturers’ Appraisal of their applications of andragogical learning principles as influenced by disciplines/areas of specializations are presented. Considering the three categories of disciplines/areas of specialization – Education, Arts and Sciences, their sub-scale means are as presented above.
Considering the grand mean ratings, which are 3.05 for Education, 2.82 for Arts and 2.59 for Sciences, it indicates that areas of specialization do not influence the Lecturers’ appraisal of their extent of application of learning principles. Since all the grand mean ratings are greater than the cut off point, it implies that all Lecturers are consistent in appraising the extent of their application of andragogical learning principles as learner-centred. This is irrespective of their area of specialization.

Discussion
The result of the study has shown that lecturers’ appraisal of their application of andragogical learning principles during instruction is learner-centred. This implies that lecturers, in their self-appraisal, apply the adult learning principles desirable for adult learners. This appears to be consistent with the views of Lieb (1991) Smith (1982) and Brundage and Mackeracher (1982) who considered the above as the best instructional styles needed to adopt by teachers of adult learners to guarantee effective and problem-solving teaching and learning.

Furthermore, the findings indicate that the areas of specialization do not influence the lecturers’ appraisal of andragogical learning principles. Hence all the lecturers’ appraised as learner-centred their application of andragogical learning principles during instruction. The mean rating scores of lecturers in the Faculties of Education, Arts and Science were 3.05, 2.82 and 2.59 (grand means) respectively. They are all learner-centred.

Conclusion
The perceived poor performance being recorded by some of our adult learners in different institutions of higher learning led to the present study. It appeared from observation that most teachers of adult learners use teacher-centred (pedagogical) approach rather than learner-centred (andragogical) approach in their instructional activities with adult learners. Lecturers’ self-appraisal of their applications of andragogical learning principles were assessed using PALS instrument. Lecturers appraised their application of andragogical learning principles during instructions as learner-centred. Furthermore, it was evident from the findings that areas of specialization do not have any influence on the appraisal of the lecturers’ application of andragogical learning principles.

Recommendations
i. Management of various institutions of higher learning should constantly monitor and assess the performance of lecturers as to their proper application of the right principles of teaching and learning especially as it affects adult learners.

ii. Heads of tertiary institutions should make an appraisal of the instructional styles of lecturers from time to time. This will not only serve as a check and a type of monitoring but will assist to know the extent to which lecturers apply the requisite principles necessary for effective teaching and learning.

iii. Workshops and Seminars should be organized from time to time for lecturers of adult education programme so as to equip them with the right principles, methodologies and skills for handling adult learners. Such an enlightenment workshops are necessary for lecturers to consider and appreciate what they do and why they do them.
References


THE SCHOOL PRINCIPALS HEALTH AND WELLNESS STATUS FOR QUALITY EDUCATION SERVICE DELIVERY IN ENUGU STATE

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Abstract
This study examined the school principal’s health and wellness status as a determinant to quality educational service delivery in secondary schools in Enugu State, Nigeria. Survey research designed was adopted for the study. The population of the study consisted of all the principals in the six educational zones numbering 283 principals. The instrument used was a questionnaire which comprised 23 items. The study was guided by two research questions. Data collected were analysed using Mean Score and Standard deviation for the research questions and t-test statistics at 0.005 level of significance for the hypotheses. The findings of the study showed that the principal’s health and wellness status has a positive influence in his educational service delivery to secondary education. The study also revealed some promotional and preventive measures to enhance the school principal’s health and wellness status. Based in the findings, the study recommended among others that the government, the principal should work towards and implement measures that will enhance the school principal’s health and wellness status for effective and quality educational service delivery.

Key Words: Principal, Health, Education, Service, Delivery

Introduction
The secondary school system is seriously facing the problem of not providing good quality education and poor service delivery. Effective service delivery is a challenge facing our schools today. In this era of more services in the field of educational leadership, the school principal is facing a lot of challenges which include population explosion of students, several reforms and development –driven (NEEDS and MDGs) programmes and new circular including HIV/AIDS, entrepreneurship, civics, computer education etcetera. The school principal’s health and wellness status determines to a large extent how effectively he contends with these and many other emerging global developments within the school system.

The school principal according to Olosunde, (2008) is an administrator who most of the times runs a school for a purpose, but who once in a while sees the need for modification and is able to effect necessary changes in the school to make it effective. He is an astute social engineer, human manager and resource optimizer. Ogakwu (2009) described the school principal as one who serves as the educational leader and chief executive of a secondary school, to manage effective relationship with students, staff, parents, community and organisations to interpret and implement educational policies and regulations in administering the school and participate in recommending educational policies, procedures and regulations to the school board, and to exercise independent decision as situation warrants. Asuquo (2008) describes the school principal as the head teacher in the school who bears the whole burden of educational structure. He is expected to raise standard, motivate
Literature is replete with certain attributes/characteristics of an effective school principal. Odo (2009) stated the qualities to include:

- Ability to listen effectively, make and implement effective decision. Have effective communication skill. Empowering, delegating teachers and encouraging them to take risks without fear of penalty for failure.
- Ability to have organizational system in place so as to be able to respond and follow on multiple requests from students, teachers and government agencies. Tough and diplomatic, a man of integrity and ability to recognize that nobody including himself is infallible.

Asiabeka (2010) observed that the school principal is at the top of the administrative leader of the secondary school. His position involves the control of human and material resources of the school as an organisation. The occupier of the office of school principalship has variously been described as a leader, executive head, supervisor, manager, school climate developer, change facilitator, chief accounting officer and the like all reflecting role perception or expectations. A good competent, effective, efficient and healthy principal is a great asset to the school as a social organisation and the nation as a whole since the present and future of any nation depends to a large extent on the quality of education it provides for the citizenry. The quality of education is determined by the quality of management in that it mobilizes and utilizes the human and material resources available to the school towards the achievement of the school’s corporate goals. The school principal’s health and wellness status determines how far these goals are achieved.

The relevance of health in every human endeavour can hardly be overstressed as ill health is an impediment to successful living. This amplifies the multidimensional nature of health and reaffirms the World Health Organisation (WHO) definition of health as a state of complete physical, mental and emotional well being and not merely the absence of disease or infirmity. This definition emphasizes three dimensional view of health – the physical, mental and social. In other words, health is wholeness of life. From this it is deduced that the health of an individual extends beyond the functioning of one’s body to include feelings, values, reasoning and interpersonal relationships. So there are degrees of health, wellness and ill-health. As an individual reaches the age of 40 (forty) and above which is the age range of most school principals, he experiences a variety of pathological problems which impinge and militate against effective performance of his administrative duties.

**Statement of Problems**

As earlier mentioned, the public secondary school system is seriously facing the problem of not providing good quality education due to poor service delivery. The school principal being the heartbeat and nexus of all activities in the school need to be healthy to effectively discharge his administrative duties maximally, if not a lot of things will go wrong and ultimately quality in service delivery will be poor. But unfortunately, some school principals probably because of the conflicting societal, professional and economic demands impacting on them are weighed down physically, mentally and emotionally and so could not provide quality educational service. It is on this light that this study tries to find out how the school principals health and wellness status positively affect his administrative responsibilities, thus improve quality educational service delivery in public secondary school in Enugu State.

**Purpose of The Study**

The purpose of the study is to

1. To find out how the school principals health and wellness status enhance educational service delivery.
2. To assess measures that could be adopted to improve the health and wellness status of the school principal

Research Questions
The following research question guided the study:
1. To what extent will the school principal’s health and wellness status affect quality educational service delivery?
2. What measures should be adopted to enhance the health and wellness status of the school principal?

Hypotheses
The following null hypothesis were formulated to guide the study
Ho:1 There is no significant difference in the mean rating scores of urban and rural principals on the health and wellness status of the school principal and quality service delivery.
Ho:2 There is no significant difference in the mean rating scores of urban and rural principals on the measures to ensure the health and wellness status of the school principal.

METHODOLOGY
Research Design
Descriptive survey design was adopted to collect data from principals.

Population for the Study
The population comprised the entire 283 principals in the six educational zones of Enugu State.

Instrument for Data Collection
The instrument for data collection was a questionnaire designed by the researcher titled “Principal Health And Wellness Status for Quality Education Service Delivery (PHWSQESD).” It is made up of two clusters consisting 23 items. Cluster 1 consisted of 12 items concerned with how the principals health and wellness status positively affect quality educational service delivery. Cluster 2 consisted 11 items on measures that will enhance the school principal’s health and wellness status. The items in the questionnaire were structured on a 4 – point rating scale of Very Great Extent (VGE), Great Extent (GE), Little Extent (LE) and Very Little Extent (VLE)

Validation of the Instrument
The instrument was validated by two lecturers from College of Agriculture and Science Education, Michael Okpara University of Agriculture Umudike, who are experts in Educational Administration and Planning and Measurement and Evaluation respectively

Reliability of the Instrument
Trial test was conducted on 40 principals from Ebonyi State. Cronbach Alpha statistics was used to compute their mean ratings which yielded ‘r’ 0.76; p<0.05.

Methods of Data Collection
The researcher with the help of research assistants distributed and collected the questionnaires from the respondents.

Method of Data Analysis
Data collected were analysed using mean and standard deviation. A mean rating of 2.50 and above were regarded as positive effect. Null hypotheses were tested with t-test of p<0.05
The results of the analysis are presented in Tables according to the research questions and hypotheses that guided the study.

Research Question one: -To what extent will the health and wellness status of the school principal affect quality education service delivery. 

**Table 1**
Mean response on principal’s health and wellness status as it affect their service delivery.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items</th>
<th>Urban Principals</th>
<th>Rural Principals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>X</td>
<td>SD</td>
</tr>
<tr>
<td>1</td>
<td>Improve on the competence of staff</td>
<td>2.77</td>
<td>1.32</td>
</tr>
<tr>
<td>2</td>
<td>Proper keeping of school records</td>
<td>3.54</td>
<td>0.72</td>
</tr>
<tr>
<td>3</td>
<td>Enhance frequent communication with Teachers and students.</td>
<td>2.95</td>
<td>0.89</td>
</tr>
<tr>
<td>4</td>
<td>Ability to adequately supervise the needs of students to ensure conducive environment for learning.</td>
<td>3.16</td>
<td>1.13</td>
</tr>
<tr>
<td>5</td>
<td>Enable him develop and promote effective use of innovative materials in the school.</td>
<td>2.77</td>
<td>1.32</td>
</tr>
<tr>
<td>6</td>
<td>Adequate monitoring of students and teachers to ensure discipline.</td>
<td>3.04</td>
<td>1.22</td>
</tr>
<tr>
<td>7</td>
<td>Ability to consult with leaders and members of the parents, teachers and community on issue concerning the school.</td>
<td>3.10</td>
<td>0.11</td>
</tr>
<tr>
<td>8</td>
<td>Ability to make learning experience more meaningful for students</td>
<td>3.20</td>
<td>0.86</td>
</tr>
<tr>
<td>9</td>
<td>Effective consultation with leaders and members of the parent-teachers and community organisation.</td>
<td>3.19</td>
<td>1.02</td>
</tr>
<tr>
<td>10</td>
<td>Effective guidance and counseling services for both staff and students</td>
<td>3.54</td>
<td>0.72</td>
</tr>
<tr>
<td>11</td>
<td>Enforcement of school to rules and regulations for school discipline.</td>
<td>3.35</td>
<td>0.87</td>
</tr>
<tr>
<td>12</td>
<td>Supervision of adequate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
application of human and material resources for quality learning.

Table I presents the summary of the responses on how the principal's health and wellness status affect quality education service delivery. All items were rated above 2.50. This shows that the principal's health and wellness status makes him render quality service for the attainment of school goals.

Research Question 2. What measures should be adopted to enhance the health and wellness status of the school principal.

Table II Mean responses of principals on measures that will help to enhance their wellness status.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items</th>
<th>Urban Principals</th>
<th>Rural Principals</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Government to adequately provide and maintain infrastructural facilities in school.</td>
<td>3.24 1.06 GE</td>
<td>2.93 1.38 GE</td>
</tr>
<tr>
<td>14</td>
<td>Sponsoring of principals to improve their professional skills.</td>
<td>2.87 0.93 VGE</td>
<td>2.72 0.60 GE</td>
</tr>
<tr>
<td>15</td>
<td>Provision for and timely release of funds for school use.</td>
<td>3.03 1.23 GE</td>
<td>2.72 0.60 GE</td>
</tr>
<tr>
<td>16</td>
<td>Provision of support service amenities for principals.</td>
<td>3.16 1.02 GE</td>
<td>2.72 0.96 GE</td>
</tr>
<tr>
<td>17</td>
<td>Adequate supply of human resources and maintenance of material resources</td>
<td>2.86 0.91 GE</td>
<td>3.16 0.94 GE</td>
</tr>
<tr>
<td>18</td>
<td>Payment of staff salaries and benefits as and when due.</td>
<td>2.95 0.89 GE</td>
<td>2.93 0.95 GE</td>
</tr>
<tr>
<td>19</td>
<td>Principals to change unhealthy life style</td>
<td>3.20 0.86 GE</td>
<td>3.24 1.03 GE</td>
</tr>
<tr>
<td>20</td>
<td>Adequate rest and relaxation.</td>
<td>3.24 1.06 GE</td>
<td>2.93 1.28 GE</td>
</tr>
<tr>
<td>21</td>
<td>Regular exercise.</td>
<td>2.77 1.32 GE</td>
<td>2.93 1.28 GE</td>
</tr>
<tr>
<td>22</td>
<td>Taking good nutrition and proper hygiene.</td>
<td>2.98 1.00 GE</td>
<td>2.75 1.12 GE</td>
</tr>
<tr>
<td>23</td>
<td>Proper management of stress.</td>
<td>2.87 0.93 VGE</td>
<td>2.72 0.60 GE</td>
</tr>
</tbody>
</table>

Table 2: Presents the mean scores on measures to enhance principal health and wellness status. All the II items rated high above 2.50. This indicates that all the measures were accepted as means of enhancing the principal’s health and wellness status.

Table 3: t-test analysis of mean difference between urban and rural principals response on the extent principals health and wellness status enhances his service delivery.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Source</th>
<th>No</th>
<th>X</th>
<th>SD</th>
<th>df</th>
<th>t-cal</th>
<th>t-val</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Urban Principals</td>
<td>198</td>
<td>2.93</td>
<td>0.95</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3 shows that the t-calculated value of 0.54 degree of freedom at 0.05 level significance. Therefore, the null hypothesis is accepted. There is no significant difference between mean responses of urban and rural principals on the extent principal's health and wellness status affect quality education service delivery.

Table 4 shows the t-calculated value of 0.43 is less than t-critical value at 1096 at 280 degree of freedom at 0.05 level of significant. The second null hypothesis is therefore accepted. This means there is no significance difference in the mean scores of principal in urban and rural areas on measures to enhance the principal’s health and wellness status.

Discussion of Findings

From the findings of the study, it is clear that a principal’s health and wellness status effect the administrative roles which positively or negatively influence his education service delivery. A principal in high level of health and wellness presents a wonderful personality. He is in a position to achieve both personal and society group goals. His input in education service delivery is enhanced. According to Odo (2009) the principal’s health and wellness status enable him to provide direction, asses, exercise influence, mobilize and work with others to articulate and achieve the shared goals, objectives, interest and intensions of all stakeholders in the school system. Ogakwu (2009) opined that the principals health and wellness status will enable him maintain sensitive and mutual beneficial relationship with the community such as the utilization of community parental resources for the benefit of school programmes and activities. In line with the above assertion, Ekwudalo (2010) observed that the principals health and wellness status helps in better communication, efficient educational service and enhanced students, staff and school community relationship. A healthy principal is disposed to provide effective staff and students personal services in the areas of staff motivation and self development, students feeding, health services, guidance and counseling for both staff and students and generally promote conducive environment for the achievement of educational goals. Such a principal finds life worth living, always happy, understanding and relate with people around him satisfactory, functions optimally and wellness status.

The respondents agreed to all the 11 items in table 2 as measures to enhance the principal’s health and wellness status. It is their general consensus that the health and wellness status of the principal will be enhanced and sustained if the government adopt such measures as providing schools with enough human material and financial resources which gives the principal an enabling environment to carry out his roles effectively. This gives credence to Madubum (2000) findings which noted that inadequate resources and facilities are stressors for some principals. He maintained that the quality of education received by students bear direct relevance to the availability of
resources and over all atmosphere in which learning takes place. The principal will be emotionally and mentally stressed if infrastructures are dilapidated, place of convenience not available and inadequate staffers who should help in moving the school to greater height.

On the issue of prompt payment of salaries by government, Abanobi (2005) observed that the issue of late payment of salary is a major cause of mental and emotional health hazard for the principal. He opined that principals and staff salaries should be paid as and when due and their promotion not stagnated. Supporting the above assertion, Odo (2009) noted that the principals take home pay is not commensurate with his productivity. He is not given any bonus, car nor house loan. The politicians only take care of themselves neglecting the teachers and the principals. Today councilors who barely passed senior school certificate examination (SSCE) receive better pay and posh cars despite the principal’s plethora of degree certificates and experiences. Even the much he receives at the end of each month cannot sustain him and his family because of inflation. All these are stressors for the principal which affect his health and wellness status.

Heaven it is said help those who help themselves. This is true to the responses of principals to items on Table 11. The principals themselves need to adopt these promotional and preventive measures for enhancing their health and wellness status, which include good nutrition, change in life style, adequate rest/relaxation, regular exercise and proper hygiene. Principals should be exposed to health education which probes into and redirects life styles, habits and behaviours that cause health problems for man. Madubum (2009) observed that health is maintained and improved not only through the advancement and application of health services, but also through the efforts and intelligent lifestyle choices of the individual and society. He stated four general determinants of health as –human biology, environment, lifestyle and health care services.

The principal should eat food rich protein, minerals, vitamins, fruits, vegetables and less carbohydrate to avoid obesity, diabetes and heart diseases. This supports Akubuo (2000) whose study observed that as one grows older he drops certain habits which is detrimental to his health. Regular exercise is good for the principal as it enhances physical, mental and emotional wellbeing of any individual. Akubuo (2000) still maintained that regular exercise improves blood circulation, help the immune system, control blood pressure, strengthen the hearts, lungs, muscles, bones. Increase emotional stability, decrease anxiety, depression, tension and stress. It should then be rightly stated that much of the ill health suffered by man could be prevented through wise and effective dissemination and inculcation of beneficial health habits and practices.

**Conclusion**

Every planned curriculum has quality built into it. This quality can materialize depending in the centrifugal circumstances surrounding its implementation of which the principal’s health and wellness status is one of them. The health and wellness status of the principal who is the nexus of the school contribute immensely to the achievement of education goals through quality educational service delivery. Achieving health and remaining in a wellness state is an active process. Some promotional and preventive measures to ensure the principals health and wellness status were discussed.

**Recommendation**
1. Government should give support to measures that ensures principals health and wellness status by ensuring that the environment where the principal operate is conducive through provision of and maintenance of human and material resources.

2. Principal’s salary should be commensurate with his work, education and experience.

3. Principals need to be motivated by giving them such incentive as car and housing loan.

4. Inculcation of health education will help the principal know and implement preventive and promotional health measures.

5. Without good health, the enthusiasm and capacity to deliver will not be there. Therefore, Nigerian Health Insurance Scheme should be provided for principals just as their counterparts in the federal school.

REFERENCES
31

ENGLISH LANGUAGE, A WALL IN FRONT OF IT USAGE IN PAKISTAN AT INTERMEDIATE LEVEL

Muhammad Nawaz Tunio
Sindh Agriculture University,
Tandojam, Pakistan

Abstract

This study focused on the merger and confrontation of the English Language and learning of the computer technology at the intermediate level in the different groups like pre-medical, pre-engineering, commerce and computer science. Data for this study was collected from the tuition center where the entire target students were found available on the same time and for same purpose.

Keywords: English language, Information and communication technology, learning, globalization.

1. Introduction

Information technology has strong integration with the organizational performance. Knowledge creation and innovation in the organizations occurs with the support of the Information Technology (Melville, et. al., 2004).

Students remained driving force for the frequent application of Information technology in the academies for the teaching and learning. Since this emerging the technology for the learning process, attitudes and competencies of students have flourished in the learning process (Knezek and Christensen, 2008).

Integration of ICT in education system is a need of the hour in Pakistan’s education institutions as this integration increases the relationship between performance and productivity. ICT driven knowledge strengthens the individuals and institutions and helps to establish standard level (Shaikh and Khoja, 2011).

IT-based study is more helpful for the students, IT use differentiates the level of the students using IT or not using IT in their studies. Technology tools develop the learning capacity of the students due to its versatile in nature (Youssef and Dahmani, 2008).

IT study in colleges enables the students to develop computer skills and understanding with new software for different uses. IT is a medium to access the new information and to share the knowledge voluntarily (Alam, 2009).
English language possesses the status of global language and has equal impact on the world countries. English language shows problems for the people who are non-native of English countries, this occurs due to inadequately trained and skilled teachers (Nunan, 2003).

Development of fundamental grammar feature is most important for the teachers as well as students; basic initiate of this feature is to have understanding of its use. English language gives linkages among the students, teachers and learning process (Conrad, 1999).

English is global language to be used in every country of the world; English comes to our help in formal and informal communication for the personal and impersonal use of routine life. cross-cultural training fulfills the requirement of English Language at local level, in the training, audio-visual aids can support the learn method among the students.

As a world recognized language, English language is prevailing in every subject and every institute for the standard information, but most of the students refrain from the English Language due to either lack of awareness or lack of proper guide. However, it is crucial to master the English Language and English language can be mastered by going through literature which provides style, vocabulary, ideas, enlightens their minds through reading of literary texts and enables them to speak fluently (Studymode, 2011).

World has become a global village where local languages are no more applicable in global network, therefore, English is more prevalent in the young generation of developing and developed countries (Souravbose, 2012).

English language provides a new mental landscape for oral and written communication to the teachers and students. In a digital age, English language is leading language for the complete and proper use of new technology (The Observer, 2011).

**2. Objectives:**
- To study how English language affects computer study?
- To study in which language (Local, National, International) computer study can be easy?

**3. Methodology**
Study and survey of English language syllabus and teaching methods at Intermediate Level. Survey, Questionnaire or test from students about the usage of IT and hindrances in it. Interviews of IT teachers (do they think or have experience that English is problem for students in usage of IT).
### 4. Result:

What is your section?

<table>
<thead>
<tr>
<th>Section</th>
<th>Total No.</th>
<th>Attempt</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-medical</td>
<td>50</td>
<td>42</td>
<td>8</td>
</tr>
<tr>
<td>Pre-engineering</td>
<td>50</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Commerce</td>
<td>50</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>IT</td>
<td>50</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Do you have access to a computer at home?

<table>
<thead>
<tr>
<th>Access</th>
<th>Total No.</th>
<th>Attempt</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>50</td>
<td>25</td>
<td>5</td>
</tr>
<tr>
<td>No</td>
<td>50</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Sometimes</td>
<td>50</td>
<td>13</td>
<td>6</td>
</tr>
</tbody>
</table>

Do you have access to the internet at home?

<table>
<thead>
<tr>
<th>Access</th>
<th>Total No.</th>
<th>Attempt</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>50</td>
<td>17</td>
<td>4</td>
</tr>
<tr>
<td>No</td>
<td>50</td>
<td>24</td>
<td>4</td>
</tr>
<tr>
<td>Sometimes</td>
<td>50</td>
<td>7</td>
<td>4</td>
</tr>
</tbody>
</table>

Do you e-mail for communication?

<table>
<thead>
<tr>
<th>Access</th>
<th>Total No.</th>
<th>Attempt</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>50</td>
<td>17</td>
<td>4</td>
</tr>
<tr>
<td>No</td>
<td>50</td>
<td>24</td>
<td>4</td>
</tr>
<tr>
<td>Sometimes</td>
<td>50</td>
<td>7</td>
<td>4</td>
</tr>
</tbody>
</table>

How important do you think IT is for your learning?

<table>
<thead>
<tr>
<th>Importance</th>
<th>Total No.</th>
<th>Attempt</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very important</td>
<td>50</td>
<td>33</td>
<td>6</td>
</tr>
<tr>
<td>Important</td>
<td>50</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Some importance</td>
<td>50</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>No importance</td>
<td>50</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Do you think IT/Internet helps you in your studies?

<table>
<thead>
<tr>
<th>Assistance</th>
<th>Total No.</th>
<th>Attempt</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, but could do a little more</td>
<td>50</td>
<td>34</td>
<td>6</td>
</tr>
</tbody>
</table>
Can you easily search the material needed to you?

<table>
<thead>
<tr>
<th>Choice</th>
<th>Yes</th>
<th>No, needs to do a lot more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, definitely</td>
<td>28</td>
<td>2</td>
</tr>
<tr>
<td>Yes, some of the time</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>No, not really</td>
<td>4</td>
<td>8</td>
</tr>
</tbody>
</table>

Books are more helpful in learning or Internet/Computers?

<table>
<thead>
<tr>
<th>Choice</th>
<th>Books</th>
<th>IT/Internet</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td>12</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>IT/Internet</td>
<td>4</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Both</td>
<td>34</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

English language is essential for the computer use?

<table>
<thead>
<tr>
<th>Choice</th>
<th>Yes</th>
<th>No</th>
<th>Sometimes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>42</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

Do you feel difficulty in using IT because of English Language?

<table>
<thead>
<tr>
<th>Choice</th>
<th>Yes</th>
<th>No</th>
<th>Sometimes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>20</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>No</td>
<td>16</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Sometimes</td>
<td>14</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

For the use of IT, students face which problem?

<table>
<thead>
<tr>
<th>Choice</th>
<th>English Language</th>
<th>Reading</th>
<th>Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Language</td>
<td>3</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>Reading</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>23</td>
<td>6</td>
<td>2</td>
</tr>
</tbody>
</table>

Browsing/Searching related material

<table>
<thead>
<tr>
<th>Choice</th>
<th>English Language</th>
<th>Reading</th>
<th>Vocabulary</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Language</td>
<td>1</td>
<td>6</td>
<td>2</td>
</tr>
</tbody>
</table>

Which skill of English Language is more difficult in comprehending on computer/Internet?

<table>
<thead>
<tr>
<th>Choice</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>13</td>
</tr>
</tbody>
</table>
Computer based reading of text has difficulty in:

- Vocabulary: 31%
- Fluency: 5%
- Comprehension: 12%

While using computer, what are effects of vocabulary?

- Vocabulary is too much difficult: 17%
- Vocabulary rate is increases: 24%
- You refer dictionary to understand meanings: 19%

Which activity is more interesting on computer?

- Games: 13%
- Reading: 24%
- Movies: 9%

Is it easy to learn by short videos or by reading texts/lectures?

- Reading Text: 19%
- Verbal Lectures: 14%
- Short movies/aids: 12%

Would you be willing to have more access to information technology both in school and at home?

- Yes: 36%
- No: 3%
- Sometimes: 8%

Which language should be medium of instruction for computer use?

- Local language (Sindhi, Urdu, etc.): 33%
Siraiki, Punjabi, Balochi, etc) 6
National Language (Urdu) 50 2
International Language (English) 50 4 8

5. Discussion:

A questionnaire surveyed from the students of intermediate shows their response in a numerical form in above mentioned chart. There are 16 questions conducted from the 50 students of different specialization at intermediate like Pre-medical, Pre-engineering, Commerce, and information Technology.

Student’s response towards questionnaire was confident and very interesting as all of them participated actively and supported the data collection method.

However, it is inferred from the response of the students that most of students do not have easy access to the technology package; technology package includes the computer, internet and other technological tools like printer, scanner, etc.

Most of students interested in computer study face the English Language as a barrier in learning process due to poor proficiency in English language, they preferred to study and learn computer study in their native language so that they can easily understand all the commands and operations of the computer.

However, these students need to develop their capacity as native or local language can be useful for them in their personal understanding and its use in their local region. English language is a global language that is used in worldwide in all the countries of the world, so English Language can bridge them with the people across the world.

6. Conclusion:

Contribution of English language is unavoidable in the study of the information technology, hence, it should be focused to flourish the soft skills in the students and bring them up to compete the global challenges and local issues. Students from the developing countries are suffering from language problem, but mostly from the rural areas in the developing countries as the students from the urban areas can access and avail some facilities and opportunities.

7. Recommendations:

- Students should be properly training and capacity should be developed in English language proficiency in order to understand the technological trend.
- Government should introduce a scheme under which poor students should be provided a technology package.
8. Acknowledgement:

Author is thankful to Mr. Muhammad Ali Noonari (Lecturer Computer Science) and his institute Times academy, Hyderabad, Sindh Pakistan for the facilitation to collect the data and to achieve the research objective.

References:


