



LEADERSHIP STYLES OF SOCIAL STUDIES TEACHERS AND ACADEMIC ACHIEVEMENT OF JUNIOR SECONDARY SCHOOL STUDENTS IN SOCIAL STUDIES IN CALABAR METROPOLIS, CROSS RIVER STATE NIGERIA.

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ABSTRACT

This study was carried out to determine leadership styles of Social Studies teachers and academic achievement of junior secondary school students in Social Studies in Calabar Metropolis, Cross River State-Nigeria. Ex-post facto research design was adopted. The simple random sampling technique was used in selecting the six public secondary schools used for the study. A sample of two hundred junior secondary school three students (JSS 3) was drawn from the population and used for the study. Three research questions and hypotheses were formulated to guide the study. Data were collected using two researcher made instruments tagged "Social Studies Teachers Leadership Styles Questionnaire (STLSQ) and Social Studies Achievement Test (SOSAT) The Data Collected was analysed using the Analysis of Variance (ANOVA) and the Fisher Least Square Difference (SLD) was used in the multiple comparism. The findings of the study revealed significant differences in the academic achievement of students based on their teachers' leadership styles. Students taught by teachers with autocratic and laissez-faire leadership styles had a lower LSD value compared to students taught by teachers with democratic leadership styles. Students taught by teachers with democratic styles performed academically higher than those taught by teachers with either autocratic or laissez-faire leadership styles. Based on this, it was recommended amongst other things that Social Studies teachers imbibe more of democratic rather than autocratic or laissez faire leadership styles in their classroom and that educational administrator should organize workshop and seminars for teachers on proper classroom management.

KEYWORDS: Leadership, Leadership styles, Autocratic, democratic, Laissez faire.

INTRODUCTION

There is no gainsaying the fact that the ultimate realization of the aims and objectives of education is a function of teachers' variables. The teacher is therefore responsible for translating policies into actions and principles into practice in

the classroom interaction with the students (Odey,2014). Besides, Adetula (1993) opined that effective learning results from effective teaching and student's performance is the keyword to justify this. The teacher, in the educational process plan, organises and controls the student's activities and consequently appears

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in the position of a leader. However, leadership has been observed as fundamental to the success of any group or organization. Behaviours displayed by teachers in the classroom environment during the communication process in teaching activities show their classroom leadership styles (Odey and Odey, 2019). Teachers are classroom leaders and may apply different classroom leadership styles (Ekici, 2004). Therefore, leadership style(s) in the classroom cannot be overemphasized in teaching and learning. It goes a long way in determining performance of both the teachers who is the boss, director, manager administrator and organizer (Amadikwe, 1991). Moreover, Okoroji, Anyanwu and Ukpere (2014) postulated that the interaction between the teacher and the student is one of the most important aspects of educational process, but the most neglected. Privacy and autonomy enable each teacher to manage and organize his own classroom the way he prefers to handle it. Good & Brophy (1995) have identified some general attributes of teachers that contribute to their success in socializing students. These attributes include: Social attractiveness, based on a cheerful disposition, friendliness, emotional maturity, sincerity and other qualities that indicate good mental health and personal adjustment. Ego strength, exhibited in self-confidence that allows teachers to be calm in a crisis, listen actively without being defensive, avoid win lose conflicts and maintain a problem-solving orientation. Realistic perception of self and students, without letting perceptions become clouded by romanticism, guilt, hostility or anxiety. Enjoying students while at the same time, maintaining their identity as an adult, a teacher and an authority figure. It is good to be friendly but not overly familiar. It is also important to be comfortable with the group without becoming a group member. Clarity about teacher's role, and comfort in playing them, enables teachers to explain coherently to students what they expect. It is necessary to be patience and determined to work with students who persist in testing limits. Acceptance of individual, though not necessarily all of his or her behavior, and making this attitude clear to students. The ability to state and act on firm but flexible limits based on clear expectations is another requisite. It is also important to keep rules to a minimum and liberalizing them as students become more independent and responsible over time. Developing these personal qualities and using research-based principles for managing the

classroom will set the stage for student socialization and will go a long way toward minimizing the need for disciplinary interventions. According to Paun (1999), studies conducted in the field of classroom management present the teacher authoritative, democratic and Laissez-faire leadership styles. The teacher therefore in some situation makes all the decisions about the organization of the group and the activities performed in the class. The teacher does not share with the students the overall plan of activities, nor the criteria for assessing individual or group performances of the students. On the other hand, the teacher does not participate either too much in the activities. The teacher avoids making decisions alone and encourages the student to participate in the class activities. The students are offered the opportunity to choose from the array of learning activities. The teacher presents the common criteria of assessment and criticism and observes together with the student, acting in a way like a member of the student group. Conversely, a teacher could also decide to be passive as the class leader limiting his participation as much as possible, leaving the students to take all the initiative. The teacher exhibits a friendly attitude but by all he does suggests indifference and non-involvement (Odey and Odey, 2018).

However, Social Studies is one of the core courses offered at the junior secondary school as stipulated in the National Policy on Education (FRN, 2004). Striking at the heart of Social Studies is an educational intent of making students to become knowledgeable and purposeful "responsible citizens" (Udoukpong, Emah and Okon, 2006). Social studies curriculum integrates concepts, processes and ways of thinking drawn from the diverse disciplines of Humanities, Social Sciences and Pure Science. In particular, Social Studies curriculum promotes students growth as individuals and citizens of a nation. Mkpa (2005) confirmed that the implemented curriculum determines the extent to which educational objectives are achieved. Social Studies teaching then require teachers who can create and implement various creative curriculum plans that actively involve students in the learning process. The methodology of style(s) employed by the teacher in instructional delivery may be of great significance in curriculum implementation. Arising from the above, the researcher sought to find out the differences that may exist in junior secondary school Social Studies academic achievement based on the their teachers' leadership styles.

STATEMENT OF THE PROBLEM

The major concern of the school organization is the success or effectiveness of teaching/ learning process. Teacher leadership approach is an idea whose time has come to be given proper attention. The unprecedented demands being placed on the schools today require effective and efficient leadership at every level. Yet many schools are still organized as though all the important decisions are made by administrators and carried out by teachers or by the teacher and the students, passive recipient. Besides, the issue of leadership styles in teaching and learning have been raised in many instances by trying to find out the causes of poor standard of education in Nigeria. The present decline in academic achievement coupled with the saying that "No school can be greater than her teachers" is an issue of great concern. It seems to be out of the mind that teachers' leadership style in the classroom may be an outstanding determinant of student academic achievement. It is also pertinent to note that some leadership styles enhance teachers/students relationship while some impose dissatisfaction. It is necessary to determine how each of these leadership styles influences teaching and learning.

SIGNIFICANCE OF THE STUDY

It is anticipated that the results of this research would be of immense benefit to the teachers, teacher training institutions, curriculum planners, school administrators and students alike.

To the teachers, the results of the study may further give an insight to the role of the teacher in the classroom as a leader in the classroom. He helps in building up the learner's personality and his emotional stability. Learning involves a child's personal experience with the environment and the texture of the learning environment created depends substantially on the teacher.

To the teachers training institutes, findings from this study is expected to provide a basis for improving Social Studies teachers' programmes by focusing on ways to improvement in retraining teachers and would be teachers in effective classroom management; a basis for developing a more effective model for teaching Social Studies. Consequently, when curriculum planners become aware of the new model through seminars and publications, they may apply it as a model in future curriculum planning for effective learning and studying of Social Studies in the classroom. Besides, the study may also identify the causes of poor activity of individuals in Social Studies. It could also alleviate the problems of assigning

Social Studies to unqualified and ineffective teachers in schools.

More so, school administrators may advantage from the results of this research when they study of the results of the study, through its publication, they may utilize them for the enhancement of the teachers' professional characteristics that hinder performance of students in Social Studies. This, they could do by supervising the work of their teachers regularly in order to enhance teacher's attitude to work. They may also encourage them to attend workshops and seminars or recommend them for in-service training. When these are done, information of course and competence in method of teaching could be enhanced.

To the students of Social Studies, their performances are likely to improve as a result of this study since improved/appropriate method of teaching may also lead to better student's academic performance.

LITERATURE REVIEW

The Concept of Leadership, Teacher's Role and Leadership Styles.

There are varied meaning of the term leadership due to different perspectives and contexts within which the word is observed. According to Koontz and Wehrich (1988), leadership is seen as an art of influencing people so that they will strive willingly and enthusiastically towards the achievement of group goals. Dressler (1997) opined that leadership is the management of the human resources in order to manage their performance by inducing them to work willingly. Hersey and Blanchard (1988) also portray leadership as the activity of influencing people to strive for group objectives. Leadership is an important element in the process of direction. A leader guides and direct people towards achieving their objectives (Nyamboga, Gwiyo, Njuguna, Waweru and Nyamweya, 2014).

Cole (1997) defined leadership as a dynamic process at work in a group whereby one individual over a particular period of time and in a particular organizational context, influences the other group members to commit themselves freely to the achievement of group tasks or goals. Hoyle (2003) quoting Lunenburg asserted that observers have pondered why some successful school leaders use a consistent leadership style in all situations and others use a more situational style. Moreover, researchers seem silent in seeking answers about the impact of certain leadership styles across schools.

Davidhizar & Cramer (2000) maintained that there have long been formal leadership roles for

teachers as department chairs, team leaders and a variety of other positions, but titles are less important than actually functioning as effective change-agents. Teachers exhibit leadership by: Participating in professional teacher organizations, including holding positions of influence; Making student and adult learning the priority; Setting high expectations for performance; Gearing content and instruction to standards; Creating a culture of continuous learning for adults; Using multiple sources of data to assess learning; Activating the community's support for school success; Taking part in school decisions, including working on teams with administrators to plan school improvements; Defining what students need to know and be able to do, including developing standards for curriculum and assessments; Sharing ideas with colleagues, including leading professional development programs for colleagues; Being a mentor to new teachers. Helping to make personnel decisions, including the hiring of new teachers and administrators; Improving facilities and technology; Working with parents, including the development of better links between schools and homes; Creating partnerships with colleges and universities to prepare future teachers; Becoming leaders in the community, and Leading efforts to make teachers more visible and communicate positive information.

Researchers have also identified three styles of leadership (Wiles, 1990; Liberman, Beverly and Alexander, 1994). These include the Autocratic, Democratic and Laissez-faire leadership styles. The autocratic leadership style is also known as the authoritarian style of leadership. Here, power and decision making resides in the leader. The leader direct group members on the way things should be done. The leader does not maintain clear channel of communication between self and clear channel of communication between self and the subordinates. He does not delegate authority nor permit subordinates to participate in policy making (Syalic and Jack, 1990; Hoy and Miskel, 1992; John, 2002).

Fred (2001) stated that in a democratic system the students are surely involved in any efforts aimed at finding solution to the problems and planning the classroom of the organization. The leader in this style makes for easy flow of information to dispel rumours and also provide avenue of steady feedback mechanism. Vain (2000) emphasized that a democratic leader does not normally takes arbitrary orders and decision as he regards the subject as partner in progress. He is always mindful and sensation to

the needs and welfare of the staff and strives always to motivates them. A teacher with democratic leadership style employs guidance in decision making, especially decision affecting his class by giving paramount attention their feelings by sharing information and creating a pleasant working relation in the classroom. Kojo (2001) avers that that "in conflict management and resolution, the democratic leader will usually employ wide consultation, dialogue, persuasion and above all, compromise as veritable tools for achieving a stable and enduring tranquility within the system". At all times, the democratic leader makes available his advice and suggestion to his class. The democratic style of leadership on the other hand emphasizes group and leader participation in the making of policies. Decisions about organizational matters are arrived at after consultation and communication with various people in the organization. The leader attempts as much as possible to make each individual feel that he is an important member of the organization (Heenan and Bemnis, 1999). In this style of leadership, a high degree of staff morale is always enhanced (Mba, 2004).

Laissez-faire leadership style allows complete freedom to group decision without the leader's participation. Thus, subordinates are free to do what they like. The role of the leader is just to supply materials. The leader does not interfere with or participate in the course of events determined by the group (Talbert and Milbrey, 1994). According to Yilmax (2009) Laissez-faire classroom management is a style where teachers display little behaviour to control students and demand little from them. In this style, teachers accept and watch students' behaviours and reactions, and never hurt their feelings and emotions and hardly say "no" to their students. In this style, there is no continuous discipline, teachers become friendly with students at once and really appreciate them, plus treat their students in a friendly manner. Teachers have difficulties in refusing student's demands. However, in this style, innocuous behavior of teachers may lead to uncontrolled students actions and occasionally classes get out of control. Teachers with this style are much loved by their students.

Therefore, Okoroji, et al (2014) in a research examined the effect of leadership styles on teaching and learning process. The population comprises the academic staff of selected secondary schools in Owerri North Local Government Area (LGA). The academic staff members selected includes junior and senior staff

members, as well as male and female staff. Sixty-six teachers, which constitute the population of academic staff selected from secondary school makes up the sample for the study. Stratified random sampling technique was used for sample selection. Self-structured questionnaire was the instrument used for data collection. The method of data analysis used on this research work is ANOVA statistics. Based on the summary of the findings, Gender to a high extent, influences the leadership style used in classroom teaching and learning process. The result also reveals that majority of secondary school teachers in Owerri North used democratic leadership style more than other types of leadership styles. Having listed some findings of the research work, it is necessary to make recommendation. Both male and female teachers should be exposed to constant and relevant seminars, workshop by the school management boards in order to ensure that these teachers are equipped with better understanding of leadership style as well as better combination of these styles.

In furtherance to these, Yusuf (2012) carried out a study to investigate the influence of principal's leadership styles on students' academic achievement in secondary schools in Osun State. The descriptive survey design was employed on a sample of 50 school principals from randomly selected schools. The findings of the study revealed that autocratic leadership style had a negative influence on students' academic achievement while democratic styles however had a positive influence on students' academic achievement. Laissez-faire leadership style had no significant influence on students' achievement. Based on this finding, school principals were encouraged to adopt the effective style of leadership.

Similarly, Nyamboga et al (2014) in their research to determine leadership styles on the performance of public secondary schools in National Examinations in Tana, Kenya used nine secondary schools in the region and compare their performances from 2003 to 2009. Forty respondents were selected using the simple random sampling and the findings revealed that a positive relationship between principals leadership styles and student's performance. Autocratic style was found to have negative effect on the students' performance in national examinations.

Moreso, Drobot and Rosu (2012) carried out another study on teachers' leadership style in the classroom and their impact upon high school

students in Romania. The result from their study were not significant as they asserted that one may not claim that one leadership style is the best for better or higher students' academic achievement but situational. To Drobot and Rosu, the portrait of the ideal teacher is not only based on the teacher's communication and relationship skills but on the quality of explanations and teaching (pedagogic talent). Similarly, Duze (2012) study investigated the leadership styles of principals and the effect on job performance of teachers and supportive staff in senior secondary schools in Delta State of Nigeria. The population comprised all 358 senior secondary schools in the State from which a sample 120 was selected through the simple random sampling technique. Three instruments were used for data collection – principals' leadership style questionnaire (PLSQ), teachers' (TJPQ) and supportive staff (SSJPQ) job performance questionnaires. The data collected were analyzed using frequencies, percentages, ANOVA, and regression statistics. Results showed that autocratic leadership style was the most commonly used among principals of senior secondary schools in Delta State, followed by laissez-faire, and lastly democratic. Job performance was found to be low for both categories of staff in the three leadership variables. Interestingly, supportive staff indicated highest level of job performance under laissez-faire principals and lowest under autocratic principals. For teachers job performance was highest under democratic and lowest under autocratic principals. Also, job performance of staff was found to be more significantly related to democratic leadership style than either autocratic or laissez-faire leadership style. It was therefore recommended that principals should adopt the democratic leadership style to boost better job performance among staff and in essence enhance administrative effectiveness and students' academic performance.

Adeyemi (2010) carried out a study to investigate principal's leadership styles and teacher's job performance in senior secondary schools in Ondo State, Nigeria. 281 secondary schools were used out of this population, a sample of 7460 teachers were used. It was found that democratic leadership style yielded a higher teacher job performance compared to other styles. It was therefore recommended that the use of autocratic and laissez-faire leadership styles by principals should be discouraged as much as possible in schools as high teachers performance could also translate to high academic achievement of students.

Moreover, Tilmaz (2009) in a study to ascertain primary school teachers' views about pupil control ideologies and classroom management styles in Turkey used a sample of 200 primary school teachers from Kutahya's Province Turkey. Using the "Classroom Management Profile Scales" and pupil ideology scale data were collected and analysed and the findings from the study showed that no one best styles is appropriate for any class situation.

RESEARCH QUESTIONS

The following research questions were put forward:

- i. How does teachers' autocratic leadership style influence students' academic achievement in Social Studies?
- ii. To what extent does Social Studies teacher's democratic style influence students' academic achievement?
- iii. How does teachers' laissez-faire leadership style influence students' academic achievement in Social Studies?

RESEARCH HYPOTHESIS

The following hypotheses were formulated to guide the study:

- i. Social Studies teachers' autocratic leadership style does not significantly influence students' academic achievement.
- ii. There is no significant influence of teachers' democratic leadership style on students' academic achievement in Social Studies.
- iii. Social Studies teachers' laissez-faire leadership style does not significantly influence the academic performance of students.

METHODOLOGY

The study adopted the ex-post facto research design since the effect of the independent,

variables on the subjects has already occurred; the researcher has no control over it. The population of the study consisted of all JSS 3 Social Studies students in public secondary schools in Calabar Metropolis (Calabar South and Calabar Municipality) totalling 6461 students as gotten from the State Secondary School Education Board.

Using the simple random sampling, the researcher selected six schools and from the six schools, a sample of two hundred JSS 3 Social Studies students was used for the study.

The researcher utilized two instruments for the study; Social Studies Teachers Leadership Styles Questionnaire (STLSQ) and the Social Studies Achievement Test (SOSAT) the STLSQ was used to measure the teachers leadership styles variables while the Social Studies achievement test was used to determine the student's academic achievement.

The instruments were subjected to validity and reliability. To establish the validity, the researcher consulted research specialist in measurement and evaluation to ensure that the instrument measure what it was expected to measure. For the reliability, a pilot test of the instrument was carried out using a sample of twenty students outside the research area. After the trial test, the data were analysed and it was found out that the instrument was reliable enough for data collection as it yielded a co-efficient of 0.08 using the Kuder Richardson method.

The instruments were administered at to the Social Studies students after due permission was taken from the respective school principals, there were then retrieved for analysis. It had one hundred per cent retrieval.

RESULTS.

TABLE 1: One-way Analysis of Variance (ANOVA) of the Influence of Teachers' Leadership Styles on Academic Performance of Students.

Groups	N	\bar{x}	SD	
Democratic L.S	123	34.74	3.01	
Authoritarian L.S	35	33.20	2.47	
Laissez-faire L.S	42	32.50	2.98	
Total	200		3.05	
Source of variance	SS	Df	Ms	F
Between group	184.23	2	92.11	10.95*
Within group	1655.77	197	8.41	
Total	1840.00	199		

P.05, df=2,197, critical F=3.06

The result of the analysis presented in table 1 revealed that the calculated F-value of 10.95 is statistically greater than the critical F-value of 3.06 at 0.05 level of significance with 2 and 197 degrees of freedom. With this result, the null hypothesis was rejected while the alternate hypothesis was upheld. Based on the significant

F-value, a detailed multiple comparison analysis using fisher's least square difference (LSD) analysis will done in order to show the independent groups between which the significant difference lies. The result of the analysis presented in table 2.

TABLE 2: Fisher's Least Square Difference (LSD) Multiple Comparison Analysis of the influence of teachers' leadership styles on academic performance of students.

Teachers leadership style	Democratic (N=123)	Authoritarian (N=35)	Laissez-faire (42)
Democratic LS	34.74a	1.54b	2.24
Authoritarian LS	2.77c	33.20	0.7
Laissez-faire LS	4.32	1.05	32.50

Note:

- Group means are placed along the diagonal
- Differences between group means are placed above the diagonal
- Fisher's LSD t-values are placed below the diagonal

The result of analysis presented in Table 2 indicate that the significant difference lies among the academic performance of students taught with the three teachers' leadership styles but the highest significant difference lies between students taught by teachers with autocratic and laissez-faire leadership styles with LSD value of 4.32 while students taught by teachers with democratic leadership style preformed academically better than those of other groups with mean value of 34.74. This was followed by students taught by teachers with authoritarian leadership style with mean value of 33.20 while students taught by teachers with laissez-faire leadership style have the mean of 32.50. The implication of this result is that there is a significant influence of leadership style of teachers on academic performance of students in Social Studies in Calabar Metropolis.

DISCUSSION OF FINDINGS

The study results showed that students taught by teachers with democratic, authoritarian and laissez-faire leadership styles differ in terms of academic performance. The finding of this study is in accordance with the finding of the earlier study of Yusuf (2012) and the influence of principal leadership styles and students' academic achievement in secondary schools in Osun State, Nigeria. The study the adopted the

descriptive survey design and a sample of 50 school principals revealed that authoritative leadership has a negative effect on students' academic achievement while democratic leadership however had a positive influence on students' academic achievement. This result is also in support of the findings of Okoroji et al (2014) whose result revealed that majority of the secondary school teachers in Owerri North the students' academic achievement in the research area was high because majority of the teachers used democratic leadership style.

However, the result of the study is at variance with the result of findings of Drobot and Rosu (2012) and Duze (2012) which revealed non-significant influence of leadership styles on students' academic achievement. To Drobot and Rosu, the portrait of the ideal teacher is not only based on the teacher's communication and relationship skills but on the quality of explanations and teaching (pedagogic talent). However, the researcher of the view that this variations maybe due to the cultural and psychological differences and other variables combined that exist in the research areas.

CONCLUSION

In conclusion, it is pertinent to note that the leadership style of a teacher contributes immensely to the success of teaching and learning in schools. Therefore, irrespective of the disposition of the teachers, effort should be geared towards creating a friendly teacher-student atmosphere and relationship for learning/change in behaviour.

RECOMMENDATIONS

Based on the implications of the findings, the following recommendations are made.

1. Social Studies teachers should imbibe more of democratic than autocratic or laissez faire leadership styles in their classrooms to enhance students' academic achievement.
2. Educational administrators should also ensure that teachers at their recruitment stage be given appropriate orientation on instructional delivery strategies and classroom management for better students' scholastic outcomes.
3. The Cross River State secondary school education management board should organize seminars and workshop for teachers on proper classroom management.

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PERCEPTION OF UNDERGRADUATE STUDENTS ON AVAILABILITY AND UTILIZATION OF INTERACTIVE WHITE BOARD ON PERFORMANCE IN BIOLOGY

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ABSTRACT

The aim of this research is to assess availability and utilization of Interactive White Boards (IWBs) in teaching and learning of Biology among Undergraduate students in Sokoto State. The research is a descriptive survey with a population of 587 and a sample size of 234 100 level students of Science and Vocational Education department who are offering biology courses at Usmanu Danfodiyo University Sokoto. A self-designed questionnaire tagged 'Assessment of the use of Interactive White Board in Teaching and Learning Biology' (AIWBTLB) and Biology Performance Test (BTP) were used as instruments for data collection. The instruments were validated by experts and exhibited reliability index of 0.87 and 0.77 using Cronbach alpha and split half method respectively. The data generated was statistically analyzed using descriptive statistics and Structural Equation Modeling (SEM). Findings revealed that the required IWBs for teaching and learning Biology were not available; and the available IWBs were not adequately utilized. Equally important, a positive relationship was found between IWBs utilization and undergraduate students' performance in biology. It was however recommended among others that, government; management of universities should as a matter of urgent importance provide adequate IWBs devices for the teaching and learning of Biology in the universities; and to provide modalities in which students are encouraged to make full use of IWBs in the teaching and learning of Biology.

KEYWORDS: Interactive white board, availability, utilization, students' performance

INTRODUCTION

The teaching and learning of biology have experienced a renaissance in tertiary institutions in recent years. The current focus on restructuring of tertiary institutions curricula is perhaps surpassed only by the emphasis placed on the development of scientific skills. Edward (2015), suggested that improvement of student

achievement has always been one of the main goals of education. In addition to student achievement, positive student attitudes toward learning science, biology inclusive are an important outcome of education.

Interactive white board (IWB) is a big pad, interactive touch screen LCD monitor delivers innovation to the world of education. It simply enhances visual communications by transforming

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presentations, training sessions, or classroom lectures into creative and interactive experiences. Smith, (2005) defined an IWB as a 'large, touch sensitive board, which control a computer connected to a digital projector. Interactive boards were originally developed for office settings, and are therefore considered relatively new innovation to education. Research suggests that every school in the future will have an interactive whiteboard in every classroom and that the technology has revolutionised learning (Amoo, 2004).

Availability here is whether someone or something can be accessed or adequately ready to use. Utilization on the other hand is the action of making practical and effective use of something available; the act of using something available; the manner in which something available is used.

According to Muhammad, (2017), utilization has to do with the extent to when facilities are provided to schools, there are three possibilities, they are either used effectively or inefficiently or they may remain unused. When item of equipment is maximally used such equipment is effectively utilized. If the equipment is not maximally used it can be said to be under-utilized. When there is so much pressure on the use of equipment this may result to over utilization which could lead to breakdown of such item of equipment. Lewin (2000) however reported that science facilities are only important when they are used. Similarly, Awoniyo (1999) reported that the availability of resource input into the education system has no value for achieving educational objectives if they are not actually put to use. This is necessary because once the facilities are misused they cannot offer the best service required.

Today, teacher education is much improved than it was before and a few decades after independence. The NPE, released in 1977 and revised in 1981, 1998, 2004, 2007 and 2013 clearly articulates the importance attached to teacher education and affirms that 'no education system can rise above the quality of its teachers'. The policy makes it mandatory for all teachers in Nigeria to be trained and stipulates NCE as the minimum qualification for the profession Badamasi (2010). It also provides that teacher education shall continue to take cognizance of changes in methodology and in the curriculum, even as it underscores the need for teachers to be regularly exposed to innovations in their profession. It further recognizes the need

for in-service training as an integral part of continuing teacher education.

Unfortunately, teacher educators in Nigeria are faced with major challenges of insufficient knowledge and use of modern tools in a globalizing world. The knowledge, and use, of computer technology as well as the internet is a necessity for all teachers to guarantee the relevance of the system and its products in the 21st century. Many schools in Nigeria still operate the traditional education system with little or no adaptation to modern tools (Omadibi, 2006). Facilities must be provided by government and other stakeholders to enable teachers and their students access to these facilities as the world is gradually becoming a global village. For future teachers to be able to operate effectively and efficiently, they must imbibe the new technologies and methodologies of the modern times.

Faculties of Education in universities are to prepare teachers that feed secondary schools and higher levels of education in Nigeria with manpower demands. Students are expected to encounter to a reasonable level the new technologies that will help them deliver in the classroom after graduation and eventually leave school and are gainfully employed as teachers. A modern tool like interactive board has the potential to transform the way education is delivered and promotes new opportunities therefore, enhancing scholarship and enquiries. This can only be attained when teachers, who are still the key to learning, have developed and utilized the necessary pedagogical competencies for instructional delivery through IWB resource utilization. Of all the modern technology being introduced into the classroom, interactive white board (IWB) have been found to be the most promising for various reasons among these are the fact that the IWB uses all the three-learning style; visual, audio and kinaesthetic. The most widely claimed advantage of IBs is that they motivate student, because lessons are more enjoyable and interesting resulting in improved attitude and performance.

Biology is a science subject offered by pure science students or science education students from Faculties of Education across Nigeria. Biology as a Science subjects attracts the great number of both science oriented and art base students (Nwachukwu & Nwosu, 2007). Biology provides a platform for teaching student the ability to apply learned concepts and principles in solving everyday science related problems. Omadibi (2006), stated that the cardinal objective of biology science education is that, the student

at the end of the studies should acquire: adequate laboratory and field skills in science; meaningful and relevant knowledge in science; ability to apply biology knowledge to everyday life in matter of personal, community health, and agriculture; reasonable and functional scientific attitude and ability to teach these rudiments to lower level of education. Biology curriculum emphasizes an experimental science with its root in laboratory and request that teachers should be guided by this philosophy in the teaching and learning process (Emendu, 2007).

MODERN USAGE OF INSTRUCTIONAL MATERIALS IN BIOLOGY LEARNING PROCESS

Modern pedagogical theory and practice stem from the notion that school was created for learners, not vice versa. This notion conditions the teaching to be based on knowledge, interests and experiences of the learners that are amended and improved along with their development in school. Hui, (2013): In modern teaching, the focus of teaching and learning shifts from the learning of ready knowledge towards the process of knowledge acquisition. The role of the teacher is more responsible than in traditional teaching, due to the fact that he/she must find out what the interests of students are and then monitor and properly direct them. Instruction must be directed to the student's activity, while the teacher has to 'teach as little as possible' and act so that 'the student discovers as much as possible'. Amoo, (2001), emphasised that teachers and students must follow the schedule of procedures:

- ❖ Observation and recording,
- ❖ Open (interactive) communication and cooperation,
- ❖ Monitoring, researching, realizing, experimenting,
- ❖ Application of the acquired knowledge and experience in new situations,

These procedures, among other things, provide proper mental development (cognitive, emotional) and proper socialization of the student. Traditionally, teachers have emphasized lecture, text, and demonstration, with the intent that students would comprehend and recall this information at the conclusion of a unit or chapter. However, teachers practicing modern gadgets-based instruction place less emphasis on these traditional approaches and greater emphasis on fostering inquiry in student centered ways.

ACTIVITY THEORY

Allan (1971) as the profounder of the theory was quoted in Karim (2013), to proposed the activity theory through dual coding of memory, he explained the power effect of imaginary, that he had uncovered, he emphasise on application of imageries for accelerating the acquisition of knowledge. This theory supported by Karim (2013), that said the use of modern gadgets in teaching and learning processes yield positive result. His theory placed considerable influence on identifying the appropriate sequence of instructional events that promote successful learning. In essence manipulation of these ideas (gain attention, inform learners of objective of the lesson, provide guidance etc.) when coupled with appropriate external condition of leaning can stimulate the presumed internal process in short and long-term memory and cause learning to occur. Within activity theory, signs and tools mediate learning. So, in this study, the IWBs were seen as artefacts that shape the ways in which learning can occur. The teachers found the resources that were available through the IWB – such as pre-planned lessons and digital tools (protractors, rulers, etc.) – offered different ways of working with the students. Not only where the resources shaping the ways in which teachers taught and planned, but also, they impacted on other aspects of their work.

Activity theory above or activity learning are prevalent in the use of IWB's in the classroom. IWBs allow for this learning environment to flourish as they provide students with opportunities to interact and engage in a student-centred approach. Activity learning is learning that is an active process and student-centered in the sense that, with the teacher's help, learners select and transform information, construct, and make decisions (Cika, 2016). Therefore, this work hinged on this theory because when teachers use IWB's appropriately they seek to engage students with interactions in a student-centred learning environment, that looks to scaffold learning with the assistance of teachers. The theory is found relevant to this study.

STATEMENT OF THE PROBLEM

An existing problem is the lack of data-based research on the interactive white board's impact on students' attitude and academic performance in tertiary institutions, level of availability and the extent of its usage is not yet ascertained. This warrants the need to explore the ways teachers used these tools. This is because IWB may not

be available, in some cases, teachers are not use to it, or students' attitude to its usage is not encouraging. It was also observed that some schools do not have IWB that can meet up the number of biology class/ lesson taking place at a time and it is not clear if the schools that have IWB use it adequately. Recent reports indicated unfavourable academic performance in science related subjects, Biology inclusive. Though, the report does not separate the results of students who were exposed to IWB in the analysis if any. Based on the above-mentioned problems, this research assessed the availability and utilization of IWBs in teaching learning Biology among undergraduate science education students in Usmanu Danfodiyo University, Sokoto

OBJECTIVES OF THE STUDY

The general objective of this study is to assess the availability and utilization of Interactive Board in teaching learning Biology among undergraduate science education students in Usmanu Danfodiyo University, Sokoto

The specific objectives are to:

- i. Assess the availability of interactive board in Usmanu Danfodiyo University, Sokoto
- ii. Evaluate the extent of utilization of interactive white board in Usmanu Danfodiyo University, Sokoto
- iii. Assess the relationship between the use of IWB and student academic performance in biology.

RESEARCH QUESTIONS

The following research question guided the research;

- i. Are there interactive white board in Usmanu Danfodiyo University, Sokoto?
- ii. What is extent of utilization of interactive white board in Usmanu Danfodiyo University, Sokoto?
- iii. Will there be an impact of interactive white board on students' academic performance in biology?

Hypotheses

The following null hypotheses were proposed for the study:

- i. There is no significant relationship between interactive board and academic performance biology students

SIGNIFICANCE OF THE STUDY

The paramount concern of this research is attached to the impact of IWB in teaching biology

among undergraduate students. This provides bases for some assessment of the availability and possible utilization of IWB in teaching and learning of biology subject in teacher training institutions and within the Faculties of Education.

The device is designs mainly to engage students and assist teachers to deliver unique presentation through creating a wide range of learning opportunities which could be an investment in modernizing classroom to meet the need of the digital generation of nowadays. This is supported by the view of Glover & Miller, (2015), They found that, although interactive whiteboards are theoretically more than a computer if it is only being used as an adjunct to biology teaching its potential remains unrealized. This study is of great significance to the educational policy planners, curriculum designers, management of tertiary institutions, and the department of higher education in the sense that, the result obtained from the study can help the department to know the standard of use of modern tools skills among the students.

It is significant to parents, since the study design to find out the impact of interactive white board on student attitude and academic performance, if it happened that the performance is low then proper measures will be taken to improve the student performance and learning conditions so as to improved their potentialities and attitude positively towards learning. Moreover, the study can help students in their learning by adopting different skills and experience provided by the use of interactive white board after taking corrective measures of teaching of the problems realised from influence of interactive board on students' performance it will enable him to learn effectively and improved his performance.

Finally, the problems that may surface as a result of the study would give room for further research in this area, and it would serve as a reference material to other researchers in the future.

METHODOLOGY

Descriptive survey research design was used in this study. Survey design is a plan in which a sample is taken from a well-defined population; data is collected from the sample and used to make decision for the entire population. Akwuezu (2004) further asserted that simple survey research design is considered the best as it is interested in collecting original data for the purpose of describing condition as they exist in their natural form. Survey can elicit information about attitude that otherwise difficult to measure using other technique.

Population of the Study

The population of this study comprises all 100 Level students of the Department of Science and Vocational Education, Faculty of Education and Extension Services, Usmanu Danfodiyo University, Sokoto, Nigeria in 2019/2020 academic year. They are 587 and within the age of 16-25, and are both male and female students.

Sample and Sampling Techniques

A sample size of 234 was used in this study as it is the required sample in accordance with the research advisors (2006). Meanwhile, purposive sampling technique was used to select only Biology/Education students among other combinations such as Chemistry/Education, Physics/Education and Mathematics/Education. According to Akwizuuelo (2004), purposive sampling is a non-probability which is characterized by the use of judgment and deliberate effort to obtain representative sample. The researcher's judgments are based on: Students who have used interactive board for biology lectures only were selected for the study.

Instruments for Data Collection

A self-design questionnaire titled 'Assessment of the use of Interactive White Board in teaching and learning Biology' (AIWBTLB), was used as the instrument for data collection on students' views about IWB utilization and the level of availability of interactive board and its accessories in the University. Equally important, Biology Performance Test (BTP) was used to ascertain the academic performance of selected UGI Education/Biology students. The content of the BTP was from the UGI content of general biology course. To ensure the validity of the research instruments, the instruments were given to experts in the Department of Science and Vocational Education and Department of Biology, Faculty of Education and Extension Services and

Faculty of Science Usmanu Danfodiyo University Sokoto for validation. The observations made by these experts were in areas of language, appropriateness of the items and relevance of the items in relation to the objectives of the study. All the observations were incorporated in to the instruments and adjustments were made accordingly.

The researcher established the reliability of the instruments by trial tested the instruments at University of Science and Technology, Aliero, Kebbi state which was not part of the sampled institution. Questionnaires were administered on 30 students and Cronbach alpha was used to determine the reliability coefficient of 0.87 which signified that the instrument was reliable. Also the BPT was administered to 30 students, split half method was the reliability index of 0.79 was obtained.

Data Analysis and Result

The researcher analyzed the data collected for this study and the results were presented in the form of frequency counts and simple percentage while Structural Equation Modelling (SEM) was used to test the null hypotheses. The reason for using SEM was because the researcher correlates the impact on the two variables which were inform of scale. At alpha level of 0.05 level of significance using SPSS- version 23.0

Data Presentation

This section presented the data collected from the study.

Answering research questions: the research question was answered using descriptive statistic as follows:

Research question 1: Are there interactive boards in the Usmanu Danfodiyo University?

Table 1: Availability of IBs

s/no	Variables	Frequency	Percentage (%)
A	Not Available	122	62.90
B	Available	112	37.10
C	Total	234	100.00

Source: field work (2021)

Table 1 above shows 122 (62.90%) items on the checklist of IBs are not available, while only 112 items of IBs are available representing 37.10% out of 234 items of IBs used in the University. This implies that there is unavailability of IB facilities in the University

Research question 2: What is extent of utilization of interactive white board in Usmanu Danfodiyo University, Sokoto?

Table 2: Utilization of interactive board

S/no	Variables	F	Percentage
A	Not Utilized	118	54.3
B	Utilized	116	45.7
			100%

Source: field work (2021)

Table 2 above indicated that 118 items with 54.3% been observed by the researcher are not utilized in various Biology lesson. While 116 items with 45.7% utilized. This means there is underutilization of IBs in the study area

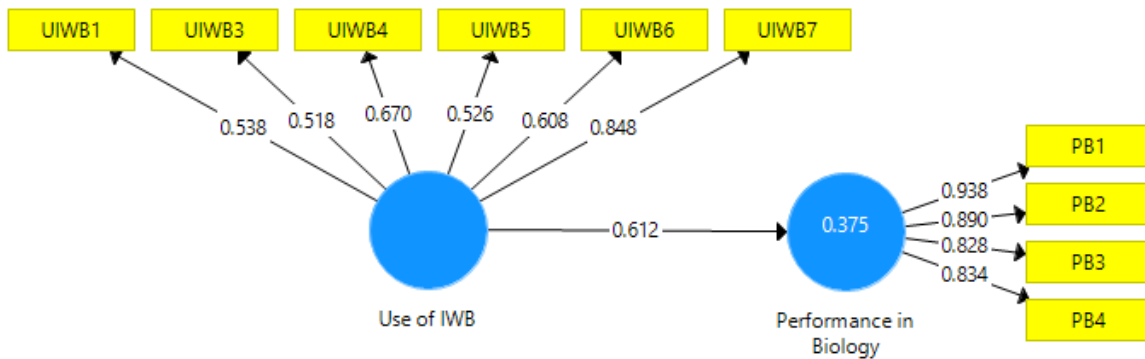


Figure: Validated Model of Relationship between IWB on PB

Figure 2: Path Analysis of IWB on PB

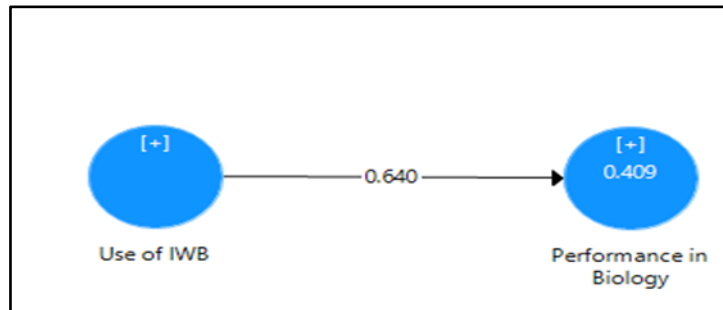


Table 3: T-statistics and P-value of Interactive White Board on Performance in Biology

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
UIWB -> PB	0.612	0.618	0.118	5.178	0

The result of the path analysis shows that Interactive white Board (IWB) has significant direct positive relationship on students' performance in Biology (PB). The relationship is positive with a path coefficient ($\beta = 0.640$, $t \geq \pm 1.96$). According to Byrne, (2010) "The standard decision rule for a relationship between constructs to be significant is (t-value ≥ 1.96 and p-value is ≤ 0.05). This was applied here to decide the significances of the path coefficient between dependent variable and independent variable. So, since the t-value is $> \pm 1.96$, it therefore, means the relationship between interactive white board and student performance in Biology is significant and interactive white board has influence on students' performance in Biology. Thus, the hypothesis is not rejected. In this study the interactive white board accounts .40% variance on performance in Biology.

SUMMARY OF MAJOR FINDINGS

It has been envisaged that science education especially Biology can only be achieved through quality and adequate provision of modern equipment like IWB for teaching and learning, conducive learning environment, proper science teaching method as well as students' right attitude to learning (olatoye,2014). The major objective of this study was to assess and find out the availability, utilization and impact of interactive board on students' attitude to learning biology and academic performance among undergraduate students of Usmanu Danfodiyo University, Sokoto. Thus, the summary of the major findings was given below:

1. IWBs were not adequately available in the university
2. IWBs were found to be underutilized for biology class. It has been observed that, there was no effective utilization of IWB by lecturers and students in the teaching and learning of Biology in the selected courses
3. There is significant relationship between IWBs and students' academic performance

DISCUSSION OF THE FINDINGS

In the course of assessing the availability and utilization of IWBs in the teaching and learning of Biology in Usmanu Danfodiyo University, Sokoto, finding of the study on availability of IWB in the university, revealed that 122 out of 234 (59%) of IWB system were not available, only 133 (41%) available. The finding agrees with the work of Okobia (2016), who conducted a research on Availability and Teachers' Use of IWB as modern Resources in the Implementation of Basic science in Junior Secondary Schools in Edo State". The results showed that IB and resources were not adequately available. The study also revealed that most IWB materials and resources were not available in the schools for the teaching of biology. This finding is also in line with that of Ebeniza and Oluchi (2015) on Availability of IWB in Teaching and Learning of English Language in Secondary Schools in Okigwe Educational Zone, Imo State, Nigeria. The findings revealed that the IWB facilities found in the schools were very few, except for hand-sets. Equally Richard, Mathew and Ugbe (2011), in a research, Assessing Undergraduate Students Accessibility to and Utilization of Internet Services using IWB in Cross Rivers University of Technology Multi Campus System, found out that, the campuses had no efficient internet services for the students to learn from, and inadequate IWBs for other learning activities. In another support to this finding, Muideen (2011), in a study, An Assessment of Students Usage and Availability of IBs Facilities in Colleges of Education: Problems and Prospects concluded that there was unavailability of IWB resources in the colleges' classes.

Finding on utilization of IWB in the university revealed that, there was underutilization of IWBs by teachers and students in the process of teaching and learning of Biology in the university. Only some few were found to be utilized as agreed to by both the lecturers and student. The finding agrees with Duru and Ozoji (2011) who

reported that computer teachers in secondary schools do not utilize IWBs hard ware and internet applications in lessons; and at times teachers lack the required skills to operate IWBs; secondary schools lack the necessary infrastructures required for utilization of the IWBs resources and applications. Similarly, Olufunde, Oyetola and Kehinde (2010), in a study on Access and Utilization of IWB among Lecturers and Students in South West Nigerian Public Universities, found that 89% of the respondents claimed that they had no access to IWB facilities. Ololube (2006), also studied on teacher IWB utilization competencies in sub-Saharan Africa, found out that teachers were not well trained in using IWBs in teaching. In further support of the present finding, Ehikhamenor (2003), in a study on Utilization of Internet information using IB by Nigerian Scientist in 10 Universities observed that, scientists in Nigeria are not using modern gadgets on information services still rely on print materials for information services. Furthermore, view was provided by a study conducted by Ebeniza and Oluchi (2011) on utilization of IWB in teaching and learning of English language in Okigwe educational zone, Imo State, Nigeria, which revealed that the available IB facilities were not to a great extent used by the teachers in the schools.

CONCLUSION

Based on the findings from the analysis of the data collected for this study and results of the tested hypothesis, the study concludes that, the required IWB system for the effective teaching and learning of biology in the universities were averagely not available; only a few of the IWB system were found to be available, only a few of the supposed IWB were found to be available. The lack of IWB facilities can be attributed to government lack of funding and encouraging lecturers through provision and training in IWB facilities. In terms of utilization, the study confirms that, students do not effectively utilize the available IWB in the process of learning Biology. Underutilization can be as a result of lack personal or supply of the IWBs accessories in biology class. It was also established that, lecturers were not motivated adequately in the use of the IWB in teaching due to several factors. This can be attributed to lack of sponsorship to train in IWB application. As a result of the findings, it was also established that, problems of human and material resources, and lack administrative policies regarding the use of IWBs for the teaching and learning of biology has been

the major constraints in the application of IWBs devices in the process of learning in the tertiary institutions.

RECOMMENDATIONS

From the analysis of the data collected for this study and result of the tested hypotheses, the following recommendations are made:

- i. Stakeholders of in the management universities should as a matter for urgent importance provide adequate IWB devices for the teaching and learning of Biology in the institutions.
- ii. There is need for effective utilizations of the IWB that are available in the institutions. This is because despite inadequacy of these gadgets but still impacted in the students learning and academic performance in biology.

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TEACHERS' PEDAGOGIC VARIABLES AND STUDENTS' ACADEMIC PERFORMANCE IN SOCIAL STUDIES IN CALABAR EDUCATION ZONE, CROSS RIVER STATE-NIGERIA

ODEY, EDWARD OGAR AND ODEY ESTHER EDWARD

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ABSTRACT

This study was carried out to determine teacher pedagogic variables and the differences that exist in the academic performance of secondary schools' students in Socials Studies in Calabar Education Zone, Cross River State, Nigeria. The population of the study comprised of all the 126 Social Studies teachers and 6476 JSS3 students in the 72 public secondary schools in Calabar Education Zone. Since all the 126 Social Studies teachers and 6476 students were manageable for the study, purposive sampling was adopted. Ex-post facto research design was used for the study. Data collection was obtained with the use of researcher's made questionnaire tagged Teacher Pedagogic Variables Questionnaire (TPVQ) and Social Studies Academic Records (SSAR). The instrument had reliability co-efficient 0.793 for the TPVQ. Results from the analysis show no significant difference in the academic performance of students in Socials Studies in terms of teachers' educational qualification and experience. It was therefore recommended among others that teacher training institutions should scrutinize would-be teachers to ensure that their interest is continuous in their teaching subject.

KEYWORDS: Teachers' Pedagogy, Variables, Academic Performance, Social Studies.

INTRODUCTION

The ultimate realization of any set of aims of education depends on the teacher. He is responsible for translating policy into action and principles into practice in the classroom interaction with the students. The ability to deliver the lessons properly depends to a great extent on the competencies of the teacher. Adetula (1993) opined that effective learning results from effective teaching and students' academic performance is imperative to justify this.

Teachers are the hub of any education system. They are accountable for what goes on in education. If students are expected to know more and be able to apply their knowledge skillfully, then teachers must be models for such teaching. This implies that high quality teaching is a key ingredient in curriculum implementation and evaluation.

It is in realization of this fact that the Federal Government of Nigeria (FRN, 2004) states that no education system can rise above the quality of its teachers. Teachers are largely responsible for

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the translation and implementation of educational policies, curriculum or course offerings, instructional material packages and assessment of learners' outcome (Maduewesi, 2003). Similarly, Lassa (2000) posited that the critical role of the teacher in formal education is to initiate learning process, facilitate learning skills, co-ordinate learning sequence, assess learning efficiency and indeed pivot the entire educational development. These fundamental functions can only be effectively discharged where the teacher possesses all the necessary traits, characteristics and professional competence. Akpan, (1998), stressed that teachers generally occupy a unique position in any society as they have the major responsibility but in addition, they are required to help the students develop skills and knowledge needed for understanding of the environment, acquisition of values and for the unity of the society. Darling-Hammond (2001), pointed out that teachers determine what happens in the classroom, as fully prepared teachers are more effective in the classroom, and their students demonstrate larger achievement gains than students whose teachers are less effective and unprepared in knowing how to guide and encourage individual student's learning; how to plan productive lessons and how to diagnose students' problems. Fully prepared teachers have an in-depth knowledge of content and how it can be taught effectively.

Wenglinsky (2000) observed that teachers' classroom practices greatly influence students' academic performance and that more attention need to be paid in improving classroom practices. Students' achievement increases when they have teachers who are trained in developing higher order thinking skills, who are skilled at implementing hands-on experience in the classroom, and who are trained to work with special populations. Donovan, Branford and Pellegrino (1998), stated that teachers must be highly skilled in working with students to develop true understanding of concepts. The level of skill that a teacher must have to ensure students understands takes time to develop. It does not happen overnight. Dovan et al (1998), therefore, in their study also found out that teachers must be very skilled at working with students' pre-existing and mistaken ideas about how the world works. Teachers must be able to device formative assessments that examine the understanding of the students. All of these principles and data provide strong evidence that content alone, while necessary, is not sufficient

for a teacher today. Clinical practice and professional study are crucial.

Rivkin, Hanushek and Kain (2004), showed that the influence of teachers on students' academic achievement is many times greater than any other commonly observed variable. In line with this view, Cooper (2002), identified some traits possessed by each teacher to include teacher's approach, ability, cheerfulness, dependability, enthusiasm, fairness, honesty, intelligence, morality, interest, self-concept and patience. The author explained that these traits are the determinants of what happens in any classroom environment.

Moreso, Adeyemo (2005), remarked that no profession in Nigeria has suffered reversal of fortune than teaching. This has affected the commitment expected of the teachers. This then implies that the quality of service rendered by an ineffective teacher affects academic performance of learners. Similarly, Akiri and Ugborugbo (2009), observed that, considering governments' huge investment in education, its output in terms of quality of students have been observed to be unequal with government expenditure. Consequent upon the observed deterioration in the academic performance attitude and value of secondary school students, one wonders if the high failure rates and poor quality of students is not a reflection of the instructional quality in the schools.

STATEMENT OF THE PROBLEM

The National Policy on Education (2004) stipulated that secondary education is an instrument for National development that fosters the worth and development of the individual for further education and development, general development of the society and quality of educational opportunities to all Nigerian children, irrespective of any real or marginal disabilities. The role of secondary education is to lay the foundation for further education and if a good foundation is laid at this level, there is likely to be no problems at subsequent levels. However, different people at different times have passed the blame of poor performance in secondary schools to students because of their low retention, low achievement motivation and the likes (Aremu, 2000; Aremu and Oluwole, 2001; Aremu and Sokan, 2003).

Mezieobi and Domike (1996) observed that, there is a dearth of professionally trained Social Studies teachers in Nigerian classroom hence, the employment of history, geography, government, economics teachers as Social

Studies teachers. Since these teachers are not grounded by training in the instructional communicative demands of social studies in the classroom, they resort to verbalism in Social Studies classroom instead of the utilization of instructional practices, strategies, and communication mode that make for effective communication in the Social Studies classroom setting. The teacher, therefore, erroneously sees himself as the repository of knowledge, which must be drilled into the learners' heads, dominates classroom communication irrespective of whatever modes of communication. His teacher centric communication pattern makes students passive recipients without a corresponding feedback.

Meziobi and Domike (1996), further stressed that, while Social Studies in Nigeria emphasizes the investigative – orientated methods and techniques, which encourages a reasonably democratized classroom setting in which students freely communicate and share meanings, feelings and ideas, the Nigerian Social Studies teachers more or less, employ in their interactive instructional setting the heuristic or expository methods and techniques which makes the learners passive in the classroom, in terms of non-participation in the teaching – learning process and inhibit their communication zeal.

Moreso, Adeyemo (2005), remarks that no profession in Nigeria has suffered reversal of fortune than teaching. This has affected the commitment expected of the teachers. This then implies that the quality of service rendered by an ineffective teacher affects academic performance of learners. Similarly, Akiri and Ugborugbo (2009), observed that, considering governments' huge investment in education, its output in terms of quality of students has been observed to be unequal with government expenditure. Odey and Odey(2019) further buttressed that consequent upon the observed deterioration in the academic performance, attitude and value of secondary school students, one wonders if the high failure rates and poor quality of the students is not a reflection of the instructional quality in the schools.

The question therefore, is what is the cause of poor academic performance of students? Is the fault entirely that of teachers or students or both of them? Is it that students of today are non-achievers because they have low intelligent quotient (IQ) or is it in teacher variables (personal characteristics)? This study therefore sought to find out the variables that are peculiar to the teachers, notably, teachers' educational

qualification and teaching experience how it relates to the difference that exist in the academic performance of students in Social Studies.

LITERATURE REVIEW

TEACHERS' EDUCATIONAL QUALIFICATION AND STUDENT'S ACADEMIC PERFORMANCE

Interest in students' performance and teacher qualifications has intensified among education policy makers and researchers (Odey and Odey, 2018). Studies have consistently shown that teacher quality whether measured by content, experience, training and credentials or general intellectual skills are strongly related to students' academic performance (Bobbitt & Mcmillen 1994, Goldhaber & Anthony 2004). Adebile and Adeyemi (2008) asserted that researchers and analysts argued that assigning experienced and qualified teacher to low performing schools and students is likely to pay off in better performance gaps.

Conversely, Hanushek (1990) surveyed the results of 113 studies on the impact of teachers' qualification on their students' academic achievement. 85% of the study found no positive correlation between the educational performance of the students and the teachers' educational background. The USA Science Report Card (1990) surveyed almost 20,000 students in grade 4,8 and 12. The survey demonstrates that there is no relationship between the science achievement of students and the certification level or advanced degrees of their teachers.

Ferguson (1991), Ehrenberg and Brewer (1995) asserted that students learn more from teachers with strong academic skills. According to these researchers, teachers' assignments depend on their qualification of the subject(s) being taught. Middle and high school students learn more from teachers who hold Bachelor or Master's degree in the subjects they teach and from experienced teachers than they do from less experienced ones. In a study on human resource and organizational achievement, Egungum (1992) found that the placement of only the right employees in the right jobs, at the right time and places assist greatly in attainment of organizational set goals and objectives.

Similarly, Bond, Smith, Baker and Hattie (2000), assessed two samples of teachers recruited from among those who had attempted to obtain National Board Certification in the areas of Middle Grade Level/Generalist, or Early Adolescent Level/English Language Arts. One of

the comparism (N=31) consisted of those who did not achieve Board Certification through assessments; the other group consisted of those who achieved Board certification through assessments (N=34). All the teachers were well experienced and had prepared diligently for the examinations and spent considerable amount of time and money to demonstrate that they were accomplished teachers. The result of the study was very significant as the Board-certified teachers, in compares to those that failed to meet the Board standard on the assessments, excelled with statistical significance found in 11 of the 13 compares of the features. Thus, NBCTs were found to exhibit higher measure of use of knowledge, the depth of their representation of knowledge, their expressed passion, and their problem-solving skills. Bond, et.al (2000) therefore, concluded from this study that identifying and certifying teachers that are producing students who differ in profound and important ways from those taught by less qualified teachers. These students appear to exhibit an understanding of concepts targeted in instruction that is more integrated, more coherent, and at a higher level of abstraction than understanding achieved by other students. Darling-Hammond (2000) opined that teachers' teaching qualification is a major quality of the teacher. This means that the qualification of a teacher matters when it comes to effective teaching. Darling-Hammond States that certificates or licensing status is a measure of teacher qualifications that combines aspects of knowledge about subject matter and about teaching and learning. Its differences in licensing requirements, but a standard certificate generally means that a teacher has been prepared in a state approved teacher education program at the undergraduate or graduate level and has completed either a major or a minor in the field(s) to be taught.

TEACHERS TEACHING EXPERIENCE AND STUDENTS' ACADEMIC PERFORMANCE

Teacher characteristics such as years of teaching experience have been investigated to determine their effect on student outcomes (Sanders and Rivers, 1996; Wright and Horn 1997). Iheanacho, (2002) opined that right from the associationists to the cognitive theorists, the need for experience has never been ignored. The stimulus – Responses (S-R) theorists believe that repetition is essential for the formation of association between stimulus and response. In postulating the law of effect, Thorndike (1913) emphasized

the role of practice implying that teachers with long experience on the job are bound to be more knowledgeable in their specialized areas than those with less experience. In postulation his famous Law of Effect, Guthrie (1946) believes that since skill represents a population of habits, learning appears to accumulate with repetition, although individual habit or atomic unit is learned at full strength in a single repetition. Hull (1951) emphasized the role repetition plays not only in habit formation, but also in habit strength. Therefore, less experience results in low the productivity of the teachers (Heise, 1991). Similarly, Okam (1992) investigated the characteristics of Social Studies teachers and academic attainment of students and opined that the longer the years spent in teaching, the greater the skills and their commitment. Okam, looked at experience as the acquisition of knowledge and skills through long term participation.

Santrock (1995) asserted that newly employed workers tend to encounter problems with their job and in personal adjustment. This is because the career is different from the individual's role. It is crucial to meet such unanticipated expectations and conditions and to adjust to the new career roles in adult development. Lawrenz (1995) observed that more experience is not enough to mark any positive difference in the classroom student. Lawrenz pointed out that teaching fails when a teacher fails to learn, no matter how old he might be in teaching. In other words, a teacher might be on the job for a long time, but if he fails to keep himself abreast of current trends of events in his chosen field, then experience serves no useful purpose. He observes that the effect of experience was "constant" after it was initially gained, refresher courses were therefore necessary for teaching effectiveness.

Fieldman (1996) postulated that rank, age and years of experience of teacher are the basic factors leading to teacher effectiveness in the classroom. Fieldman observed that newly employed teachers are usually rated as less experience than teachers that have stayed long in the teaching profession with so many years of teaching. Fieldman contended that experience is gained through observation Blocks and many years of teaching contact with students. Newly employed or beginning teachers do not have this type of experience, thus have less of actual classroom experience.

Moreover, Green (1996) opined that teachers' have unique roles to play in the curriculum process. He observed that the best experience

that will give rise to effective teaching is the number of years of teaching experience of the teacher in the classroom. Good teaching is mastered by practice, implying that, the longer one teaches, the better one teaches and the better will one's learners perform in assessment as well as behaviour change. Green (1996) therefore maintains that when a teacher is experienced, he is in a better position to handle contingencies in the classroom. He submits that experience backed up by relevant academic qualifications exerts positive influence on the academic attainment of students. Greenwald, Hedges and Laine (1996) found also in their meta-analytical study that teaching experience had a positive and significant effect on student achievement. Conversely, Hanushek (1997) wrote that 71 percent of the student he reviewed did not find any result to support a relationship between teaching experience and student's achievement. Similarly, Hawkins, Stancavage and Dossey (1998) found their meta-analysis that no significant relationship exists between teachers experience and scholastic outcomes of students.

PURPOSE OF THE STUDY

The main purpose of this study is to find out teachers' pedagogic variables and students' academic performance in Social Studies. Specifically, the research sought to:

- i. find out the relationship that exist in student's academic performance in Social Studies based on teacher's educational qualification.
- ii. find out the influence of teachers' teaching experience on academic performance of students in Social Studies.

RESEARCH QUESTIONS

In order to accomplish the purpose of the study, the following research questions were put forward:

- i. How does teachers' educational qualification relate to students' academic performance in Social Studies?
- ii. How does the teachers' teaching experience influence students' academic performance in Social Studies?

RESEARCH HYPOTHESES

The following hypotheses were formulated to guide the research.

- i. Teachers' educational qualification does not significantly relate to student's academic performance in Social Studies

- ii. There is no significant influence of teachers' experience on student's academic performance in Social Studies.

METHODOLOGY

The research design adopted for this study was the Ex-post facto research design. The population of the study consist of Social Studies teachers and students in junior secondary three (JSS3) in Calabar Education Zone. Data obtained from the Cross River State Secondary School Management Board (Planning, Research and Statistics Unit) shows that the total number of Social Studies teachers in the area is one hundred and twenty-six (126) and six thousand four hundred and seventy-six students (6476). These comprised of male and female teachers with various degrees of experience. Most of them have a basic teaching qualification. That is, Nigerian Certificate in Education (NCE) and a few others have earned a university degree. The subjects of the study comprised of one hundred and twenty-six (126) Social Studies teachers in the 72 schools in Calabar Education Zone. The population is made up of Social Studies teachers teaching JSS 3 in the seventy-two (72) schools in the research area. There are teachers with different educational qualification.

The sampling technique adopted for this study was the purposive sampling. It was adopted because the entire population was used for the study, since the population under study was manageable. This study involved the use of two researcher made instruments; Measurers of Teacher Pedagogic Variables Questionnaire (TPVQ) and 2011/2012 JSS 3 Social Studies Academic Records. (SSAR). To ascertain the extent to which the instrument measured what it purports to Measure, the Instrument (TVQ) was given to three (3) research experts. One from the Faculty of Education, University of Calabar, Calabar and two from the Faculty of Education University of Uyo. The items were carefully and independently scrutinized, comments and suggestions were applied to improve the quality of the items. To determine the reliability of the instrument, a pilot test was done using 20 teachers outside of the study are. The TPVQ was administered once and the Cronbach's alpha analysis used to determine the reliability. The result of the analysis revealed a high range of reliability from 0.753 to 0.793.

PRESENTATION OF RESULTS

Hypotheses one: Teachers' educational qualification does not significantly relate to student's academic performance in Social Studies. Teachers' qualification is a categorical variable while academic performance is a

continuous variable. One-way analysis of variable (ANOVA) was therefore used in testing the hypothesis because there are five level of education qualification of teachers. The results are shown in Table1.

Table 1: Result of one-way Analysis of Variance (ANOVA) on how Students differ in Social Studies performance based on teachers' educational qualification.

Teachers' Qualification	N	X	SD		
NCE/Diploma/TCII	8	60.00	16.90		
PGDE	16	49.38	18.61		
Ph.D	12	54.68	14.53		
B.Sc/B.Ed	67	49.03	17.22		
M.Sc./M.Ed	23	55.22	15.41		
Sources of variance	Sum of Squares	Df	Mean squares	F	Sig. Level
Between Groups	1490.337	4	372.584		
Within Groups	34302.520	121	283.492	1.314	.269
Total	35792.857	125			

$P > 0.5$, $df = (4, 121)$, critical $f = 2.46$

The results in Table1 shows that students taught by teachers with NCE/Diploma/TCII have the highest mean academic performance of ($X = 60.00$, $SD = 16.90$) followed by those taught by teachers with M.SC/M.Ed ($X = 55.22$, $Sd = 15.43$); Ph.D ($x=54.58$, $SD=14.53$), PGDE ($x=49.38$, $SD=18.61$) and B.Sc/E.Ed ($x=49.63$, $SD=17.22$) in decreasing order of magnitude of mean academic performance.

Entries in Table 1 also shows a lower calculated f- value of 1.314 which is greater than the critical f-value of 2.46 at 0.05 alpha level with 4 and 121 degree of freedom. The result is not significant, hence the null hypothesis that students do not significantly differ is Socials Studies performance

based on teachers' educational qualification is retained. The implication of this result is that a significant difference does not exist in student's academic performance in Social Studies in terms of teachers' educational qualification in the research area.

Hypothesis 2: There is no significant influence of teachers' experience on student's academic performance in Social Studies. Teaching experiences is categorised while academic performance is continuous. Thus, one-way Analysis of Variance (ANOVA) was used in testing the hypothesis at 0.05 level of significance. The summary of the result obtained is presented in Table 2.

Table 2: Result of one-way Analysis of Variance for how teachers' experience influence student's academic performance in Social Studies.

Teachers Experiences	N	X	SD		
1-5 years	52	54.13	16.50		
6-10 years	34	52.35	17.76		
11-15 years	16	49.38	13.15		
16-20 years	11	45.00	18.44		
20 years and above	13	46.15	18.73		
Sources of variance	Sum of squares	Df	Mean squares	F	Sig. Level
Between Groups	1293.592	4	323.398	1.134	.344
Within Groups	34499.265	121	285	118	
Total	35792.857	125			

$P > 0.5$, $df = (4,124)$, critical $f=2.46$

As shown in Table 2 students taught by teacher with 1-5years experience have the higher mean academic performance ($X=54.13$, $SD =16.50$). There are followed by those taught by teacher with teachers with teaching experiences of 6-10 years ($x=52.35$, $SD = 17.76$), 11- 16 years ($x = 49.38$, $SD = 13.15$); 32 years and above ($x=46.15$, $SD = 16.73$) and lastly 16-20 years ($x=45.00$, $SD = 18.44$) in decreasing order of magnitude of mean academic performance of Social Studies students. The results of the Analysis of Variance (ANOVA) also indicates that the calculated f-value of 1.134 is less than the critical f=value of 2.46 at 0.05 level of significance and 4,124 degrees of freedom. Hence, the calculated f value is not statistically significant. In other words, teachers experience does not translate to the difference that exist in academic performance of students in the research area.

DISCUSSION OF FINDINGS

The result of the data analysis in Table 1 is not significant due to the fact that the calculated f-value of 1.314 is greater than the critical f-value of 2.46 at 0.05 alpha level with 4 and 121 degree of freedom; this result means that there is no significant difference that exist in students' academic performance in Social Studies based on teachers' educational qualification. This result may be surprising because it is expected that students should learn more from a highly qualified teacher than those of a lower qualification. But it is pertinent to note that educational qualification does not translate to commitment to work. This result may however be

due to the environment in which the study took place.

However, the result is in corroboration with the opinion of Hanushek (1990) who found no positive correlation between educational performance of the students and their teachers' educational background.

Similarly, the USA Science Report Card (1990) found out that that no relationship exists between the achievement of students and the certification level or advanced degrees of their teachers. The result of the analysis caused the null hypothesis to be retained.

The result of the data analysis in Table 2 is not significant due to the fact that the calculated f-value of 1.34 is less than the critical f-value of 2.46 at 0.05 level of significance at 4, 124 degree of freedom; the result means that teachers experiences does not influence the difference that exist in academic performance of students in Social Studies. The reason for this result may not be unconnected to the fact that though teachers experience matters, but more is not always better. The impact of experience is strongest during the first few years of teaching; after those marginal returns diminish. Teachers tend to show the greatest productivity gains during their first few years on the job, after which their performance tends to level off. Besides, experience on the job does not automatically results in effective instructional delivery as some level of commitment is needed to enhance teaching effectiveness.

The result is in consonance with Hanushek (1997) who found out that 71 percent of the student he reviewed did not find any result to

support a relationship between teaching experience and student's achievement. Similarly, Hawkins, Stancavage and Dossey (1998) found their meta-analysis that no significant relationship exists between teacher's experience and scholastic outcomes of students.

CONCLUSION

Considering the findings of this study, it was also concluded that teachers' educational qualification and experience does not translate to the differences that exist in student's academic performance in Social Studies in the study area.

RECOMMENDATIONS

From the findings of the study the following recommendations were made for adoptions:

1. The teacher training institutions, should scrutinize the would-be teachers very well to see if their interest in the subject will be continuous. The perception of anything sort of this should be discouraged and should result to discontinuation by shifting over to specialized and train in another subject. This is because failure to do so will be detrimental to the teaching of the subject in schools.

2. Based on the findings, it is recommended that the government should encourage experiences teachers to study on the jobs by providing them with more incentives and fringe benefits. The promotional prospect of the teachers should also be improved. The State Ministry of Education should make more efforts in the inspection and monitoring of schools to ensure inspection and motoring of schools to ensure that teachers stay on the job.

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EDUCATION, ACCOUNTABILITY AND TRANSPARENCY: A CATALYST FOR SUSTAINABLE DEVELOPMENT IN NIGERIA SOCIETY

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ABSTRACT

The paper examined education, accountability and transparency, a catalyst for sustainable development in Nigeria Society. Education in this context is seen as a tool in ensuring accountability and transparency and also to attain sustainable development. It also paraphrased some key concepts such as, education, accountability, transparency and sustainable development. The theory of structural functionalism was adopted to offer credence to the paper. The paper also comments on the factors that hinder sustainable development in Nigeria such as poor leadership, poor resource management, lack of accountability and public employees, weak governmental institutions and high cost of governance and also the strategies to improve transparency and accountability in education to achieve sustainable development. The paper therefore summarizes Education as a tool in ensuring transparency and accountability as it, instills in citizen, good moral behaviour, norms, values, honesty, good attitude and so on toward work delivery, to achieved sustainable development in Nigeria.

KEYWORD: Education, Accountability, Transparency and Sustainable Development.

INTRODUCTION

The development of any nation is traceable to Education. Development is seen as a systematic process of positive change in man which translates into transformation of the immediate environment. Therefore, sustainability is development that satisfy the needs of the present without compromising the capacity of future generations, guaranteeing the balance between economic growths, care for the society social well-being.

Education is a powerful instrument for imparting powerful knowledge, skills, attitudes, values and beliefs to the learner to be an accepted member of the society. According to Esu, Erukoha and Umoren (2006), education is the process of shaping individual's behaviour for adequate adjustment in the society. In fact, education performs the role of shaping the individual to conform to the accepted positive values that enhance all round development in the society. Positive values include good moral attitude, respect for cultural heritage, love of the nation,

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respect for labour and productivity, truthfulness and honesty. These positive values aided development and projected the country as a nation a paradise of success.

Today Nigeria is riddled with altered values in all sphere of life which is inimical to the sustainable development of a nation. Changes over time have eroded the earlier cherished values of Nigeria politically, culturally, socially, and economically, as the system is being politicized by our leaders and unfruitful policies with the aim of embezzling. It is high time to be transparent and patriotic to achieve our dream. Hard work and honesty was hallmark of Nigeria's cultural values. People were recognized on the basis of what they have been able to achieve through their sweat rather than through dubious means and stealing, Aggarwal (2004) states, "values stand for ideas men live for, they are the guiding principles of life which are conducive to all round development." Values are beliefs or ideas which people consider dear or acceptable. Education is an agent of values, it inculcates all these values to citizens to ensure accountability and transparency to achieve sustainable development.

Accountability is answerability for the correct and thorough completion of the deliverable task, and the expectation of account giving while transparency implies openness, the quality that makes something obvious or easy to understand. Through the powerful instrument of Education, the spirit of transparency and accountability can be instilled in citizens and its effect will be visible in all sectors. This subsequently brings about sustainable development of the Nigerian society.

Education

In almost all societies, attending school and receiving an education is extremely vital and necessary if one wants to achieve success. Education is a vital instrument for shaping and directing human reasoning and actions that follow suit in every society. According to Yakubu (2004) education is defined as the shaping or modification of behavior of the individual with the view to developing desirable habits, skills and attitudes for adequate adjustment in the society. This assertion clarifies that the desirable habit, skills and attitudes for modification of individual behavior could be found in the Blooms three taxonomy of educational domains. It is the acquisition of such knowledge and skills that will help the individual earn his livelihood and find a place in the adult society. Education is the

process of transforming an individual physically, mentally, socially and emotionally to become a useful member of the society.

Education is accepted globally as a major instrument for social transformation, technological advancement, cultural integration, national unity and national development, (Dienye & Morrison, 2012). According to Okoh in Morrison, Onyema, Igwe and Ogadi (2015), education is the process through which the ideals and worthwhile values of society are systematically passed on from one generation to another to ensure socio-cultural transformation and advancement of man and his environment. In the view of Hamilton (2013), education is any formal, informal, or non-formal system of activities people engaged in the society in order to prepare them with the appropriate skills, attitudes, knowledge, information and competences that will enable them participate and function effectively in socio-economic activities in the environment they find themselves. By implications, education, in all ramifications should positively impact on every facet of human endeavour, the right attitude of honesty, integrity and transparency to ensure sustainable development in the country.

The National Policy on Education (2004) section 1(7)(d) stated categorically that education is the process that helps to develop a total man, both physically, mentally, morally, politically, socially and environment in which he or she found himself or herself. In section 1(9) the policy states that; education shall be highly rated in the national development plans because education is the most important instrument of change; all fundamental change in the intellectual and social outlook of any society, has to be preceded by educational revolution. Therefore FRN (2004) explained that education is an instrument par excellence for effecting sustainable development while Owarri (2006) opined, that to attend sustainable development that nation would need to invest in education. Besides, education is regarded as a vital instrument for socialization and as a means of laying a formidable foundation for a strong nation leading to sustainable development of a nation.

Necessary conditions must be in place for the needed development to be achieved. The most important condition in this regard is the state of education system of a nation. Maicibi (2011) seems to have projected education as the key to development and stability of nation. Shepard and Greene (2001) affirm that education is a channel

through which status, integrity and equality could be achieved by the individual. Education is an instrument for excellence, for affecting sustainable development (FRN, 2004). Also, according to Onwumere, (2006), any nation that wants everlasting and remarkable peace and development would need to invest in education.

Accountability

This is the state of being assigned responsibility for something that you have done or something you are supposed to do. Accountability is answerability for the correct and thorough completion of the deliverable or task, and the expectation of account giving; it can also be seen as "being called to account for one's actions".

Accountability can also mean (Obligation imposed by law or lawful order or regulation on an officer or other person for keeping accurate record of property, document, or funds, The person having the obligation may or may not have actual possession of the property, documents or funds. Accountability is concerned primarily with records, while responsibility is concerned with custody, care and safe-keeping.

Accountability in Education

Accountability is an important concept in the management of education. It has gained credence in all the state in Nigeria and throughout the world. Accountability means being required to give an account of events and behavior to those who has the legitimate right to know. Accountability occurs when an individual's action comes under review and when that person receives a higher or low degree of sanction in their performance does not come up to standard. In fact, Accountability and Transparency are inseparable. Indeed, accountability is a form of transparency. Transparency leads people to look at result and this promotes accountability. In 2017, the Global Education Monitoring (GEM,) report series on assessment of progress towards a sustainable development on global education (UNESCO, 2020).It investigates accountability in education and analyze how all relevant stakeholders can provide education more effectively, efficiently and equitably. The report examines different accountability mechanism that is used to hold government, schools, teachers, parents, the international community and the private sector accountable for inclusive, equitable and quality education that exposes some selected issues in global education (Donald, 2011). Accountability, the idea of holding schools, distinct, educators and students responsible for

result has become a more recent watchword in education.

Consequently, the school on behalf of the society transmits moral values, positive attributes and attitude of the society to individuals, according to Udoh (2010), school transmits honesty, regard and concerned for the interest of others, justices, discipline, right attitude to work, encourage and national consciousness. Ibia (2016) added to the list by mentoring integrity, chastity, modesty, tolerance, honor, humility, patience, brotherliness and so on. All of these help people to be more pro-social than anti-social, more vitreous than criminal. No doubt the Nigerian Education is the contradiction between what ought to "be and what constitute a great dichotomy between theory and practice.

Transparency

Transparency implies openness, the quality that makes obvious or easy to understand. Transparency could also mean the quality of being done in an open way without secrets. In education transparency is very important for variety of reasons. It encourages teachers to work together to unpack standards, plan instruction, assess learning, analyze data, revise instruction reanalyze data and then evaluate the impact of individual teaching, strategies

Looking at Nigeria, a nation that is greatly endowed with human and material resource would not have become a debtor nation. A survey conducted by transparency international, a Global Society Organization leading fights against corruption, in 2004 of 146 countries, placed Nigeria in the 3rd position. To confirm the corruption in Nigeria, Anholts Brand Index (2018) placed Nigeria as the 49th out of the 50 most corrupt nation's studies.

Nigeria experiences oil boom in the 1970s and is currently benefiting from high prices on the world market but progress has been undermined by corruption and mismanagement. Ironically, Nigeria does not lack management knowledge but lack of the will to do the right thing (Adukwu - Boujoko, 2010). It is common knowledge that, corruption in Nigeria is fueled by need on the impoverished majority on the one hand and the greed of the powerful minority on the other hand, Therefore, corruption span across all sectors and strata of the society thereby hindering productivity and the cultivation of transparency. The effect on the nation's educational system, the hub around which nations develop, has been catastrophic.

All levels of education have been reduced to poor learning centers, and this has caused more harm than good. Schools are now where many students exchange the little values learnt at home for quick fixes such as spending huge sum of money without working for it, buying certificate without studying, enrolling in schools without attending classes. In-fact, corruption in the education sector is multidimensional and can be grouped as internal and external. Internally, it is perpetuated by students and staff alike and externally by parents and officials of ministries and their parastatals including officials of examination bodies such as West Africa Examination Council (WAEC), National Examination Council (NECO), among others, Cases abound where parents pay for examination question for their ward who would not read to pass entrance examination to the next level of education.

Therefore, a monitory measure should be adopted to checkmate the activities of workers and students and nurture them to be transparency in attaining sustainable development.

The Concept of Sustainable Development

To be, sustainable means something that continues to exist over a period of time According to Dalal – Clayton (2002) defines sustainable as an action or process that can continue or last for a long time.

Development in this paper is seen as a systematic process of positive change in man which translates into the transformation of his immediate environment. In order words, development is man centered geared towards social transformation. That is any development that does not revolve around changing the man to be good himself and the general society is not development (Idari, 2011). Similarly, Bhasin (1983) has earlier pointed out that awareness and the ability of individuals in a group to readily change their situation is an essential aspect of development which should not be neglected.

Sustainability is development that satisfies the needs of the present without compromising the capacity of future generation, guaranteeing the balance between economic growth, care for the environment and social wellbeing. Sustainable development is a concept that appeared for the first time in 1987 with the publication of the Brudland report, warning of the negative environment consequences of economic growth and globalization, which tried to find possible

solution to the problems caused by individualization and population growth.

Sustainable development is the organizing principle for meeting human development goals while simultaneously sustaining the ability of natural systems to provide the natural resources and ecosystem services upon which the economy and society depend. Also, social, cultural, and health needs-including a shelter which is healthy, safe, affordable, and secure, within a neighborhood with provision for pipe borne water, drainage, transport, health care, education, child development, and protection from environmental hazards. These services will meet the needs of citizens. Achieving this implies a more equitable distribution of income between nations and in most case within nations. Political needs including freedom to participate in national and local politics and in decisions regarding the management and development of one's home and neighborhood, within a broader framework that ensures respect for civil and political rights and the implementation of environmental legislations.

Meeting such needs without undermining the ability of future generations to meet their own needs means minimizing the use or waste of non-renewable resources-including minimizing the consumption of fossil fuels and substituting with renewable sources where feasible. Also, minimizing the waste of scarce mineral resource (by reducing use, reusing, recycling and reclaiming).Sustainable use of renewable resource-including using fresh water, soils and forest in ways that ensure a natural rate of recharge. Keeping within the absorptive capacity of local and global sinks for water, including the capacity of river to break down biodegradable wastes as well as the capacity of rivers to break down biodegradable wasters as well as the capacity of global environmental system, such climate to absorb greenhouse gases.

THEORETICAL PROSPECTIVE

The theory of structural functionalism was adapted to further offer credence to the study which has been carried out. Taking from the preview of Emilie Durkheim, functionalism is a theory that holds the position that society is made up different indivisible pars which combine to form a whole (Anderson & Taylor, 2015). The theory provides that if any part of society is removed or detached, society would automatically incomplete and probably dysfunctional in nature. Thus, for a society to

function effectively, every part must contribute to the growth and stability of society. For instance, education as part of society is bestowed with the responsibility of furnishing members of society with relevant information about cultural values and norms of the people, knowledge, skills, just as a family facilitates procession, nurturing and socialization of young members of society (Winkle, 2010). Anderson and Taylor (2015) submit that a society would be functional if the majority of the components parts work towards helping the system to grow, but would be dysfunctional if the components parts act against the social system. Thus, if the society is a system of interconnected parts which work in agreement to stabilize society as presented (Haralambus & Holborn, 2007), there is a need for education to assist other interconnected parts such as the family, politics, social media and host of others to inculcate in citizens the spirit of accountability and transparency for effective sustainable development of the nation. This theory is relevant since the paper projects education as tools to ensuring accountability and transparency to attain sustainable development of the nation.

Factors Affecting Sustainable Development in Nigeria

Considering the enormous human and material resources at the government's disposal since independence in 1960, with the seemingly minimal growth of the nation's economic, social and political structures, the challenges of good governance for development have become a significant concern in Nigeria. Other time, the Federal Government of Nigeria has realized massive amounts from crude oil and natural gas but without corresponding development and improved the quality of lives of the citizens. This can be attributed to several reasons, some of which are;

1. Poor Leadership

One of the major hindrances to sustainable development in Nigeria is poor leadership at various facets of governance. Government lacks the capacity to perform, which is rooted in a lack of ability to innovate and harness available resources. Besides, the government has no regard whatsoever to the principles of good governance – openness, transparency, accountability and the rule of law. Which together form the crucial factors that foster sustainable development in any society. Hence, the lack of an open and accountable government has paved the way for corruption and being misappropriated at the expense of the masses. El-Rufai (2012) in

his article titled "A Federation without Federalism" reflected the broad consensus amongst Nigerians, then and now, that our Federation has been dysfunctional, more unitary than federal, and not delivering public goods to the generality of our people. Despite possessing significant natural resource endowment, being Africa's leading economy and most populous nation, Nigerians are neither happy nor content with the current political structure. All these are due to corruption, according to Obayelu (2007), corruption in the exploitation of public position, resources, and power for private gain.

2. Poor Resource Management: Poor management of resources has also been a significant hindrance to enjoying the benefits public enterprises could offer the citizens. This poor management led to the formulation of public policy of commercialization and privatization of government enterprises to relieve the government of financial burdens the non performing enterprises can cause. With no solid accountability framework, poor management of resources is now rife among public officials. It has drained the country of the needed funds and resources to attain the goal of sustainable development. This is one of the causes of ethnic conflict in Nigeria. In 1966, Isaac Adaka Boro formed a militia group to fight for resource control Etekepe (2005), which has been a contentious issue in the country. resource due to environmental degradation of the area and lack of real development in the Niger Delta which makes over 90% of federal revenue for running the economy of the nation.

3. Lack of Accountability and Public Employees: Despite the huge reliance on crude oil and natural gas for economic growth, the government has failed to ensure a proper accountability framework for the sector to be accountable in terms of revenue derived. The implication of poor accountability culture by public officials on the nation's quest for development is that public resources meant for development are often diverted for individual use, which hinders sustainable development in the country. This hydra-headed monster called corruption has done a lot of damage to the nation. For instance, it destroys the economy, causes poverty, leads to poor service delivery, denies social amenities to the people, causes collapse of local industries, frustrates indigenes professionalism, innovations, creativity, handwork and entrepreneurship (Nwosu, 2013). Not only that, it has given the nation a very bad image both nationally and

internationally. Nigeria according to transparency international (2003) is the 139th out of 176 most corrupt nations. This leaves Nigeria as one of the most corrupt nations in the world. No wonder Neild (2002) posited that crime can only be effectively death within the context of successful socio-economic programmes, but economic growth and programmes which will banish poverty are themselves subverted by crime and corruption.

4. **Weak Governmental Institutions:** This challenge majorly revolves around those heading government institutions who ought to spearhead government policies and programmes for development. However, incompetence has become the order of the day while many see themselves as bigger than the institutions they head, thus going above the law and not being held accountable for their actions. Illorah (2004) opines that unequal treatment of citizens on the basis of ethnicity is a common characteristic of political leadership in many African countries. The menaces is not only found in the political institution but in all institution were opportunities are not placed on expert rates or merit but on ethnic preferential. It is the action of somebody in power favouring their relatives and friends especially in appointing them to good positions. These officials prefer relatives and friends even when they are not qualified for government appointments, positions or carrying out contracts. Based on this, "Favourism produces a corrupt and inept leader", and affect sustainable development in any nation.

5. **High Cost of Governance:** It is observed that about 70% of the government revenues are spent on the government itself, while only less than 20% of the country's population benefit significantly from the government's revenue (Hikimi, 2006). Another related problem in the in creativity recurrent expenditure of the national budget yearly simultaneously decreases is being recorded for capital expenditure which is meant to help improve capital infrastructural development.

STRATEGIES TO IMPROVE TRANSPARENCY AND ACCOUNTABILITY IN EDUCATION

The various strategies to address the issue and find ways to respond to the challenges according to United Nations (2003) are;

- a. How to promote a sustained leadership
- b. how to define adequate regulating mechanisms

- c. how to streamline the channeling of resources to beneficiaries
- d. how to ensure that information is accurate and available
- e. how to organize independent monitoring systems, and
- f. how to develop avenues for social participation

1. How to Promote a Sustained Leadership in order to Break the Inertia of Corruption in the Education Sector

An organize body, free from corruption, will need to be established and a strong commitment to address corruption problems is required from the top. A clear vision from the leadership needs to be developed on this basis, based on some basic governance principle such as greater participation, enhanced accountability, integrity, better predictability and demand for greater transparency. This is not enough and some concrete measure have to be taken to translate this vision into real terms as illustrated through the enactment of Economic and Financial Crimes Commission (EFCC) and Independent Corrupt Practices Commission (ICPC) for the prevention of corruption and conferred power on the two commissions to investigate suspected cases of corruption and economic crimes.

However, as in often the case, once decision have been made the difficulties in applying them are far from insignificant in government action there is sometimes an initial wave of good will but this eventually gives way to the tendency, as time goes by for officials to become less rigorous in their observance of programme of governments. Eckstein (2003) suggested that a wide diffusion of the principles of governance should be adopted by top-leadership through a coherent communication strategy, reaching all stakeholders (public, authorities, parent and teachers). The principles of mutual accountability and shared responsibility be promoted with a view to obtaining positive results in programmes carried out in the education sphere. The end product of such a chair accountability would be that, when things go wrong, those responsible are held accountable for inefficiency or mismanagement. Mutual accountability be also improved in relation to other public departments such as Ministry of Finance and Civil Society should be evoked by promoting a holistic and forward planning and funding approach, removing overlapping, duplication of effort and uncoordinated intervention and providing

common accountability, reporting, monitoring and evaluation frameworks.

2. How to Define Adequate Regulating Mechanism

Endemic corruption is difficult to eliminate but mechanisms can be put in place to minimize its effects. The design and enforcement of adequate regulation (including self-regulatory) mechanisms can prove extremely useful in this respect. Such regulatory mechanisms will come from procurement, textbook production and distribution, school feeding and teacher management.

To improve transparency in public procurement according to Hallak & Poisson (2004) government should issue clear guidelines to be strictly adhered to with regards to the procurement of civil works. All school construction projects should be open to public tender and contractors may challenge any award they feel do not comply with the rules criteria for the evaluation of contractors in order to ensure that only those with a background of honesty in the industry may be allowed to conduct business. The federal government should establish an inspection team that makes sure that the qualitative standard are in no way compromised. Students, parents, employers and the entire community should be involved to play a role of watchdogs in the future.

In order to foster transparency in teacher management, Nuland and Khandewal (2006) explain that a process of verifying the physical placement and functions of teachers in school should be undertaken which will be compared with the real need of the schools. The value of self regulatory mechanisms such as code of conduct and standards of behaviour (both professional and ethical) in the education sector should be emphasized (standard council of the teaching profession, 1996).

3. How to Streamline the Channeling Of Funds

The streamlining of the channeling of funds in shortening the road from the sources of funds to the recipients and sometimes also in isolating the funds from the bureaucracy e.g. education Trust Fund, which insulate bridged resources from political change, red tape and leakages. The merit of formula funding is workable. Formula funding of schools according to Rossard Lava (1999) reduces the likelihood of corruption since an essential element of formula funding is public accessibility to information. Transparency puts pressure on people in positions of responsibility

to act in conformity with regulations since the chance of detection is much higher and the personal and professional consequences of misappropriation are greater. Thus, the use of grant for schools and pupils. In order to reduce possible drawback in formula funding according to Cangarajah (2002), a nationally agreed format of the production of financial reports at both school and intermediate authority levels, the training of principals, administrative staffs in systems and the organisation of regular audits must be designed. The existences of safeguards are not always sufficient to overcome corruption. Comprehensive guidelines should be developed to explain the new financial regulation put in place, reporting requirement should be clearly specified, training and socializing processes organized and regular assessment and audit of school accounts should be set up officials have to be motivated to keep the rules through adequate systems of incentives and the ability of the education system to improve academic excellence.

4. How to Ensure that Information is Accurate and Available

Accuracy and availability of information are key factors for ensuring equitable and transparent allocation and use of resources. This can indeed encourage schools sectors to become more accountable for government and parental spending on education. To ensure the availability of consistent and reliable data to facilitate educational planning and management, an education management information system should be established to link up all schools.

The information databases thus created, should be maintained and regularly updated at school levels, where it is easier to monitor statistical changes. In addition, in order to check the accuracy of data, the federal Ministry of Education should conduct a regular census and make vital checks to verify information in the sector database.

The merit of some specific methodological tools such as public expenditure tracking survey (PETS) can get a real picture of the situation. PETS is one of the few ways of studying the flow of public funds and other resources at various levels of government and the administrative hierarchy, and the acquire quantitative evidence on leakage (Hallak & Poisson, 2002) other tools such as Quantitative Service Delivery Survey (QSDS) in very useful in obtaining information on other important dimensions, such as the rate of teacher absenteeism and the number of ghost

teachers. However, the setting up of adequate systems of information is not enough in itself to improve transparency and accountability in the management of educational resources.

5. How to Organise Independent Monitoring

A clear guidelines and regulations have been elaborated, the problem in knowing how to make sure the departments in Federal and State Ministries of Education and local education authorities are made accountable, by organizing independent monitoring for effective spending of operational funds and accurate reporting and that departments and schools follow agreed financial guidelines and spend out agreed priorities this requires strengthening technical and financial planning, management and accounting/reporting procedures within the line ministries and schools. The establishment of internal and external audit systems is part of this process. This can involve sampling financial monitoring of schools accounts, sampling inter audits of accounts by the inspectorate general to ensure compliance with spending guidelines and improved link between the Ministry of Education internal audit office and the national audit authority. Accounting Audit mechanism should be set up as a very useful tool to find out whether instructions have been applied or not and whether decisions have been taken to induce corrective academic excellence. There is need to reduce opportunities for fraud in the management process itself, and at the same time, introducing a system of incentives not to commit fraud, or disincentives to commit fraud. Hallak& Poisson (2004), opined on the existence of primary book-rental scheme monitored by a school's supply unit (SSU). One of the SSU field offices is to identify book-rental defaulters and to persuade them to make prompt payment into the revolving fund.

6. How to Develop Avenues for Social Participation

There are usually few or restricted opportunities for the meaningful participation of civil society in the improvement of transparency and accountability in education. The question of how to make school directors and parents committees more accountable for governmental and parental spending on education in schools is a difficult one. The public is often unaware of opportunities for involvement. Yet, according to many, public involvement would be the key to reducing corruption. That is why avenues for community participation in education has to be explored. Exercises in the sharing of information, and

efforts towards mainstreaming participation would certainly go a long way towards improving transparency and accountability. (Hallak & Poisson, 2006).

In order to involve communities in education, avenues for social participation can be created by use of the media. Parents should be provided with adequate information to enable them to play the role of well-informed consumers. Radio programmes, for instance, can help to warn the public and school about incidents relating, for instance to school examinations. More broadly, the existence of web pages, newspapers, local radio and public hearing along with appropriate budget and national awareness campaigns can all help to make the public aware of opportunities of involvement. They can even contribute to promote interaction between citizen and public officials campaigns to raise public awareness, can be organized by governmental authorities information campaigns should be arranged by EFCC with the objective of informing people about what their entitlement and reflections are so that they can detect when the standard of service provided falls short of those entitlement and make a compliant accordingly. Public hearings, where rural people will be actively involved should be conducted by local authorities and donors. Information campaigns should also be led by coalitions of NGOs. Not only do these coalitions conduct public awareness campaigns, but they also organize round table discussion and press conferences, implement public opinion surveys to raise awareness about the negative impact of corruption and provide telephone hotlines where any person can receive legal advice free of charge and hold public hearing.

Education as a Tool to Ensure Accountability and Transparency for Attainment of Sustainable Development

Education is a vehicle for social transformation and sustainable development. The quest for sustainable development in Nigeria has been an issue of great concern to ail who have a stake in the existence of an entity called Nigeria (Raid, 2015). In search of genuine sustainable development, a lot of development agenda, programs and reforms measures have been initiated and some implemented by both government and partners. Being a county of paradoxes, it is blessed abundantly with natural and human resources, whose potential according to Soludo (2006) have remained largely untapped and the little that has been taped mismanaged,

even in schools, teachers mismanaged their task, break protocol and do things in their own ways. This becomes the major problem of attaining sustainable development.

For democracy to properly work, its citizens must be educated. They must know how to gather information, distinguished facts from opinion, analyzed issues, understand many different viewpoints, understand justice, think for themselves, communicate their opinion clearly and work with others for common good. These among the most important aspect of values education where honesty is playing the game of politic, integrity in holding public office is taught to the youths. Dike (2015) supporting this clearly asserted that to prepare for life in a modern society, the citizens should be expose to qualitative education and acquire good moral of being accountable and transparent, to enable them create a humane society and to function effectively in the society. Not only the citizens but the leaders should also be exposed and understand that education do not occur in the vacuum as the leaders must plan for it. The challenge to the Nigeria political leaders is to confront the problem beginning with them, being transparent and accountable, then innovative ideas and integrated values, education in the nation's school curriculum is for good character development.

To corroborate the above, Esu(2009) position on values and character education would not have occurred by chance when he strongly noted that the need for character and moral education in Nigeria educational institution is quite obvious especially when viewed against growing act of fallen moral valves such as stealing, dishonesty, cheating, examination malpractice, indent and obscene mode of dressing, act of forgery of certificate to gain admission into higher school, etc. Ewa (2003) submitted that character and moral education is inescapable mission of schools, the goal of which is to help children and adult develop good disposition that will enable men to flourish intellectually, personally, socially and above all a good and patriotic citizen and leaders (Ideri,2011). Education should instill in learners that are leaders of the future, good moral standard of behaviour honesty, good virtues, norms and values of the society to ensure transparency and accountability in them, as to achieve sustainable development through good work delivery.

CONCLUSION

In conclusion, the development of any nation is traceable to education, because education is a powerful instrument of change, good morals, knowledge, skills and good attitudes. It performs the role of shaping the individual to conform to the accepted positive values that enhance all round development in the society. The factors preventing sustainable development in Nigeria such as poor leadership, poor resource management, lack of accountability and public employees, weak governmental institutions and high cost of governance, are the menace, canker worm eating the development of this great nation. Strategies were elaborately proffered to address these issues. The paper therefore summarizes education as a tool in ensuring transparency and accountability as it, instills in citizen honesty.

RECOMMENDATIONS

In order achieve maximum result in the process of attaining sustainable development through education, accountability and transparency, the following recommendations are advised: Nigerian schools, from kindergarten to primary, secondary and tertiary institutions, as well as other Formal and informal sectors of leaching and learning should make morality a prerequisite for assessing and grading of-students, as to install the spirit of transparency and accountability in them.

In propagating the message of transparency and accountability in Nigeria, teachers and students should be allowed to access themselves, by using assessment model forms designed by schools. This will help to improve transparency, build self-consciousness and further assist in justifying for the activities taking place in the school.

The Federal Government should establish an uncompromising team that is corruption free, to tour round schools and other sectors to ensure transparency and accountability to attain sustainable development.

Education as tool in ensuring accountability and transparency to attain sustainable development in Nigeria society, should instill in students and all citizens good virtues, honesty, good moral standard of behavior, disciplines measures of being acquainted with the norms and value of the society, to help reduce or curb corruption, improve good working habit, promote accountability and transparency to attain sustainable development.

Moreso, the management of education sector in Nigeria should be grouped under three strategies. The creation and maintenance of regulatory systems, the strengthening of management capacities and the encouragement of enhanced ownership more specifically.

1. The creation and management of regulatory systems: This involves adapting existing legal frameworks so that they focus more on corruption concerns (reward/penalties) designing some basic norms and objectives criteria for procedure (for instance, with regards to fund allocation or procurement) developing professional and ethical codes of practice for the education profession, and defining well-targeted measures, particularly for fund allocation.

2. Strengthening management capacities to ensure the enforcement of these regulatory system: This involves increasing institutional capacities in various areas, particularly information system, developing computerized/automated processes, setting up effective control mechanisms against fraud, promoting ethical behaviour, sensitizing and training staff, and creating peer control mechanisms.

3. The encouragement of enhanced ownership of the management process: This involves developing decentralized and participatory mechanism involving the profession in the design and enforcement of rules, increasing public access to information (particularly by the use of new technologies) and empowering communities to help them exert stronger "social control".

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ROLE OF GENDER IN STUDENTS' PERCEPTION OF RESEARCH AND STATISTICS IN EDUCATION: A PANACEA FOR SUSTAINABLE GOVERNANCE

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ABSTRACT

The purpose of this study was to investigate the role of gender on students' perception of research and statistics among post graduate students in Abia State University as a panacea for sustainable governance. A survey design was used. Two hypotheses were formulated to guide the study. A sample of 150 post graduate students from Abia State University was drawn using stratified random sampling and purposive sampling techniques. The study used a 26-item instrument. The statistical technique used in testing the hypotheses was the independent T-test. Results showed that gender do not have any significant influence on the perception of research methods by students but had effect on their perception of statistics. It was recommended that, students should endeavor to master the skills and techniques that research and statistics will proffer to them; since when they graduate, they will be expected to go into the society, identify problems, follow the acquired techniques and proffer solution to the societal problems. When this is actualized, every citizen will contribute his/her part towards actualizing sustainable governance irrespective of his/her gender.

KEYWORDS: Gender role, Students' perception, Research, Statistics and Sustainable Governance.

INTRODUCTION

According to former Secretary General of the United Nations, Dr. Kofi Annan, "knowledge is power, information is liberating and education is the premise of progress in every society". One can deduce from this comment that, education is a transformatory agent and through education man who is said to be the main instrument for governance is transformed to appreciate the need for good governance, equipped to contribute to good governance, and through education also the fruit of good governance is harnessed and sustained.

This assertion is in line with Ememe (2014) who opined that education increases people's confidence, self reliance, belief in their ability to express themselves and to critically and

objectively diagnose their collective problems as well as activity and meaningfully participate in activities aimed at improving their lives and also maintaining sustainable governance.

Governance in the last decade has been extensively used in academic and policy circles, but it has very different and even contradictory meanings in generic terms. Governance has been defined by some authors as a process of decision making by which society defines and handles its problems (Edward, Joas, Sundback & Theobald 2005). According to World Bank (2006), governance generally implies, among other things, that states are suppose to minimize their size and promote economic and financial stability, assuming that this is a way to deal with social, educational inequalities and poverty.

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From the contemporary ideas of governance attention is drawn on the values, norms, principles that under pine decision making, and by doing so, they highlighted the control of individuals and their personal attitudes and behaviour as the origin of governance process (Dobso, 2009; Bary, 1999).

On the word “sustainability”, dictionaries provide so many meanings for sustain, the main ones being to-“maintain”, “support”, or endure. The tern ‘sustainable’ is relatively easy to interpret: it means “enduring” and ‘lasting’ and to keep in been. Therefore, sustainable governance is government that lasts. To actualize sustainable governance, a positive interaction must exist between governance and governed. Interactive governance has been defined by some authors as “the whole of interactions instigated to solve societal problems and to create societal opportunities including the formulation and application of principle guiding those interactions and care for institutions that enable or control them (Koolman, & Jentoft, 2009).

Moreover, sustainable governance indicators as highlighted by wikipedia includes status index which is measured through policy performance that also measures how well or badly a course of action that has been officially agreed and chosen by government and governed are implemented. Implicit of this indicator is that what determines the policy performance of a sustainable government is the availability of the resources from the environment, research and innovations and education. This is the main reason why nation today invest heavily on research, innovations and education in order to attain sustainable development and governance.

To actualize a quality research needed in resources for policy performance of sustainable governance, the tertiary institutions from their onset made research method a compulsory course for all the students irrespective of course of study (Nwogwugwu & Onyendi, 2016). As tertiary institution has the onus of training men and women in different areas and skills with the ability and capacity to building a nation through sustainable governance (Ariguzo, Anyakoha & Best-Njoku, 2016). The essence of training of men and women is to produce people who will produce and utilize research findings in making policy brief.

In utilization of research findings in policy briefs, Awwiri (2015) opined that, research results are often utilized to advocate for legislative and policy change at local, state and national levels. He further stated that, advocacy groups and

legislators took to current research trends and information to make decisions. That this is often presented in the form of policy briefs and outlines the rationale for choosing a particular policy alternative or course of action in a current policy debate for a sustainable governance.

Research according to McQueen & Knussen (2006), is defined as a process of investigating, scrutinizing or studying an issue, usually conducted according to a set of pre-determined guidelines and procedures. From this definition, the issues investigated on, are from the society which is made up of governed and governance. In the process of investigation, data are collected organized, analyzed and interpreted with the aim of making deductions and drawing conclusion which is the definition of statistics (Welkowitz, Conhen & Lea, 2012)

Furthermore, Aduloju, Iorniege and Aondohemba (2016) agreed that, it is through research that discoveries are made. They also opined that qualitative research uses data that is numerical in nature and is based on the assumption that the numbers will describe a single reality. Then statistical tools are often used to find relationships between variables.

Research method and educational statistics are compulsory course for all the students in education, the students are male and female that will turn out to be policy makers and keepers for sustainable governance.

A lot of research evidence exists in literature that shows that gender of students plays a vital role in the way they perceive things and also learn. According to Eluwa & Eba (2015), they revealed that, there is a significant difference between male and female undergraduates’ students in topics of disconnections in educational statistics. The study showed that male performed better than their counterpart in educational statistics during the study period.

Also, on the role of gender in planning and conduct of research among post-graduate students in Universities in Abia State, Nwogwugwu and Onyendi (2016) revealed that, gender of graduate students influenced their perception of the factors militating against the planning and conduct of their research. In contrary, gender has not also been shown to be a major influencing factor that qualifies as determinants in the quality of research, assessment and evaluation (Obowu-Adutchay, Mkpae & Ogiri 2015; Benjamin, 2009 and Jones, 2009).

Furthermore, information retrieved from net under Gender Update (2015), showed that persistently

high gender gap was found in many countries around the world whether they are developed or developing. It further stated that, the 2016 Global Gender Gap Index (GGGI), which examines gender inequality across four key areas of health, education, economy and politics showed that gender gap widened in many countries and, the gap in “economic participation and opportunity” showed the largest gap.

To actualize policy briefs needed for sustainable governance, research findings are utilized and the onus of tertiary institutions is to train both male and female students on how to produce quality research. The outcome of the study would enable the lecturers in the course of teaching research and statistics, to be conscious of gender bias towards these courses. This gender bias would help in the teaching and learning of research and statistics, the consciousness that male and female students differ in their unique perceptions.

This study therefore identified the role of gender in students' perception about research and statistics in education in Abia State University as a way forward towards actualizing sustainable governance free of gender bias.

Consequently, the following hypotheses guided this study.

1. Perception of advanced educational research methods is independent of gender of post graduate students.

2. Perception of advanced educational statistics is independent of gender of post-graduate students.

METHOD

A survey design was adopted for the study. The population comprised of all the post graduate students in faculty of Education in Abia State University, Uturu. There were 270 post graduate students in the Faculty of Education as at the time of this study. The sample consisted of 150 post graduate students randomly drawn by stratified random sampling and purposive sampling technique. A 26-item questionnaire titled Advanced Educational research Methods and statistics Questionnaire (AERMSQ) designed by the researcher was used in collecting the data of this study. The instrument was formatted on 4-point likert scale. It was validated by 3 experts in measurement and evaluation in the department of Educational Foundations, Abia State University therefore it was valid. Test-retest reliability technique was used to establish the reliability of the instrument. A reliability coefficient of 0.73 was obtained; therefore, the instrument was reliable. T-test was used to analyze the data.

RESULTS

Hypothesis 1: Perception of advanced education research methods is independent of gender of post-graduate students.

Table 1: Independent T-test analysis of perception of advanced educational research methods being independent of gender of post-graduate students.

Gender	N	Mean	SD	df	t	Sig	Decision
Male	68	30.33	2.46	148	-1.275	.993	Not Significant
Female	82	31.45	2.76				

Table 1 presents the result of the hypothesis which states that perception of advanced educational research method is independent of the gender of post-graduate students, the t-test yielded $t=-1.275$, $p > .05$.

This means that the perception of post-graduate students towards advance educational research

methods is not dependent upon their gender, therefore the null hypothesis is accepted.

Hypothesis 2: Perception of advanced educational statistics is independent of gender of post-graduate students.

Table 2: Independent T-test analysis of perception of advanced educational statistics being independent of gender of post-graduate students.

Gender	N	Mean	SD	df	t	Sig	Decision
Male	68	18.30	1.93	148	-3.287	.046	Significant
Female	82	25.73	9.28				

Table 2 presents the result of the hypothesis which states that perception of advanced educational statistics is independent of the gender of post-graduate students, the t-test yielded $t = 3.287$, $p < .05$.

This means that the perception of post-graduate students towards advanced educational statistics is dependent upon their gender, therefore the null hypothesis is rejected.

DISCUSSION

It can be seen from (table 1) that the gender of post-graduate students do not affect their perception of advanced educational research methods. This finding implies that graduates of this century can produce and utilize research findings needed in making policy briefs therefore in choosing policy making officials for a sustainable governance gender should not be considered as priority.

This finding is in agreement with the findings of Obowu-Adutchay, Mkpae and Ogiri (2015); Benjamin, (2009) and Jones, (2009). They stated that gender is not a major influencing factor that qualifies as determinants in the quality of research, assessment and evaluation.

The result in Table 2 revealed that gender of post-graduate students affects their perception of advanced educational statistics. This finding implies that emphasis should be made on gender whenever advanced educational statistics is being taught, as this will help in closing the gender-gap. This finding is in agreement with studies of Idowu, & Maxwell Borjo (2015). They revealed that there is a significant difference between male and female undergraduate students in topics of disconnections in educational statistics.

CONCLUSION

From the study it is evident that genders of students do not affect their perception of advanced research methods while it affected their perception of advanced educational statistics. Concerted efforts of students and lecturers are therefore needed to bridge this gender-gap in advanced educational statistics among the postgraduate students because

achieving gender equity is critical to sustainable governance.

In a nut-shell, one may ask "can there be sustainable governance with gender equality?" well, if sustainable governance must be achieved or realized, then much is needed in terms of researchable and statistical knowledge that can ensure dependable decision making free of gender bias.

RECOMMENDATIONS

Based on the findings of this study the researchers make the following recommendations:

1. Emphasis should be made on gender whenever any course in statistics is being taught in the schools. For instance, when both the lecturers and students are asking questions in the classroom and when appointing leaders of group assignments.
2. Lecturers teaching statistics should be paired (male and female). This will serve as a role model to the students.
3. Students (both male and female) should endeavor to master the skills and techniques that research and statistics will proffer to them. The reason being that, when they graduate, they will be expected to go into the society, identify problems, follow the acquired techniques and proffer solution to the societal problems. When this is actualize, gender will no longer be a role in students perception of research and statistics in education, then, every citizen will contribute his/her part towards actualizing sustainable governance irrespective of his/her gender.

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EFFECT OF INSTRUCTIONAL MATERIALS ON STUDENTS' ACADEMIC ACHIEVEMENT IN FISHERY IN SENIOR SECONDARY SCHOOLS

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ABSTRACT

This study determined the effects of instructional materials on students' academic achievement in Fishery in senior secondary schools. The study used a quasi-comparative-experimental research design. The study was carried in Enugu State, Nigeria, precisely in Nsukka Education Zone. The population of the study was 5726, which comprised all the SS II students in senior secondary school offering Fishery in Enugu State. The sample size for this study was 161 SS II Fishery students in 4 intact classes drawn from rural and urban senior secondary schools. An instrument titled "Fishery Achievement Test (FAT)" was used for data collection. The instrument was subjected to face and content validation by three experts. The instrument was trial tested on 50 SS II students in co-educational secondary school (intact class). Kuder-Richardson formula ($K-R_{21}$) was used to determine reliability of the test which gave a coefficient of 0.81. Data collected was analyzed using mean to answer the research questions while Analysis of Covariance (ANCOVA) to test the null hypotheses at .05 level of significance. It was found that instructional materials had an increasing effect on student's achievement in Fishery in secondary schools, instructional materials has more increasing effect on female than male students' achievement in Fishery in secondary schools and instructional materials has more increasing effect on urban than rural senior secondary schools students' achievement in Fishery. It was therefore recommended among others that teachers should always make use of instructional materials in Fishery during classroom instructions to enhance the students' achievement in Fishery.

KEYWORDS: academic achievement, fishery, instructional delivery, teachers, teaching resources

INTRODUCTION

Recently, there was innovation in the Nigerian educational sector which led to the curriculum review of secondary school system. Consequently, Fishery was introduced as a single subject in senior secondary school to ensure adequate supply of fish protein in the country.

According to Nigerian Educational Research and Development Council (NERDC, 2009), the objectives of Fishery in the curriculum of senior secondary schools are: to have Fishery as a trade for livelihood on completion of fish studies; to produce fish that will increase the nutritive value of man's diet; to meet with the gap between the demand for fish and its supply, and to bridge the gap between poverty and hunger.

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The pioneer students of this curriculum graduated in 2014 with very low achievement in the senior secondary school external examinations. Besides, it was observed that about 94% of the graduates lacked the entrepreneurial skills to embark on any Fishery occupations such as fish production, processing, preservation and marketing which was one of the objectives of the curriculum review. The observation was in conformity with the WAEC Chief Examiner's report (2017, 2018 and 2019) that only 48% of secondary school students passed Fishery in Nigeria. Adebule (2009) alerted that there has been much concern expressed about the apparent fall in the standard of education at the secondary school level. The implication is that the intension of the Federal Government to avert the existing gap between the quantity of fish demanded and the quantity supplied to the market, has not been met. It also means that the ugly situation will continue to exist if nothing is done in schools on time to abort it from the bud. This condition demands an urgent attention to investigate the causes of students' poor achievement in Fishery in senior secondary schools, so as to save the future generation from an impending doom of food insecurity in the State and country at large. In any case, the poor academic achievement of students in Fishery could be traced to many factors among which include teacher's strategy, method of teaching and use of instructional materials.

Instructional materials, in submission of Abdullahi (1982), are materials or tools locally made or imported that could make tremendous enhancement of lesson impact if intelligently used. Onyejemezi (1998) described instructional materials as resources or teaching materials which a teacher utilizes in the course of presenting a lesson in order to make the content of the lesson understandable to the learner. Agina-obu, (2005), explained instructional materials as concrete or physical objects which provide sound, visual or both to the sense organs during teaching. Esu, et al. (2004) noted that instructional materials facilitate learning of abstract concepts by helping to concretize ideas and stimulate learners' imagination. Also, their utilizations help to increase active participation in the learning process while saving teacher energy, reducing the verbal instructions. Agbulu and Wever (2011) maintained that instructional materials are relevant in education because they are used for the transference of information from one individual to another, help the teacher in extending his learner's horizon of experience,

stimulate learners' interest and help both teachers and students to overcome physical limitations during the presentation of subject matter, among others. Agwu (2001) observed that instructional materials as apparatus of teaching may include textbooks, workbooks, charts, audio visual aids, chemicals, specimens and other relevant tools that will attract student s' attention, and which should only be introduced at the appropriate time by the teacher. The instructional materials required for effective teaching of fish production to students in senior secondary schools include nursery tanks/ponds, demonstration ponds, scoop nets, hatching troughs, aquaria tanks, compounded feeds, charts and pictures, video clips (NERDC, 2009). It is the view of the council that the recommended instructional materials of fish production in the curriculum should have effect on the academic achievement of the students if utilized by the teachers during instructions in the schools.

The concept of instructional materials above indicates that the teaching of Fishery without relevant instructional materials may certainly result in poor achievement among students. Franzer, et al. (1992) cautioned that no matter how well a trained and professionally qualified science teacher could be, he would be unable to put his ideas into practice if the school setting lacks the equipment and materials necessary for him to translate his competence into reality. In the same vein, Omabe (2006) stressed that instructional materials are central in the teaching and learning of subjects because no matter the efficiency of a teacher, effectiveness in lesson delivery cannot be guaranteed without the use of instructional materials. Some of the instructional materials for teaching fishery include: dissolved oxygen meter, pH meter, conducting meter, thermometer, water test kits, microscope, magnifying glass, aquaria tanks, hatching troughs, nursery tanks/ponds, demonstration pond, scoop net, aerators and accessories, plastic sieves, concentrate feeds, grinding machine, charts and pictures, video clips in fishery, pelleting machine, dissecting kits, water pump, sec chi disc, among others (NERDC, 2009). Asogwa, et al. (2013), found that some teachers utilize only 8 out of the several instructional materials recommended by NERDC (2009) for teaching Fishery in senior secondary schools in Nigeria. Some teachers of Fishery in senior secondary schools however, deliver most of their lessons to students without the use of instructional materials not minding that their non-use of instructional materials during classroom

instruction could be one of the factors of students' poor result in Fishery. This suggests that the teachers probably cast doubt if instructional materials actually had any effect on the learning ability of the students in fishery in schools. That is, they were not completely convinced that there might be a difference between the academic achievements of students taught Fishery with and without instructional materials in schools.

It was therefore, imperative to investigate the effect of instructional materials on students' academic achievement in Fishery to encourage teachers on their utilization in classrooms instruction. Hence, the main purpose of the study was to determine the effect of instructional materials on senior secondary school students' academic achievement in fishery.

RESEARCH QUESTIONS

1. What are the effects of instructional materials on senior secondary school students' academic achievement in Fishery?
2. What are the effects of instructional materials on male and female senior secondary school students' academic achievement in Fishery?
3. What are the effects of instructional materials on urban and rural senior secondary school students' academic achievement in Fishery?

Research Hypotheses

1. There is no significant difference in the mean effect of instructional materials on senior secondary school students' academic achievement in Fishery.
2. There is no significant difference in the mean effect of instructional materials on male and female senior secondary school students' academic achievement in Fishery.
3. There is no significant difference in the mean effect of instructional materials on urban and rural senior secondary school students' academic achievement in Fishery.

METHODOLOGY

The study adopted a quasi-comparative-experimental research based on 2 x 2 non-randomized pretest-posttest non-equivalent control, non-factorial design. This research design was used since the students in the study were not randomized into experimental and control groups but left intact and classified into groups in order to avoid disrupting the activities of the classes and the school programmes. The study was carried in Enugu State because it has

lots of secondary schools that are offering Fishery in the senior classes. The State is also included in the students' poor academic achievement of 48% in Fishery in Nigeria. The population of the study was 5726, comprised all the SS II students in senior secondary schools offering Fishery in Enugu State. The sample size for this study was 161 SS II Fishery students in 4 intact classes drawn from rural and urban senior secondary schools in Nsukka Educational Zone. A multistage sampling technique was used. Random sampling technique was used to select the Educational Zone from the state. Purposive sampling technique was used to select mixed schools in the entire Zone. Stratified simple random sampling technique was used to choose 2 from rural and 2 from urban secondary schools. Simple random sampling technique was also used to assign control and experimental group to 1 rural and 1 urban secondary school and also in selecting one SS1I class in each of the schools where more than one class existed.

An instrument titled "Fishery Achievement Test (FAT)" was used for data collection. The FAT was developed from secondary school Fishery curriculum by (NERDC). FAT was a teacher-made test structured by the researchers based on the instructional objectives contained in SS1I Fishery Curriculum by the NERDC (2009). The test blueprint guided the selection of items and was anchored on the six levels of cognitive educational objectives of Bloom (1968). The first and second forms of the instrument were used as pre-test (pre-FAT) and post-test (post-FAT) to measure the student's prior knowledge and achievement in Fishery. However, the post-FAT was produced by re-arranging and re-constructing pre-FAT so as to alter its structural view from the pre-FAT but retain the same content. The topics listed to be taught during the study were divided into 4 units. Four lesson notes were planned and written on each unit to guide the research assistants (the class teachers of Fishery) in the experimental and control groups. Both groups used conventional method but the experimental group utilized relevant instructional materials. The difference between the two groups was in the use of instructional materials during class lessons. For consistency and objectivity in scoring the students' FAT items, a marking scheme was developed.

The instrument was face validated by three fishery seasoned experts. Each validate was given part of the Fishery curriculum, objectives of the study and FAT and requested to critically examine and comment on the scope of coverage,

content relevance, ability level being tested by the items, suitability and appropriateness of the items in accomplishing the research objectives. The suggestions and corrections of validates were used to produce the final copy of FAT used for data collection.

The instrument was trial tested on 50 SS II students in co-educational secondary school (intact class) in Obollo Education Zone of the State which have similar characteristics with the area of the study. The trial testing helped to calculate the testing period which was obtained by computing the average time taken by first, tenth and twentieth students to finish the test (Iji, 2002). The average time for the test computed was one hour. Kuder-Richardson formula ($K-R_{21}$) was used to determine reliability of the test items which gave a coefficient of 0.81 which means that the instrument was reliable for the study.

To conduct the study, the sampled schools were visited and permission was obtained from the principals of the schools to carry out the study. The teachers, who teach Fishery in the sampled schools served as research assistants after one week of educating them on how to use the lesson plan, administer and retrieve the FAT from the students. The research assistants administered the pre-FAT test to all sampled SSII Fishery students in an intact class in the four schools before lesson. The objective of the pre-test was to ascertain the homogeneity of the students' experience and knowledge in Fishery before the experiment. The research assistants then, taught the students an aspect of Fishery using the lesson plan designed for their group for 4 weeks. The study started on Friday, 26th June, 2019 and ended on Friday, 24th July, 2019. After which, the post-FAT was administered on the students to compute their achievement in Fishery. The marking scheme prepared was used to score the tests. Both descriptive and inferential statistics were used to analyze the data collected. Mean was used to answer the research questions while Analysis of Covariance (ANCOVA) was used to test the null hypotheses at .05 level of significance. The choice of ANCOVA was to help in equating the initial differences that might exist among the non-randomized groups, using pre-test as covariate with the post-test. In testing of hypotheses, the hypothesis of no significant difference was rejected where the p-value was less than the alpha value of .05 while it was not rejected where the p-value was equal to or greater than the alpha value of .05.

RESULTS

The results for the study were obtained from the research questions answered and hypotheses tested through data collected and analyzed.

Research Question 1

What are the effects of instructional materials on senior secondary school students' achievement in Fishery?

Data in Table 1 showed that the students taught Fishery with instructional materials had a mean gain of 25.53 while those taught without instructional materials had a mean gain of 19.04. The mean difference between the two groups is 6.49. This indicated that instructional materials have an increasing effect of 6.49 on student's achievement in Fishery in secondary schools.

Research Question 2

What are the effects of instructional materials on senior secondary school male and female students' achievement in Fishery?

Data in Table 2 showed that the male and female students taught Fishery with instructional materials had achievement mean gain of 24.99 and 27.29 respectively. This indicated that instructional materials has more increasing effect of 2.30 on female than male students' achievement in Fishery in secondary schools.

Research Question 3

What are the effects of instructional materials on urban and rural senior secondary school students' achievement in Fishery?

Data in Table 3 showed that the students in urban and rural area taught Fishery with instructional materials had achievement mean gain of 25.95 and 24.94 respectively. This indicated that instructional materials has more increasing effect of 1.01 on urban than rural students' achievement in Fishery in secondary schools.

Hypothesis 1

There is no significant difference in the effect of instructional materials on senior secondary school students' achievement in Fishery.

Data in Table 4 (Page 14) shows a p-value of 0.009 which is less than the alpha value of 0.05. This indicates that there was a statistically significant difference ($p < 0.05$) in the effect of instructional materials on the academic achievement of students taught with and without instructional materials. Therefore, the hypothesis of no significant difference in the effect of instructional materials on senior secondary

school students' achievement in Fishery was not accepted.

Hypothesis 2

There is no significant difference in the effects of instructional materials on male and female senior secondary school students' achievement in Fishery.

Data in Table 5 shows a p-value of 0.50 which is greater than the alpha value of 0.05. This indicates that there was no statistically significant difference in the effect of instructional materials on male and female senior secondary school students' achievement in Fishery. Therefore, the hypothesis of no significant difference in the effect of instructional materials on male and female senior secondary school students' achievement in Fishery was accepted.

Hypothesis 3

There is no significant difference in the effect of instructional materials on urban and rural senior secondary school students' achievement in Fishery?

Data in Table 6 shows a p-value of 0.008 which is less than the alpha value of 0.05. This indicates that there was a statistically significant difference in the effect of instructional materials on urban and rural senior secondary school students' achievement in Fishery. Therefore, the hypothesis of no significant difference in the effect of instructional materials on urban and rural senior secondary school students' achievement in Fishery not accepted.

DISCUSSION

The result of the study revealed that instructional materials have an increasing effect on student's achievement in Fishery in secondary schools. Besides, there was a statistically significant difference ($p < 0.05$) in the effect of instructional materials on the academic achievement of students taught with and without instructional materials. The difference might be as a result of the adequate involvement of the sense organs when instructional materials are used in classroom instruction. The result was in line with report of Fakomogbon (2012) that the use of improvised instructional materials makes students to achieve better in their studies. Igu, et al. (2016) also found that students taught with instructional materials performed better than those taught without instructional materials in social studies in lower Basic Education in Nigeria. Besides, Adebule and Ayoola (2016) empirically

certified that instructional material enhanced student's achievement in Mathematics. They affirmed that there was a remarkable difference between the performances of students taught with instructional materials and the performance of students taught without the use of instructional materials. In a study conducted by Aburime et al. (2016), it was found that there was a statistically significant difference in the mean scores of History students taught with adequate material resources and those taught with inadequate material resources.

It was equally found that instructional materials has more increasing effect on female than male students' achievement in Fishery in secondary schools. However, there was no statistically significant difference ($p > 0.05$) in the effect of instructional materials on male and female senior secondary school students' achievement in Fishery. This result is in consonance with the Adebule and Ayoola (2016), who found that both male and female students achieved equally under the same condition during teaching and learning process, since achievement has to do with mental and intellectual ability and not gender. They affirmed that there was no significant effect of gender on students' achievement in Mathematics. Igu, et al. (2014) found that there is no significant difference in the mean achievement of male and female students when taught with instructional materials and when taught without instructional materials in lower Basic Education in Nigeria.

The result of the study further indicated that instructional materials had more increasing effect on urban than rural senior secondary schools students' achievement in Fishery. Meanwhile, there was a statistically significant difference ($p < 0.05$) in the effect of instructional materials on urban and rural senior secondary school students' achievement in Fishery. On the contrary, Fan and Chen (1999) found that students from rural schools were found to have performed better than those from metropolitan areas. The authors certified that that there was statistically significant differences among the rural/suburban/urban students when four outcome variables were considered jointly, where the multivariate effect size measures were all extremely small. In the same vein, the result of Fan (2000), showed that students from rural schools performed as well as, if not better than, their peers in metropolitan schools in mathematics, science, reading and social studies. On the other hand, Deidra (2006) found that the location of the school had a significant

effect upon student achievement, with students attending rural schools not performing as well as students from urban schools. In the same vein, Ugwuoke et al. (2018) found that no statistically significant difference ($p < 0.05$) existed in the mean academic performance of agricultural science students in secondary schools based on location. In any case, the findings of the authors cited above helped to add credence to the result of this study.

CONCLUSION

The utilization of instructional materials is imperative to students' academic achievement in fishery. The use of instructional materials stimulates the senses of students and arouse their interest. However, instructional materials have no effects on students' performance based on gender but, students in urban schools perform better than the rural counterparts. When the applications of instructional materials are emphasized in schools, students will perform better.

RECOMMENDATIONS

Based on the finding from this study, the following were recommended:

1. Teachers should always make use of instructional materials in Fishery during instructions in the classrooms to enhance the students' achievement in Fishery in schools.
2. Teachers also should improvise some instructional materials where the standard ones are not available. The teacher should involve the students in the provision of local instructional materials that could be used as substitutes.
3. The school authority should provide instructional materials as recommended by the NERDC in the Fishery curriculum for senior secondary schools.
4. The principals, proprietors and officials of the Ministry of Education should maintain regular supervision to encourage effective utilization of instructional materials and resources in the teaching of Fishery in senior secondary schools.
5. Faculty of Education in Universities or Colleges of Education should place more emphasis on the use of instructional materials during teacher preparation and in-service training to equip teachers with skills and zeal for effective use of instructional materials during classroom instructions.

Table 1: Effect of Instructional Materials on Senior Secondary School Students' Achievement in Fishery

Group	N	Pre-test Mean	SD	Post-test Mean	SD	Mean Gain
With IM	77	32.76	12.91	58.29	15.97	25.53
Without IM	84	31.32	12.09	50.36	14.93	19.04
Effect						6.49

IM = Instructional Materials, N = Number of Students, SD = Standard Deviation

Table 2: Effect of Instructional Materials on Senior Secondary School Male and Female Students' Achievement in Fishery

Group	N	Pre-test Mean	SD	Post-test Mean	SD	Mean Gain
Male with IM	40	33.30	15.97	58.29	16.76	24.99
Female with IM	37	30.36	14.93	57.65	14.75	27.29
Difference						2.30

IM = Instructional Materials, N = Number of Students, SD = Standard Deviation

Table 3: Effect of Instructional Materials on Urban and Rural Senior Secondary School Students' Achievement in Fishery

Group	Number of students	Pre-test		Post-test		Mean Gain
		Mean	SD	Mean	SD	
Urban with IM	46	33.11	13.25	59.06	16.01	25.95
Rural with IM	31	32.26	12.47	57.20	15.92	24.94
Difference						1.01

N = Number of Students, SD = Standard Deviation

Table 4: ANCOVA Analysis of the Effects of Instructional Materials on Male and Female Senior Secondary School Students' Achievement in Fishery

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2963.143 ^a	2	148.157	0.442	0.515
Intercept	16991.392	1	16991.392	50.726	0.000
Pretest	32.886	1	32.886	0.0982	0.637
Gender	142.424	2	71.212	0.212	0.502
Error	25122.577	75	334.967		
Total	217360.000	77			
Corrected Total	28085.720	76			

Table 4: ANCOVA Analysis of the Effect of Instructional Materials on Senior Secondary School Students' Achievement in Fishery

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	57.717 ^a	2	28.858	0.128	0.880
Intercept	66775.987	1	66775.987	296.873	0.000
Pretest	52.923	1	52.923	0.235	0.628
Group	2.959	1	2.959	0.013	0.009
Error	42736.895	159	224.931		
Total	532320.000	161			
Corrected Total	42794.611	160			

Table 6: ANCOVA Analysis of the Effects of Instructional Materials on Urban and Rural Senior Secondary School Students' Achievement in Fishery

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	262.097 ^a	2	131.049	0.418	0.699
Intercept	8382.795	1	8382.795	26.760	0.000
Pretest	808.781	1	808.781	2.582	0.120
Location	203.145	1	203.145	0.648	0.008
Error	23494.698	75	313.262		
Total	297568.000	77			
Corrected Total	28750.796	76			

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PERCEIVED TEACHER'S CULTURE AND TEACHING OF ENVIRONMENTAL EDUCATION AT THE UNIVERSAL BASIC EDUCATION (UBE) LEVEL IN CROSS RIVER STATE, NIGERIA

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ABSTRACT

This study investigated perceived influence of teachers' culture and Teaching of Environmental Education at the UBE Level in Cross River State. One hypothesis was used to guide the study. A sample of 450 teachers was used from the 3 education zones of the state. Proportionate stratified random sampling was used to select the sample size of the teachers. The researcher designed and administered an instrument titled, Perceived Influence of Teachers' Culture and Teaching of Environmental Education questionnaire (PITCTEEQ) which was the main instrument used for data collection. An Ex-post Facto design was adopted for the study. The reliability estimate of the instrument was established through Cronbach Alpha Reliability Method with reliability index of 0.81. ANOVA was the statistical techniques employed to test the null hypothesis under study. 10 items questionnaire was adopted. Each was tested at .05 level of significance. The result of the analysis revealed that: There was no statistically significant difference between male and female teachers in their teaching of Environmental Education with respect to TCC, KSM, TCM, TCWS and TEC. Teachers' culture showed significant influence on the teaching of EE in the study area. By these findings, the study recommended among others that UBE teachers must be aware that culture and the concept of EE are two different ways of knowing, and therefore, their attitudes towards the teaching of EE have to be unrelated to their cultural beliefs.

KEYWORDS: Teachers, Culture, Teaching, Environmental Education

INTRODUCTION

Cultural values may determine teachers' behaviour in the area of the cultural practices in the classroom. They may determine teacher-student relationship more especially in a strange environment and their response to some infused themes of Environmental Education especially when it contradicts with their cultural values and norms.

The inadequate environmental ethics, ignorance and inadequate environmental awareness, knowledge and skills in pupils and students in particular, can only be removed through such education. That stirs the force of participation in decision-making, community action, and / or problem solving on environmental issues, which is a step towards future sustainable development (Ogueri, 2004). According to Jakayinfa and Yusuf (2008) the Environmental Education Curriculum

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of UBE, drafted by the Nigerian Educational Research and Development Council (NERDC), has the scope of environmental education structured into four main themes:

- i. Ecological foundation
- ii. Human environment/Development

- iii. Environmental change/impact
 - iv. Sustainable development
- The Environmental Education Curriculum of U.B.E. as drafted by Nigerian Educational Research and Development Council (NERDC) is presented in Table 1.

TABLE 1: The Environmental Education Curriculum of U.B.E. Basic education (Primary 1-3)

Minimum of 6 subjects, maximum of 7 subjects

Subjects	Explanatory notes
English studies	i. Official National Language
	ii. Medium of Instruction in schools
	iii. The subject predisposes itself for the infusion of the following: Road Safety Education, Disaster Risk reduction Education, and Consumer Education
	iv. Subject include literature-in-English
Mathematics	i. Fundamental discipline for science and technological development
	ii. Important for everyday life
Nigerian language	i. National Policy on Education (NPE) stipulates that the medium of instruction should be the language of the immediate environment of the child.
	ii. Schools are free to select such Nigerian Language to be taught
Basic Science and Technology (BST)	i. Each of the listed components will serve as themes for the Basic Science and Technology curriculum
	ii. Climate change is part of Basic Science theme
	iii. Disaster Risk Reduction Education and Consumer Education are infused into Basic Science and Technology Curriculum
	iv. Create enabling environment for the subject in all schools by making computers available in schools
Religion and National Values (RNV)	i. Listed components will serve as themes in the Religion and National Values Curriculum
	ii. Contents are planned for all children to take Social Studies, Civic Education and Security Education themes
	iii. Separate classes should be run for Christian Religious Studies (CRS) theme and Islamic Studies (IS) theme
	iv. Consumer Education, Disaster Risk Reduction Education and Peace and Conflict Resolution curricula are infused into the Civic Education, Social Studies and Security Education Themes
	v. Create enabling environment for the subject in all schools
Cultural and Creative Arts (CCA)	i. Important for preservation of our Cultural Heritage and fostering Creativity
Arabic Language	i. Optional

Source: Nigerian Educational Research and Development Council (NERDC, 2017) www.nerdc.org.ng/e-curriculum.

Nigeria is a country with many ethnic tribes and diverse culture. Some are the original inhabitant of the country while others are believed to be freed slaves that voluntarily decided to settle in Nigeria. A good example is the Aborigines who are believed to have been settled in Nigeria after the abolition of the slave trade in the late 19th century. For many years, Nigeria has been a country occupied with desperate people in terms

of national identity. By this, we mean culture. This identity creeps into teaching sector and affects classroom teaching in our educational system (Faloye, 2005).

In some cultural settings, parents are actively involved in their children's classrooms, and are visible in the classrooms, as volunteers who assist teachers. These cultural differences in value and belief may cause some teachers to

make inaccurate judgments regarding the value that other tribes place on education. While it is important to keep in mind that different tribal groups tend to follow particular language and interaction styles, there is tremendous variability within tribal groups (Rogoff, 2003). Thus, teachers need to understand individual students' histories and ideologies regarding education and learning as well as the cultural patterns and beliefs of groups.

The socio cultural characteristics which the teachers from Hausa Fulani society, for example, bring into the classroom from their environment into Efik cultural environment, for example, does not blend and can create a wedge between what they teach and the pre knowledge of what the students bring into the classroom for learning Environmental Education themes in the prescribed subjects. A teacher who is not positively disposed to, or has a socio-cultural background that is indifferent to classroom teaching would find it difficult to teach effectively.

Jegade (2008) investigated whether teaching through the use of the socio-cultural mode has any significant effect on students' attitude towards learning. The sample consisted of 600 senior secondary year-one students (442 boys, 158 girls) from 15 secondary schools in Nigeria. The Socio-Cultural Environment Scale (SCES) and the Biology Achievement Test (BAT) were used to measure the change in attitude and achievement of subjects in a pretest-posttest situation after a six-week treatment. Evidence was found to support the hypothesis that science teaching which deliberately involves the discussion of socio-cultural views about science concepts engenders positive attitudes towards the study of science. The findings also indicated that anthropomorphic and mechanistic views can be presented in such a way as to promote positive attitudes towards the study of science in traditional cultures.

Teachers share their culture, which is diversified into beliefs, values, and norms within their classroom teaching of environment, with their students. Hofstede (2001) identified behavioral trait as cultural dimensions among various communities. According to the author, teachers from the same community share similar beliefs and behaviors. He categorically placed these shared values into four cultural dimensions: (a) individualism and collectivism; (b) power distance; (c) uncertainty avoidance and acceptance; (d) and masculinity and femininity.

From his opinion, Hofstede (2001) suggested that low power distance cultures view teachers

and students as equals. Education in these countries center on the student. Moreover, these cultures find it acceptable for students to initiate discussion in the classrooms. In this educational setting, learning is a collaborative process between the teacher and student. Conversely, it indicates that high power distance countries viewed teachers as the experts and the center of education. Teachers in high power distance cultures initiated all communication in the classroom. It is the responsibility of the teacher to disseminate information to the student and the student to accept it without collaboration. High power cultures consider student-initiated questions to the teacher as offensive (Hofstede, 2001). This therefore explains that the culture of a teacher can significantly influence his classroom teaching of environmental education.

Mavuru and Ramnerain (2017) explored teachers' knowledge and views on the role of learners' socio-cultural background when teaching Natural Sciences to Grade 9 learners at three South African township schools. Within a socio-cultural framework, the research investigated how teachers accommodate learners' cultural norms and values, and beliefs, in their science lessons. In a qualitative case study, three teachers were interviewed five times using a semi-structured interview schedule. Through a constant comparative data analysis method, the themes emerged that firstly, teachers use their knowledge about learners' socio-cultural practices and beliefs, to create learning opportunities to harmonize the conflict between learners' worldviews and science. Secondly, the findings showed that teachers' incorporation of learners' socio-cultural background in lessons provides authentic learning situations that promoted the development of critical and analytical thinking skills in learners. This study affirms the call for teacher education institutions to review their science teacher education programmes with a view of incorporating and emphasizing knowledge of learners' socio-cultural background as an important teacher knowledge domain in teacher preparation.

Developing an awareness of cultural identity and how it affects teachers and interactions with others in school can be challenging. Teachers must be aware of how much cultural identity influences the education of students. In addition, teachers must be cognizant that their classroom teaching, their interactions with students, and their own ideas about identity influence the academic success and social development of

their students. The concept of identity is a complex one, shaped by individual teachers' characteristics, family dynamics, historical factors, and social contexts. These cultural identities of teachers are constructed from their experiences with the twelve attributes of culture identified by Cushner, McClelland, and Safford (2000) as ethnicity/nationality, social class, sex/gender, health, age, geographic region, sexuality, religion, social status, language, ability/disability, and race. Teachers' cultural identities are defined by these experiences and teachers learn these identities within a culture through socializing agents (Campbell, 2004). Therefore, teachers must understand that these cultural identities can help them define who the students are.

Teachers can discover and share their cultural identities through citing examples related to what they teach that focuses on their cultural heritage. The resulting examples can trigger other lessons that incorporate the cultures of students. By developing lessons that highlight students' cultures, the teacher actively engages them in learning. Therefore, teachers are meeting the students where they are. In this way, an awareness of the cultural identity of the teacher and that of the students affects how well the teacher will interact with the students, how well the students will interact with his or her peers, and how the students view his or her acceptance within the cultural group and within the classroom (Campbell 2004).

Cultural disconnect can occur when teachers from different cultures interact. Schools in which the cultural backgrounds of teachers differ significantly from that of the students because of tribal, racial, linguistic, social, religious, or economic reasons are especially vulnerable to cultural disconnect. This disconnect can negatively influence the teaching of environmental education concept in UBE curriculum. For example, consider a situation in which both a teacher and the family of one of her students value education and family. The teacher's beliefs include a principle that children should always attend school because of the learning and continuity that takes place in the classroom. The family, however, takes the student out of school for two weeks in order to visit a grandmother who lives out of the country. The family feels the trip is important for the student to learn and connect with the family's elders. For them, this trip is part of their child's education and does not hinder their child's education. Conflict arises between the teacher

and the student's family even though both value education and family. So, who is to say one is wrong and the other is right? The dominant cultural perspective will prevail unless teachers are able to create space to understand and explore a variety of values, beliefs, and expectations with the family. Teachers, students, and families may disagree on the nature and value of schoolwork; work ethics may differ in definition; and the role of home, family, and community may diverge in respect to understanding your own cultural background and connecting that background to the students in your classroom creates a rich learning environment in which the teacher and students value each other (Gay, 2000).

Following the introduction of Environmental Education (EE) into the Nigerian education system, based on the philosophy of education contained in the National Policy on Education (2013), the nine year basic education curriculum was reviewed to infuse EE into several subjects. It is believed that the infusion of Environmental Education into different U.B.E. subjects will help learners develop knowledge, skills and positive attitudes towards the environment from a very early stage.

Although Environmental Education has been included in the school curriculum in Nigeria as a whole and in Cross River State in particular, the condition within the school environment in particular in terms of littering of waste, mismanagement of schools' waste bin, filthy school toilets, walking and making a pathway on school fields (the green area), dirty classrooms, noise making (pollution), personal hygiene among others have not improved. Evidence of these problems can still be observed in many schools and also in the communities around the schools. The school is part of the community within where it is situated, therefore it is expected that what the teachers teach in schools, should be reflected in the society. This suggests, in this context, that there is a problem as far as the teaching of Environmental Education is concerned. In other words, it is an indication that there is a vacuum between theory and practice.

A great deal of efforts has been devoted to investigating teacher's culture and the ineffectiveness of teaching of Environmental Education in schools. None of such investigations to the knowledge of the researcher has simultaneously investigated these alongside with the same variables adopted for this study at the UBE level in Cross River State.

Therefore, the problem which this study seeks to address may be encapsulated in the following question: what influence does teachers' perceived culture have on teaching of Environmental Education at the UBE level?

Purpose of the study

The main purpose of this study is to investigate how perceived teacher's culture influences teaching of Environmental Education at the UBE level in Cross River State, Nigeria. Specifically, this study is designed to investigate;

1. How teachers' perceived culture influences teaching of Environmental Education

Hypothesis

1) There is no significant influence of teachers' perceived influence of culture on teaching of Environmental Education.

Methodology

Expost Facto research design was adopted. The study was conducted in Cross River State. The sample size of the study consisted of 450 UBE teachers across the three education zones of the state. A self-developed questionnaire was used as instrument for data collection titled Perceived Influence of Teachers Culture and Teaching of Environmental Education Questionnaire (PITCTEEQ) designed by the researchers. The questionnaire has two sections (A and B). Section A consisted of personal data while section B consisted of 10 items in the form of four point Likert scale of Strongly Agree – SA, Agree – A, Disagree – D, and Strongly Disagree – SD designed to elicit information from the respondents to indicate their level of agreement or disagreement with the item. The instrument was validated by three experts while Cronbach Alpha was used to test the reliability and the coefficient yielded 0.79. The copies of the questionnaire were administered by the researchers with three research assistants trained for the purpose. The data collected for the study were analysed using one-way analysis of variance (ANOVA).

Results

There is no significant perceived influence of teachers' culture on teaching of EE. The independent variable in this hypothesis is teachers' culture, while the dependent variable is teaching of EE in terms of TCC, KSM, TCM, TCWS and TEC. The highest score, a respondent was expected to have for the items measuring teachers' culture is 40 while the minimum score is 10 and the average score is 20. The respondents were therefore categorized into three as follows: below 20 (low), 20-30 (moderate) and 31- 40 (high). The statistical analysis technique deployed to test this hypothesis was the one-way analysis of variance (ANOVA). The results of the analysis are presented in Table 2.

The upper part of Table 2 shows the sizes, means and standard deviations for the three groups of respondents based on their culture. The critical results of ANOVA shows calculated F-ratios at .05 alpha as follows: TCC (51.86*), KSM (56.90*), TCM (20.94*), TCWS (93.55*) and TEC (735.74*).

From the obtained results, the calculated F-ratio of the five sub-variables are each (significant) higher than the critical F-ratio of 3.02 at .05 alpha level with 2 and 487 degrees of freedom. With these results, the null hypothesis was therefore rejected for each of the sub-variables of TCC, KSM, TCM, TCWS and TEC. This means that there is significant influence of teachers' culture on the teaching of EE in all the five sub-variables of the dependent variable.

Given the significant F-ratio for the five sub-variables, a multiple comparison analysis using Fisher's Least Square Difference (LSD) was done to determine exactly which group, those who score below 20, 20-30 and 31-40 differed significantly from others in terms of the five sub-variables. The results of the analysis are presented in Table 3. The pattern of the influence of teacher' culture on the teaching of EE is as follows:

TABLE 2: Analysis of variance of perceived influence of teachers' culture and their teaching of Environmental Education

Sub variables	Group	N	\bar{X}	SD
Teacher communicative competence	1. Low level	60	22.00	2.01
	2. Moderate level	240	23.25	2.38
	3. High level	150	25.20	2.32
	Total	450	23.73	2.57
Knowledge of the subject matter	1. Low level	60	20.50	1.51
	2. Moderate level	240	19.62	2.39
	3. High level	150	21.80	1.17
	Total	450	20.46	2.18
Teacher classroom management	1. Low level	60	20.50	1.51
	2. Moderate level	240	21.50	1.87
	3. High level	150	22.00	.63
	Total	450	21.53	1.58
Teachers capacity to work with teachers	1. Low level	60	20.00	.00
	2. Moderate level	240	17.12	1.61
	3. High level	150	17.80	1.47
	Total	450	17.73	1.73
Teachers' evaluation capacity	1. Low level	60	18.00	.00
	2. Moderate level	240	22.62	1.11
	3. High level	150	23.20	.075
	Total	450	22.20	1.90

Sub variables	Source of variation	Sum of squares	Df	Mean square	F-ratio	Sig
Teacher communicative competence	Between groups	559.00	2	279.50	51.86*	.000
	Within groups	2409.00	447	5.38		
	Total	2968.00	449			
Knowledge of the subject matter	Between groups	436.75	2	218.37	56.90*	.000
	Within groups	1715.25	447	3.83		
	Total	2152.00	449			
Teacher classroom management	Between groups	97.00	2	48.50	20.94*	.000
	Within groups	1035.00	447	2.31		
	Total	1132.00	449			
Teachers capacity to work with teachers	Between groups	397.75	2	198.87	93.55*	.000
	Within groups	950.25	447	2.12		
	Total	1348.00	449			
Teachers' evaluation capacity	Between groups	1251.75	2	625.87	735.74*	.000
	Within groups	380.25	447	.85		
	Total	1632.00	449			

* P <.05; critical F_{2,447} = 3.02

TABLE 3: Results of Fisher's least significant difference (LSD) multiple comparison analysis of the significant influence of teachers' culture on their teaching of Environmental Education (EE) at the UBE level (Knowledge of the subject matter, Teacher classroom management and Teachers' evaluation capacity) Multiple Comparisons

Sub dependent Variables	(I) CUL	(J) CUL	Mean Difference (I-J)	Std. Error	Sig.
TCC	Below 20	20-30	-1.25000(*)	.33508	.000
		31-40	-3.20000(*)	.35461	.000
	20-30	Below 20	1.25000(*)	.33508	.000
		31-40	-1.95000(*)	.24163	.000
KSM	31-40	Below 20	3.20000(*)	.35461	.000
		20-30	1.95000(*)	.24163	.000
	Below 20	20-30	.87500(*)	.28274	.002
		31-40	-1.30000(*)	.29923	.000
TCM	20-30	Below 20	-.87500(*)	.28274	.002
		31-40	-2.17500(*)	.20389	.000
	31-40	Below 20	1.30000(*)	.29923	.000
		20-30	2.17500(*)	.20389	.000
TCWS	Below 20	20-30	-1.00000(*)	.21963	.000
		31-40	-1.50000(*)	.23244	.000
	20-30	Below 20	1.00000(*)	.21963	.000
		31-40	-.50000(*)	.15838	.002
TEC	31-40	Below 20	1.50000(*)	.23244	.000
		20-30	.50000(*)	.15838	.002
	Below 20	20-30	2.87500(*)	.21045	.000
		31-40	2.20000(*)	.22272	.000
TEC	20-30	Below 20	-2.87500(*)	.21045	.000
		31-40	-.67500(*)	.15176	.000
	31-40	Below 20	-2.20000(*)	.22272	.000
		20-30	.67500(*)	.15176	.000
TEC	Below 20	20-30	-4.62500(*)	.13313	.000
		31-40	-5.20000(*)	.14089	.000
	20-30	Below 20	4.62500(*)	.13313	.000
		31-40	-.57500(*)	.09600	.000
31-40	Below 20	5.20000(*)	.14089	.000	
	20-30	.57500(*)	.09600	.000	

i. TCC

The significant mean difference of 1.2500, 3.20000 and 1.95000 indicates that the teaching of EE with respect to TCC for teachers with high cultural beliefs is significantly higher than those teachers with low and moderate cultural beliefs. Furthermore, those with moderate cultural beliefs are significantly higher than those with low cultural beliefs in the teaching of EE.

ii. KSM

The significant mean difference of 0.87500, 1.30000 and 2.17500 indicate that the teaching of EE with respect to KSM for teachers with high cultural beliefs is significantly higher than those of teachers with low and moderate cultural beliefs.

However, the teaching of EE of teachers with low cultural beliefs is significantly higher than those with moderate cultural belief.

iii. TCM

The significant mean difference of 1.00000, 1.50000 and 0.50000 indicate that the teaching of EE with respect to TCM for teachers with high cultural beliefs is significantly higher than those of teaches with low and moderate cultural beliefs. Furthermore, teachers with moderate cultural beliefs were significantly higher than those with low cultural beliefs in their teaching of EE.

iv. TCWS

The significant mean difference of 2.87500, 2.20000 and 0.67500 indicate that the teaching of EE with respect to TCWS for teachers with low cultural beliefs is significantly higher than those of moderate and high cultural beliefs. However, the teaching of EE of teachers with high cultural beliefs is significantly higher than those with moderate cultural beliefs.

v. TEC

The significant mean difference of 4.62500, 5.20000 and 0.575000 indicates that the teaching of EE with respect to TEC for teachers with high cultural beliefs is significantly higher than those of teachers with low and moderate cultural beliefs. Furthermore, the teaching of EE for teachers with moderate cultural beliefs is significantly higher than those of low cultural beliefs.

DISCUSSION OF FINDINGS

Considering the highest score, a respondent was expected to have for the items measuring teachers' culture as 40, minimum score is 10 and the average score is 20. The respondents were therefore categorized into three as follows: below 20 (low), 20-30 (moderate) and 31- 40 (high).

The critical results of ANOVA shows calculated F-ratios at .05 alpha as follows: TCC (51.86*), KSM (56.90*), TCM (20.94*), TCWS (93.55*) and TEC (735.74*). From the obtained results, the calculated F-ratio of the five sub-variables are each (significant) higher than the critical F-ratio of 3.02 at .05 alpha level with 2 and 487 degrees of freedom. With these results, the null hypothesis was therefore rejected for each of the sub-variables of TCC, KSM, TCM, TCWS and TEC. This means that there is significant influence of teachers' culture on the teaching of EE in all the five sub-variables of the dependent variable.

This finding is in line with the view of Jegede (2008); Mavuru and Ramnerain (2017); and (Campbell 2004). These authors are of the opinion that teachers must be cognizant that their own ideas about cultural identity can influence teaching of EE. Similarly, Banks and McGee, (2005); Gay (2000) and Bennett, (2003) asserted that teachers position themselves and their cultures to teach subjects in which Environmental Education is infused. Culture, and personality are just part of who teachers are, and they go wherever teachers go.

CONCLUSION

Based on the findings, it was concluded that perceived influence of teacher's culture has a significant influence on the teaching of Environmental Education at the Universal Basis Education in the study area. However, on teachers; differences in values and belief may cause some teachers to make inaccurate judgment regards the values of Environmental Education they have to teach.

RECOMMENDATIONS

One the basis of the findings of this study, the following recommendations were made

1. Seminars and workshops should to be organized for teachers. Also government should intensify efforts in effective supervision of teachers to acquaint them with new ideas in the implementation of the universal basic education programme.
2. Not fully appreciating distinction between culture and science may result in interference of personal culture values of UBE teachers on their attitude towards the teaching of EE. It therefore implies that UBE teachers must be aware that culture and the concept of EE are two different ways of knowing, and therefore, their attitudes towards the teaching of EE have to be unrelated to their cultural beliefs.

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COLLECTION DEVELOPMENT POLICY ON LIBRARY RESOURCES AND USERS IN UNIVERSITY LIBRARIES IN SOUTH-SOUTH GEO-POLITICAL ZONE OF NIGERIA

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ABSTRACT

The study examined the effect of collection development policy on library resources and users in university libraries in South-South Geo-Political Zone of Nigeria. A collection development policy established ground rules for planning and budgeting, selecting and acquiring library resources. These documents provide a framework for coordinated collection development programmes for academic libraries for effective service to the academic community. A descriptive survey design was adopted for the study. A purposive sampling technique was used to draw a sample of one hundred and fifty (150) library users from three university libraries namely: University of Calabar (UNICAL), Cross River State University of Technology (CRUTECH) and University of Uyo (UNIUYO). The instrument used to collect data was titled: Collection Development Policy on Library Resources and Users Questionnaire (CDPLRUQ). Cronbach Alpha reliability coefficient of 0.78 was established. Simple percentages were used to analyze the data collected from the respondents. From the findings, it was observed that problems such funding pattern, information explosion and inflation were some of the variables affecting the smooth collection development policy in Nigerian university libraries. It was recommended that, the university libraries should train the librarians on business and negotiation skill that will enable them to understand the integrity of licensing and negotiation involved in the subscription of resources. More so, there should be an increase in the internet bandwidth in order to improve the network access to resources on regular basis.

KEYWORDS: Collection development, policy, library resources, library users, university libraries.

INTRODUCTION

The major task of any library is to provide those materials which the individual user will find reliable and useful. The amount of satisfaction a reader finds in a library depends directly upon the

materials the librarian has available for his/her use; and these can only be possible with live collections. Thus, collection development is viewed as the process of building up and improving upon library's information resources both qualitatively and quantitatively. It's a

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universal process in libraries whereby a library brings together a variety of materials needed to meet patrons' demands. This aspect of the practice is responsible for selecting and acquiring information materials that would enable librarians and information specialists perform their myriad functions to the users effectively. Therefore, collection development involves community analysis acquisition policy, selection, acquisition, weeding and evaluation (International Federation of Library Association –IFLA, 2012).

The quality and quantity of collection development in the library is a necessary measure or criteria for accrediting new faculties/ programmes in universities and other related higher institutions of learning in Nigeria. Moreover, resource development is a very important service in the library because without adequate and appropriate resources; no library can claim to be effective in serving her users. The process of collection development should involve selection of current and retrospective materials, planning of coherent strategies for continuing acquisition, and evaluation of collections to ascertain how well they serve user's needs.

A library collection usually consists of books, journals, magazines, newspaper, periodicals and non-book materials like electronic media (video/ audio-visuals, cassettes, recorders, microfiches, CD-ROM, internet, maps, electronic books) and computers. According to Samantaray and Rath (2014), building a collection may occasionally involve the selection and acquisition of these materials, but in most cases it is the planning of the systematic development of the already existing collection.

Generally, in every library simple or complex; there are operational guidelines and policies that guide the acquisition and collection of information materials. Igiomo and Duro (2012) opined that policy ensures that all information materials acquired are relevant to the users of the library for effective utilization. To develop a policy, however, is a very complex process that involves every stakeholder or users of the library. It's not only the librarians and information specialists that formulate the policies; faculties and other interested individuals or users are also involved. The policy should reflect the vision and mission of the parent institution. For effective collection development policy, there must be a document that clearly highlights the mission and vision statement of the library. A policy development process requires proper planning to enhance a standard policy document. Usually, the planning

committee comprises professionals and library users. Library policies should be able to spell out explicitly what kind and type of resources to acquire in order to meet the needs of the users. However, a policy document provides sound foundation for future planning which assist in determining priorities especially when financial resources are limited. It's a wise guide to selection rather than a practical method of selecting materials. Collection development policies are virtually significant to libraries and the librarian because it serves as a set of directory for orderly selection, acquisition and management of materials accessibility to users.

REVIEW OF RELATED LITERATURE

Aina (2004) asserted that one of the fundamental functions of the library and information profession is collection development. This involves the practice that has to do with selecting and acquiring information materials that will enable librarians and information specialists to perform various functions to the users. According to him, formulating appropriate library policies and measures for the budget implementation as well as monitoring various collection development strategies and resources sharing among other institutions are problems faced by collection development policy makers. He observed that inadequate funding, inability of the library and Librarians to operate a clearly established policy, absence of written development policy, socio-economic changes, poor planning and information explosion hamper effective collection development in libraries.

Samantaray and Rath (2014) highlighted the importance of collection development in libraries. They said certain variables have to be taken into consideration while developing a qualitative collection for the benefit of the users. These factors include policies, principles, techniques and procedures, problems associated with collection/development and weeding out as well. It is equally important to evaluate the collections to assess its use and moreover the usefulness of collection development in electronic environment. They suggested that, library professionals need to take utmost care in developing a balanced collection, which enhances the quality of the library.

Relatively, Okogwu and Ekere (2018) in the study on collection development policy of electronic resources in university libraries ascertained the types of policies guiding electronic resources collection development practices; identifies the tools used in making sound electronic resources

collection development; and determines the criteria considered in the evaluation of electronic resources of university libraries. The study recommended that libraries should formulate and develop electronic resources collection development policy; efforts should be made by libraries to adopt a written electronic resources collection development policy which serves as a guide and for references and continuity among the librarians that are involved in e-resources collection development. Also, electronic resources should be evaluated on a regular basis by considering relevant factors to disclose those electronic resources that are of high and maximum utilization.

Ali (2020) explored the opportunities and challenges in the management of collection development policy in libraries. Collection development is considered a critical factor in the provision of adequate and relevant information resources in the library. In order to develop a balanced and unbiased collection, libraries formulate a policy that will serve the interest of the entire clientele. Collection development or acquisition librarians encounter challenges (both internal and external) in the process of formulating collection development policy. The study found that acquisition librarians play a vital role in ensuring access to library information resources through the formulation of policies that guide them through this process. The study also discovered that while some libraries have written collection development policies, some have unwritten, and others do not have at all. A good number of literature consulted on the subject matter identified inadequate funding, internal and external interference, issues bordering on preservation, donations/gifts, vendors, intellectual property rights and inadequate knowledge of ICT as major impediments militating against the maintenance of balanced collection development policy. The study suggested adequate funding, adequate training and retraining of acquisition

librarians in the areas of modern information technology as it relates to formulating guidelines for selecting electronic information resources and minimal interference from the libraries' parent organizations.

Purpose of the study

This study sought to find out if collection development policy has effects on resources and users of the universities library.

Research questions

1. What effect does collection development policy have on library resources?
2. What effect does the collection development policy have on library users?
3. What are the problems hindering the smooth operation of collection development policy?

Research Methodology

The study selected three Universities from the South-South Geo-Political Zone of Nigeria namely: University of Calabar (UNICAL), Cross River State University of Technology (CRUTECH) and University of Uyo (UNIUYO). The instrument used for collection of data was titled: Collection Development Policy on Library Resources and Users Questionnaire (CDPLRUQ). A descriptive survey design was adopted for the study. A purposive sampling technique was used to draw a sample of one hundred and fifty (150) library users from the three universities mentioned in the study. Cronbach Alpha reliability coefficient of 0.78 was established. And simple percentages were used to analyze the data collected from the respondents.

RESULTS

The results from the data collected are shown in the Tables based on the research questions.

Table 1: What effect does collection development policy have on library resources?

ITEMS	SA	A	%	SD	D	%	TOTAL
1. The collection development policy has a great effect on library resources	48 (32%)	33 (22%)	(54)	40 (27%)	29 (19%)	(46)	150 (100%)
2. A greater percentage of library growth and systematic arrangement is attributed to collection development policy	45 (30%)	40 (27%)	(57)	48 (32%)	17 (11%)	(43)	150 (100%)
3. Library resources are up to date with current trends of events in the society	43 (29%)	39 (26%)	(55)	35 (23%)	33 (22%)	(45)	150 (100%)
4. A good collection development means a good library collection.	53 (35%)	37 (25%)	(60)	43 (29%)	17 (11%)	(40)	150 (100%)

The data from Table 1 item 1 showed that a greater percentage of the one hundred and fifty (150) respondents agreed that the collection development policy has a good effect on library resources. Fifty-four (54%) agreed while forty-six (46%) of the respondents disagreed to this fact. In item 2, fifty-seven (57%) of the respondents admitted that a greater percentage of the library growth and systematic arrangement is attributed

to the collection development policy while 43% of them disagreed to it. From item 3, fifty-five (55%) of the respondents confirmed that library resources are up to date with current trends of events in the society while 45% disagreed to it. And item 4 showed that 60% of the respondents supported the assertion that a good collection development means a good library collection while 40% disagreed to it.

Table 2: What effect does collection development policy have on library users?

ITEMS	SA	A	%	SD	D	%	TOTAL
1. Library users are satisfied with the services rendered to them by the library	66 (44%)	53 (35%)	(79)	16 (11%)	15 (10%)	(21)	150 (100%)
2. Students and other users always get positive results from library use.	50 (33%)	60 (40%)	(73)	28 (19%)	12 (8%)	(27)	150 (100%)
3. A university library exists to meet information needs of the users.	65 (43%)	51 (34%)	(77)	18 (12%)	16 (11%)	(23)	150 (100%)

Information from Table 2, item 1, shows that as much as 79% of the respondents agreed that library users are satisfied with the services rendered to them by the library while only 21% disagreed to the fact. This shows that services provided by the three university libraries to their users are satisfactory. Item 2 showed that 73% of students and library users appreciate the outcome from library use while 27% were not in agreement. And item 3 indicates that 77% confirmed the view that university library exist to meet information needs of the users and 23% respondents did support the view.

Table 3: What are the problems hindering the smooth operation of collection development policy?

ITEMS	SA	A	%	SD	D	%	TOTAL
1. Fund is needed for effective library collection development	65 (43%)	60 (40%)	(83)	15 (10%)	10 (7%)	(17)	150 (100%)
2. Information explosion makes academic library collection development difficult to operate.	77 (51%)	44 (29%)	(80)	22 (15%)	7 (5%)	(20)	150 (100%)
3. Lack of clear collection development policy makes the policy difficulty to understand by staff	66 (44%)	52 (35%)	(79)	23 (15%)	9 (6%)	(21)	150 (100%)
4. Poorly organized library resources make access by the users difficult.	77 (51%)	40 (27%)	(78)	18 (12%)	15 (10%)	(22)	150 (100%)

The findings from Table 3 item 1 show that a reasonable percentage of the respondents that is 83% admitted that funding is a major variable that hinders effective operation of library collection development; 17% disagreed to it. The next item indicates that 80% agreed that information explosion makes it difficult for academic library to operate the policy successfully; 20% did not support it. In the same manner, items 3 maintains that 79% respondents is of the opinion that lack of clear collection development policy make policies difficult to understand while 21% did not upheld it. And in item 4, seventy-eight (78%) of the respondents agreed to the fact that poorly organized library resources make access by the users' difficult as against 22% respondents who opposed it.

DISCUSSION OF FINDINGS

The study revealed that library collection development policy has a significant effect on library resources. A closer look at the itemized statements in Table 1 revealed that a reasonable percentage supported that, collection development policy has a positive effect on library resources. These assertions corroborate Umoh and Abua (2021) who opined that the goal of library education is familiarizing students with the role of information in the society/ awareness of information resources. The findings support Okogwu and Ekere (2018) assertion that library growth and systematic arrangement is attributed to a sound collection development policy. Interestingly also, the recent study revealed that the library resources on the average are up to date with the current trends of events in the society, this is in line with the findings highlighted by Igiomo and Duro (2012), IFLA (2012) views that collection development policy ensures that

all information materials acquired are relevant to the needs of every stakeholder of the library for effective utilization.

Table 2 provided results on the effect of collection development policy on the library users. It was revealed that, university library exist to meet information needs of the users of which strengthen the view of Igajah (2013) that library policy made should contribute to the advancement of knowledge by providing resources for effective utilization of the needs of her users. Relatively, on the assertion that student/ other library users always get positive results from library use or are they satisfied with the services rendered to them? Corroborate Mansur (2012), Aina (2004) findings that, collection development is the selection, acquisition, and processing of library materials in varied formats meant for users' current needs and their future requirements.

In consideration of Table 3, the findings in the recent study identified some of the problems hindering the smooth operation of collection development policy to include: funding; lack of clear understanding of the policy; poor management and implementation of the policy; inadequate and obsolete resources; poorly organized resources and information explosion are all variables affecting functional collection development policy in libraries. These challenges consolidate assertions of Ali (2020), Benny (2017) and Jenson (2017) to include: increase in the cost of books and journals, security in library environment, problems related to check the reliability and authenticity of the digital information, control over the copy right act, availability of library materials in various physical medium, increased demand of the readers, fluctuation in the exchange rate and so on. To

overcome these challenges, they suggested that librarian should always go for materials that are relevant and cost effective, depending on the budget, electronic security gadgets are preferred. The library can go for CCTV device to tract any threat of theft. It is advisable to emphasize on purchase on local but relevant resources when the exchange rates are high.

CONCLUSION

Developing a balanced and usable collection is important aspect of library services. The university libraries are built up to meet specific research and information needs of the parent institutions and community services. The collection development policy is the basis upon which the library collection is built. University is a citadel of learning, teaching and research; the main duty of the university libraries are to acquire, organized, store and disseminate information resources for the effective academic programmes within the university system. The funding pattern of university libraries in the south-south geo-political zone is very low and inadequate. It is therefore concluded that collection development policy, acquisition of materials, satisfaction of collection and users, as well as challenges faced by the university librarians should be given urgent attention by the Government and policy makers.

RECOMMENDATIONS

In the light of this study the following recommendations were made:

1. The University libraries in South-South Nigeria should provide adequate funds to improve on the library infrastructures.
2. The provision of adequate fund will necessitate the subscription of better network for improved access to information resources.
3. The provision of adequate fund will encourage timely renewal of resources to avoid loss of access to the resources.
4. The university libraries should train the librarians on business and negotiation skill that will enable them to understand the integrity of the licensing and negotiation involved in the subscription of resources.
5. The librarians should follow up with the provider to avoid losing access to resources if not renewed at expiry.
6. The selectors should devise a means of applying usage statistics to a cancellation decision.
7. Increase in the internet bandwidth in order to improve the network access to resources on regular basis.

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