Influence of Physical Environment on Inclusive Education and Students Academic Achievement in Agriculture in Secondary Schools in Port-Harcourt Metropolis;

By

Nlebem S.B. PhD
Department of Vocational and Technology Education
Faculty of Education
Rivers State University, Nkpolu-Oroworukwo
Port-Harcourt.

Abstract:

This study examined the influence of physical environment on inclusive education and students' academic achievement in agricultural science in public secondary schools in Port-Harcourt Metropolis. Correlation design approach was adopted for this study. The area of the study was Port Harcourt Metropolis. The population of the study consisted of all public senior secondary schools in Port-Harcourt Metropolis of Rivers State. The sample size of the study was 30% of the total population which gave 351. The instrument for data collection was questionnaire. The research instrument was subjected to face and content validation by two experts from the Department of Vocational and Technology Education, Rivers State University. Test-retest reliability method was used to test the reliability of the instrument using Pearson Product Moment Correlation Coefficient and it gave a value of 0.90. The data collected was analyzed using mean (x) and standard Deviation (SD) to answer the research questions. The criterion mean was used in scoring the instrument. 2.50 and above was used to accept an item, while item below 2.50 was rejected. The results of the study show that efficient and conducive school climate influence effective teaching and learning of agricultural science. Good school management enhances the effective teaching and learning of agricultural science in an inclusive education. Lack of field/field trips hinder the proper visualization of what the student are taught in the classroom. Instructional materials enhances the effective teaching and learning of agricultural science as it makes the process conducive and favourable. The study recommended that good school environmental climate should be provided and maintained for an inclusive public senior secondary school to ensure that all students participate in the teaching and learning of agricultural science.

Keywords: Influence, Physical environment, Inclusive education, Academic achievement, Agricultural science.

Introduction

The process of learning is an active agent of change such that students are empowered to generate knowledge, form their experiences and develop requisite skills for life (Bada, 2015). The right to education to every Nigerian child of school-going age is enshrined in the 1999 Constitution of the Federal Republic of Nigeria. The state is mandated to make the

Necessary resources and facilitates available at all levels of the educational system so that the teaching and learning process can take place efficiently and effectively. Achoka (2017) noted that secondary education is universally acknowledged as a fundamental stage. The formation of character and foundations of future leadership are laid at this level, which comes at a time when the youth is in his formative adolescent stage. Achoka (2017) he went further to say that secondary education is the foundation stone for further studies and also for the development of a nation. Therefore, it is imperative to pay proper attention towards secondary education and revolutionary steps should be taken to make it more effective, successful and productive. Nigeria constitution of 1999 stipulated that Primary and secondary levels of education are made compulsory for every Nigeria child no matter the status of the child physical health condition (able or physically challenged). Nlebem (2018) observed that agricultural science which is called rural science at primary school level is made compulsory for the pupils, at the secondary school level it is called agricultural science and is among the major subjects for the students. Agricultural science been a vocational subject should be properly handled for an inclusive education if the students are to perform well in all our public secondary schools. Poor academic achievement of public secondary students in agricultural science (both in practical and theory sections) leaves many in serious concern that a lot of people may not have arousing interest in taking up agriculture-oriented courses as career in higher institutions of learning in the near future. The reality of this is that many youths will not have interest in agriculture as a career and also may serve as a source of discouragement for other students that may want to taking up a career in agriculture or related occupation (Schauss, 2021).

Lack of interest in agricultural oriented courses may lead to the problem of food insecurity in the near future of any nation. Olawepo (2009) observed that agricultural science as a subject is not complete without the aspect of conducive physical environments like functional agricultural laboratory and availability of a school farm for on-the-farm experience for the students. He went further to say that school farm is a major component of the school physical environments and with a vision to bring back unprecedented rebirth in the teaching and learning of agricultural science that is practical oriented and able to complement what the students are taught in the class room environment. With seasoned

and well trained teachers in the field of agriculture coupled with the availability of other instructional materials, the students can be encouraged to create interest in the subject which may reflect ultimately in their academic performance in both practical and theoretical aspect of the subject.

Shakil, Faizi, Hafeze (2010) were of the opinion that the low standards of academic achievement of public secondary school students offering agricultural science in Nigeria constitute not just an educational challenge but also a developmental challenge in a country that seeks to use education as a vehicle for achieving development. Despite the tremendous progress in academic access for all Nigerians, several problems are affecting thousands of school-going children from learning in public schools. Most school environments in Nigeria are not conducive for inclusive education. Inclusive education according to Wilson (2005) means students with diverse and different learning and physical abilities staying in the same classroom to learn side by side. It is the art of placing students in age-appropriate general education classes in schools available in their immediate environment that gives access to high-quality instruction, intervention and assistance to meet up primary academic curriculum irrespective of any challenges they may have. Wilson (2005) also noted that children with disabilities have equal capacities to learn and perform optimally as their age-mates that are without limitations. These children are therefore supposed to be part of all educational activities in their classroom and within the neighbourhood. Such activities include excursion, academic debates, student union government, sports and other related activities.

Usman, and Adewumi (2016) asserted that recognizing the values in diversity and unique contribution of each student in the classroom is one of the key drivers of an inclusive educational system that will make every child to feel safe and develop a sense of belonging. Usman, and Adewumi (2016) also noted that a lot of schools claim to be inclusive, but this is often not the case, sharing the same physical space and performing different activities is not inclusive. Most educational institutions in Nigeria do not operate an inclusive setting; the reason for this could be inadequate funding, cultural belief, negative perceptions and teacher qualification.

Profusek, Rainey (2016) numerated some of the several benefits of including special needs students in the same classroom with other students. It helps them develop a positive perception of themselves and others. Playing and learning alongside with other children of different cultures and abilities assist children to grow in understanding people that are unique in skills due to physical, social or other challenges. Allowing special needs children to mix with other children in the school settings makes them feel included and this expands

their network of friends, every parent wants their child to be happy and accepted by their peers, have a healthy life and education. Introducing inclusive education in the classroom will reduce stagnation and help such children attain their highest height. It also drives a higher commitment to the school by the parents as they become more involved in the school programme.

Onweh, and Akpan (2014) observed that there are equally important and more intangible factors like school physical environments that affect academic achievement but may have escaped researchers mind at the global level and particularly in low and middle-income countries. These gaps have led to a limited understanding of what can predict students' academic achievement in low and middle-income countries such as Nigeria. Addressing these gaps provides in-depth knowledge of how different domains enhance the school learning environment in way that impact students' academic achievement differently. Developing countries such as Nigeria and many of the African countries are focusing their concentration on research to explore better solutions to the escalating and emerging problems faced by the youth at secondary school level. Onweh, and Akpan (2014) went further to say that most of the people, who make up the skilled manpower of a nation, are trained before the end of their secondary school years. The quality of higher education depends upon the quality achieved at this level. School learning physical environment is a critical part of effective and successful instruction in inclusive education. Conducive physical environment with well-organized and efficient lesson planning preparation helps a teachers to teach and students to learn. Students perform well in an optimistic classroom atmosphere and an environment in which they feel secure, safe, cared for and involved in all activities. From a student point of view, effective and successful physical environment provides students with opportunities to gain experience though observation, to socialization, and to be motivated while learning interesting content.

Osariyekenwen (2010) noted that from a teacher point of view, effective physical environment in an inclusive education involves availability of students with willingness/readiness to learn, availability of teaching aids and instructional materials. To ensure a favourable physical arrangement provides students with effective instruction and promotes smooth teaching learning process. (Laws of Learning Edward Lee Thorndike 18 74-1949).

Physical facilities such as chairs, white boards, lights, computers, among others should be provided as they are helpful in improving the overall performance of the school. Physical environment refers to physical characteristics of the rooms & places used in learning other than the class room like fields/playgrounds, school farm, laboratory etc. Physical

environment is a combination of different things for instance the classroom physical characteristics includes architectural design, lighting, seat arrangement, ventilation system, size of the room, floor, walls, desks, chairs, rugs, whiteboards, computers etc. While outside the classroom involves other vital places of learning like fields/playgrounds, school farm, laboratory and tourist or excursion areas. The learning setting is comprised of different things i.e., learners, teachers and the physical environment (Mills, 2013).

Physical environment according to Rasenfield, Lambert, and Black (2009) is simply defined as the physical room in which teacher and learners are the main element including its spatial elements i.e., floor, windows, walls, as well as other classroom equipment i.e., desks, chairs, rugs, chalkboards, tack boards, easels, counters and computer equipment but not limited to these things. Davis, (2010) also noted that teachers and students are considered the main elements of the physical environment. Favourable physical environment has a significant positive effect on the efficiency of any organization and acts as catalyzing agent to provide a straight way for achieving predetermined objectives of an organization. But unfortunately, physical environment in our classroom for inclusive education is not conducive for smooth teaching learning process resulting in fatigue and frustration among the students. Physical arrangement plays a vital role in teaching learning process. It can affect the performance of both teachers and students. Davis, (2010) also observed that a good physical environment is designed in such a way that it does not obstructs the learning process. It stands to reason that a student sitting in an insufferably hot, airless room listening to a lecture on cryogenics would not learn as much as he would in a cool, comfortable space. Unfortunately, college buildings are designed to attract people from outside but they failed to provide a safe and comfortable internal atmosphere for students.

Over the years, there has been an upsurge in public outcry in the low participation and involvement of physical challenge students in the study of agricultural science and on the poor performance in public examinations. This situation also affected the students' enrolment and choice of courses of study in the agriculture background in higher institutions of learning. This ugly situation has bothered much on the minds of government, parents, policy makers and scholars in the discipline of agricultural science been a practical course. Attention has also been focused on what could be responsible for this phenomenon. It has also been observed by the researcher that this situation highlighted above is as a result of not properly including inclusive education in our school system. These factors as seen by the researcher include obsolete instructional materials, lack of field trip/field studies, poor school climate, school location, and poor school

management techniques and poor teachers-students relationship that will favour disabled children.

The problems are further compounded by government policies and programmes on education which has rendered the study of agricultural science uninteresting. The non-recognition by the government and employer of labour of agriculture related courses in our society these days has greatly aggravated the problem. Therefore, in this era of serious environmental degradation and its concomitant effect on human health and wellbeing, it becomes imperative to investigate the influence of physical environment on inclusive education and students' academic achievement in agricultural science in public secondary schools in Port Harcourt Metropolis.

Purpose of the Study

The main purpose of the study is to examine the influence of physical environment on inclusive education and student's academic achievement in agricultural Science in Public Secondary Schools in Port-Harcourt Metropolis. Specifically the objectives are expressed as follows:

1. Examine the influence of school climate on inclusive education and students' academic achievement in agricultural science in public secondary schools in Port-Harcourt Metropolis.
2. Determine the influence of field activities on inclusive education and students' academic achievement in agricultural science in public secondary schools in Port-Harcourt Metropolis.
3. Ascertain the influence of instructional materials on inclusive education and students academic achievement in agricultural science in public secondary schools in Port-Harcourt Metropolis
4. Examine the influence of physical structures on inclusive education and student academic achievement in agricultural science in public secondary schools in Port-Harcourt Metropolis.

Research Questions

The following research questions guided the study:

1. What are the influence of school climate on inclusive education and students' academic achievement in agricultural science in public secondary schools in Port-Harcourt Metropolis?

2. What are the influence of field activities on inclusive education and students' academic achievement in agricultural science in public secondary schools in Port-Harcourt Metropolis?
3. What are the influence of instructional materials on inclusive education and students' academic achievement in agricultural science in public secondary schools in Port-Harcourt Metropolis?
4. What are the influence of physical structure on inclusive education and students' academic achievement in agricultural science in public secondary schools in Port-Harcourt Metropolis?

Methodology

This study adopted the correlation design approach. The study was carried out in Port-Harcourt Metropolis. Port-Harcourt Metropolis comprises of Port-Harcourt Local Government Area and Obio/Akpor Local Government Area. There are numerous public secondary schools here offering agricultural science at senior secondary level, because Port-Harcourt is a large city; its schools contain both able and physically challenged students. This is why the area was chosen for the study. The population of the study consisted of all the principals, vice principals and teachers of agricultural science in the 38 public secondary schools in Port-Harcourt and Obio/Akpor the two Local Government Areas that make up Port-Harcourt Metropolis. Sample and sampling technique adopted was a multistage sampling technique was adopted to select 15 schools out of the 38. And simple random sampling technique was used to select all the principals which are 15, and 2 vice principals which are 30 and 5 agricultural science teachers from the 15 schools which are 75, all totalling 110 respondents. The instrument for data collection was a structured questionnaire titled, Influence of Physical Environment on Inclusive Education and Students' Academic Achievement Questionnaire, (IPEIESAAQ). The study adopted a 4-points modified Likert rating scale of agreement, strongly agreed, (SA) Agreed. (A) Disagree (D) and strongly disagreed, (SD), with numerical values of 4, 3, 2, and 1respectively. The instrument before use was validated by two experts in the department of Vocational and Technology Education of Rivers State University Port Harcourt. The instrument also passed the test of reliability, through test retest method and its result computed using Pearson's Product Moment Correlation Technique which yielded a coefficient of 0.78. Data collected were analyzed using mean and standard deviation measures, with a criterion mean value of 2.50 and above as benchmark for agreement and below 2.50 as disagreement.

Results and Discussion

Research Question 1: What are the influence of school climate on inclusive education and students' academic achievement in agricultural science in public secondary schools in Port-Harcourt Metropolis?

Table 1: Respondents Mean Responses on Influence of School Climate on Inclusive Education and Student's Academic Achievement in Port Metropolis

S/N	Statement	Principals (n=45)			Teachers (n=75)		
		X	SD	REMARK	X	SD	REMARK
1.	Able and physical challenged students are thought together	3.80	0.37	Agree	2.90	0.87	Agree
2.		3.00	0.56	Agree	2.85	0.86	Agree
3.	Goals and values of the school consider physically challenged.	2.70	0.75	Agree	3.00	0.56	Agree
4.	There is interpersonal relationship between able and physically challenged students.	3.28	0.83	Agree	3.26	0.84	Agree
5.	The physically challenged are not allowed to sweep classroom.	3.48	0.63	Agree	3.36	0.64	Agree
6.	The physically challenged are not appointed class prefects.	3.00	0.56	Agree	2.96	0.84	Agree
7.	The physically challenged are not appointed school prefects.	3.26	0.79	Agree	3.28	0.71	Agree
8.	The physically challenged also per take in school debates	2.94	0.84	Agree	2.90	0.93	Agree
9.	Well painted and illuminated classrooms favour all students	2.87	0.84	Agree	2.67	0.70	Agree
	Grand Mean	2.71	0.71	Agree	2.67	0.60	Agree

Source: Field survey, 2021.

Data in Table 1 showed that the respondents agreed that climate have influence on inclusive education and students academic achievement in agricultural science in public secondary schools in Port-Harcourt Metropolis, such as able and physically challenged students are taught together (3.80 & 2.90), goals and values of the school consider physically challenged (2.70 & 3.80), there is interpersonal relationship between able and physically challenged students (3.28 & 3.26), the physically challenged are not allowed to sweep classroom (3.48 & 3.36), the physically challenged are not appointed class prefects, (3.26 & 3.28), the physically challenged also partake in school debates (2.94 & 2.90), well painted and illuminated classrooms favour learning for all students (2.87 & 2.67). Also the

standard deviation of principals' range from (0.37 to 0.84) while teachers range from (0.56 to 0.93) which shows homogeneity and closeness in the opinion of the respondents. The findings are in corroboration with the work of Bada (2015) which states that school climate have great influence in teaching and learning in secondary schools.

Research question 2: What are the influence of field activities on inclusive education and students' academic achievement in agricultural science in public secondary schools in Port-Harcourt Metropolis?

Respondents Mean Responses on the Influence of Field Activities on Inclusive Education and Student Academic Achievement in Agricultural Science in Port Harcourt Metropolis.

S/N	Statement	Principals (n=45)			Teachers (n=75)		
		X	SD	REMARK	X	SD	REMARK
1.	The school farm is accessible to all students	2.60	0.64	Agree	2.54	0.63	Agree
2.	The farm hands assist physical challenged students	2.84	0.86	Agree	2.90	0.87	Agree
3.	School Paths are clean and accessible to all students	3.00	0.62	Agree	3.00	0.64	Agree
4.	The football field is accessible to all students including disable	2.80	0.80	Agree	2.84	0.86	Agree
5.	All students go on field trips	2.32	0.54	Disagree	2.20	0.53	Disagree
6.	Agricultural laboratory is made accessible to disabled or physically challenged students	2.70	0.76	Agree	2.60	0.80	Agree
7,	Seat arrangement all students can easily see the whiteboard	2.80	0.85	Agree	2.76	0.83	Agree
	Grand Mean	2.65	0.84	Agree	2.56	0.67	Agree

Source: Field survey, 2021.

Data in Table 2 showed that the respondents agreed that field activities have influence in inclusive education and students academic achievement in agricultural science in public secondary schools in Port-Harcourt Metropolis for instance, The school farm is accessible to all students (2.60 & 2.90), The farm hands assist physical challenged students (2.84 & 2.90), School Paths are clean and accessible to all students (3.00 & 300), The football field is accessible to all students including disable (2.80 & 2.84), All students go on field trips (2.32 & 2.20), Agricultural laboratory is made accessible to disabled or physically challenged

students, (2.70 s& 2.60), Seat arrangement all students can easily see the whiteboard (2.80 & 2.76). Also the standard deviation of principals' range from (0.63 to 0.87) while teachers range from (0.54 to 0.86) which shows homogeneity and closeness in the opinion of the respondents The findings are in agreement with the works of Asiya (2011) which noted that field activities have influence on inclusive education in public secondary schools in Port Harcourt Metropolis.

Research question 3: What are the influence of instructional materials on inclusive education and students' academic achievement in agricultural science in public secondary schools in Port-Harcourt Metropolis?

Table 3: Respondents Means Responses on Influence of Instructional Materials on Inclusive Education and Students' Academic Achievement in Agricultural Science in Secondary Schools in Port Harcourt Metropolis.

S/N	Statement	Principals (n=45)			Teachers (n=75)		
		X	SD	REMARK	X	SD	REMARK
1.	Instructional Materials used by teachers favour all students	2.91	0.72	Agree	2.84	0.88	Agree
2.	Some disabled students can make use of the chalkboard	2.51	0.46	Agree	2.60	0.76	Agree
3.	Disabled students are grouped together with able student during practical	2.61	0.78	Agree	2.71	0.54	Agree
4.	Teachers sometimes use audio visual in teaching to enable some disabled students understand.	2.90	0.84	Agree	2.90	0.84	Agree
5.	Disable students are taught differently	3.00	0.48	Agree	2.90	0.64	Agree
6.	Good teaching aid and instructional materials help mostly physically challenged students	2.36	0.64	Disagree	2.26	0.64	Disagree
	Grand Mean	2.67	0.64	Agree	2.62	0.65	Agree

Source: Field survey, 2021

Data in Table 3 showed that the respondents agreed that instructional materials have influence on inclusive education and students' academic achievement in agricultural science in secondary schools in Port Harcourt Metropolis in all the items tested accept item

6 with mean score of (2.36 for Principals and 2.26 for teachers), for instance Instructional Materials used by teachers favour all students (2.91 & 2.84), some disabled students can make use of the chalkboard (2.51 & 2.60), disabled students are grouped together with able student during practical (2.61 & 2.71), Teachers sometimes use audio visual in teaching to enable some disabled students understand (2.90 & 2.90), disable students are taught differently (3.00 & 2.90), good teaching aid and instructional materials help mostly physically challenged students (2.36 & 2.26). Also the standard deviation of principals' range from (0.46 to 0.84) while teachers range from (0.54 to 0.88) which shows homogeneity and closeness in the opinion of the respondents. The findings are in agreement with the work of Ananga (2010) who stated that instructional materials influence teaching and learning in a positive direction in secondary schools anywhere.

Research question 4: What are the influence of school management on inclusive education and students' academic achievement in agricultural science in public secondary schools in Port-Harcourt Metropolis?

Table 4: Respondents Mean Responses on Influence of School Management on Inclusive Education and Student Academic Achievement in Agricultural Science in Secondary Schools in Port Harcourt Metropolis.

S/N	Statement	Principals (n=45)			Teachers (n=75)		
		X	SD	REMARK	X	SD	REMARK
1.	Physically Challenged students not punished when they come late	2.96	0.82	Agree	2.80	0.86	Agree
2.	Students who fight with disabled are punished	2.74	0.56	Agree	2.69	0.54	Agree
3.	Physically challenged students are assisted during laboratory work	2.89	0.84	Agree	2.70	0.52	Agree
4.	Some of the physically challenged students are appointed prefects	2.78	0.56	Agree	2.90	0.76	Agree
5.	Physically challenge students always sit in front in the class	3.00	0.70	Agree	2.80	0.79	Agree
6.	Teachers offices are accessible to all students	3.00	0.71	Agree	2.96	0.74	Agree
	Grand Mean	2.77	0.56	Agree	2.76	0.57	Agree

Source: Field Survey, 2021.

Data in Table 3 showed that the respondents agreed that School Management have influence on Inclusive Education and Student Academic Achievement in Agricultural Science in public Secondary Schools in Port Harcourt Metropolis as all items tested have their mean score above 2.50. Physically Challenged students not punished when they come late (2.96 & 2.80), Students who fight with disabled are punished (2.74 & 2.69), Physically challenged students are assisted during laboratory work (2.89 & 2.70), Some of the physically challenged students are appointed prefects 2.78 & 2.90), Physically challenge students always sit in front in the class (3.00 & 2.80), Teachers offices are accessible to all students (3.00 & 2.96). Also the standard deviation of principals' range from (0.56 to 0.84) while teachers range from (0.252 to 0.86) which shows homogeneity and closeness in the opinion of the respondents. The findings are in consonant with the work of Achebe (2020), which noted that school management have tremendous roles to play in high academic achievement of students in public secondary schools in Nigeria.

Conclusion

From the study it is discovered that good school climate encourages appreciation of goals and values of the school by all students, make field activities available to all students both able and physically challenged. Use of good and stimulating instructional materials in instructional process, coupled with good school management structure put in place will influence better academic achievement in an inclusive education in public secondary schools in Port Harcourt Metropolis of Rivers State, Nigeria.

Recommendation

From the findings of this study, the following recommendations were made:

1. Goals and values of our public secondary schools should consider the physically challenged and there should be good interpersonal relationship between students in an inclusive education system
2. The school farm should be made accessible to all students, and farm hands should be directed to assist the physically challenged students, and they should be included in field trips.
3. Teachers should use instructional materials that will favour all students, including the physically challenged.
4. School principals should adopt good management procedure that will ensure the well being of the physically challenged in our public secondary schools.

References

Achoka, J. (2017). In Search of Remedy to Secondary School Pandemic in Kenya Role of the Principal, *Unpublished M. Sc. Dissertation, University of Ghana.*

Ananga, E. (2010). Understanding the Push and Pull Factors in School Dropout; a case of Southern Ghana. (REATE *Monograph Series (Forthcoming). Brighton; University of Sussex, UK.*

Asiyai, R. (2011). Effective Classroom Management Techniques for Secondary Schools. African Research Review, 5, 282-291

Bada, S. O. (2015). The Psychogenesis of Knowledge and its Epistemological Significance. Language and Learning, 5, 23-34.

Carwell, T. L; (2012). The Impact of Standard Math Intervention Programme and School Climate on Mathematics Achievement Levels of Female Middle School Students (order No. 3514803). Available from proQuest Dissertations and Theses global.

Davis, B.W; (2010). The Relationship of Principal Leadership Style as it Affects School Climate and Student Achievement (Order No. 3425719). Available from pro Quest*Dissertations and Theses Global.* (759831811). Retrieve from http://search,Proquest.com/doi view/759821811?

Gilliam, J. E., & Unruh, D. (2016). The Effects of Baker-Miller Pink on Biological, Physical and Cognitive Behaviours. *Journal of Orthomolecular Medicine*, 5, 202-206.

Gregory, A., Cornell, D., & Fan, X. (2011). Acoustical Environment Evaluation of Joint Classrooms for Elementary Schools in Taiwan. *Building and Environment*, 43, 1619-1632.

Hervie, D. M., & Winful, E. C. (2018). Enhancing Teachers' Performance through Training And Development in Ghana Education Service (A Case Study of Ebenezer Senior High School). *Journal of Human Resource Management*, 6, 1-8.

Mills, J. H. (2013). Noise and Children: Are View of Literature. *The Journal of the Acoustical Society of America*, 58, 767-779.

Nlebem, B. S. (2018), *Introduction to Principles of Vocational Agricultural Education*; Diobu, Port Harcourt: Chi's Publications.

Olawepo, J. A. (2009). *Agriculture Education: Aims and Objectives of Senior Secondary Schools Agriculture.* (eds) in Jekayinta A. A. and Olawepo, J. .A. (2009). Fundamentals of Subject Methodologies; Ilorin: Oacnoch Publishers.

Onweh, V. E., & Akpan, U. T. (2014). Instructional Strategies and Students' Academic Performance in Electrical Installation in Technical Colleges in Akwa Ibom State: Instructional Skills for Structuring Appropriate Learning Experiences for Students. *International Journal of Educational Administration and Policy Studies*, 6, 80-86.

Osariyekemwen, D. N. (2010). Examining Factors Militating Against the Teaching and Performance of Fine Art in Secondary Schools in Edo State. *The Nigerian Journal of Research and Production: 17(1), 1-10.*

Profusek, P. J., & Rainey, D. W. (2016). Effects of Baker-Miler Pink and Red on State

Anxiety, Grip Strength, and Motor Precision. *Perceptual and Motor Skills*, 65, 941-942.

Rosenfield, P., Lambert, N. M., & Black, A. (2009). Desk Arrangement Effects on Pupil Classroom Behavior. *Journal of Educational Psychology,* 77, 101-108.

Schauss, A. G. (2021). The Physiological Effect of Color on the Suppression of Human Aggression: Research on Baker-Miller Pink. *International Journal of Biosocial Research,* 2, 55-64

Shakil, A. G; Faizi, W. N. & Hafeez, S. (2010). The Need and Importance of Field trips at Higher Level in Karaili, Pakistan. *International Journal of Academic Research in Business and Social Sciences: 2(1), 100-131.*

Usman, K. O. & Adewumi, A. O. (2016). Factors Responsible for Inability of Teachers to Improvise Instructional Materials for the Teaching of Mathematics. *Journal of Science Teachers Association Nigeria,* (JSTAN) 41, (1 x 2); 51-56.

Wilson, C. (2005). Principal Leadership, School Climate and the Distribution of Leadership Within the School Community. Missoula M .T. University of Montana.