Social Studies Physical Learning Environment and Primary School Pupils' Academic Performance in Rivers State

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Abstract
This study assessed the physical learning environment and primary school pupils' academic performance in Rivers State. The study adopted correlational research design. Three (3) research questions and three (3) hypothesis were formulated in line with the purpose of the research work. The sample were 10,213 primary school pupils from 27 primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State. Simple random sampling technique was used to select 890 primary school pupils. The instrument for data collection was questionnaire (r=0.81). For the analysis of the data, research questions were analyzed with mean, while Pearson Product Moment Correlation Statistics was used to test the null hypothesis at 0.05 level of significance. The results revealed that classroom buildings, classroom furniture and class population enhance pupils' academic performance in in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State. It was recommended that government and other education stakeholders should make concerted efforts to provide adequate classroom building and renovate the existing dilapidated structures and small class population should be maintained in public primary schools.

Keywords: Physical learning environment, Facilities. Academic performance, Pupils, Primary schools

Introduction

The introduction of Social Studies as one of the core subjects in primary and junior secondary school has continued to win the administration and support of most Nigerian scholars and students (Adams, 2015). Social Studies is of the subjects taught in primary schools today because of its usefulness to everyday life. Integrated Social Studies inform the child and helps him know about the physical, social and educational environment in which he lives and function (Thomas, 2012). Social Studies helps the child to realize that all the aspects of his environment are revolving or changing. The use of the available knowledge, skills, tools and technology may aid his interaction. At the same time, society demands the loyalty, cooperation and knowledge of its members in order to ensure development and continued survival of the environment. Badmus 2013 observed that Social Studies is one of the social sciences discipline which studies man as he interacts with his fellow men and with his environment.

Social Studies helps children to develop awareness of the world and environment, lessons in Social Studies related to topics like- my family, my neighborhood, community helpers, early man, and modern period in human history (Tanushree, 2016). The types of knowledge could enable the pupils to realize how the world and different societies have evolved, the important events that have occurred in the past, enduring ideas and eminent personalities that have created an impact and affected both locally and globally. Social Studies creates an awareness and understanding of our social and physical environment in order to conserve it for nation development.

Education for years has been considered as playing functional roles in preparing individual learners to be socially useful and contribute meaningfully to national development. The process of learning is an active agent of change such that students are empowered to generate knowledge, form attitudes and develop requisite skills for life. Studies about students' performance and physical learning environment indicates that physical spaces have influence on students' academic performance. Thomas (2017) stressed that the environments that students spend a good deal of their time learning have effect on how well they learn. Balogun (2018) was of the opinion that physical features of learning environment can stimulate emotions, create a sense of security, and prepare the students to learn.

The physical environment of a school indicates buildings, classroom, furniture, equipment, instructional materials, laboratories, libraries, playgrounds. It's also made up of machineries, decorative objects, swimming pools, audio-visual equipments and playfields (Peters and King, 2017). The conducive physical environment is an agent of intellectual stimulation and an essential factor of strengthening the child's educational development. Therefore, school planners should create learning environment that motivates students and support learning and teaching. Physical environment should provide tranquilizing spaces such as sound architecture and unique design. The researches indicate that there should be collaborations between the school planners and architects. Therefore, combining redesigns of learning and teaching environment with students' interest can lead to good students' performance and outcome.

In his own opinion Judes (2016) stressed that there is relationship between the physical structure of the classroom, such as room organization, size of space, lighting and table arrangement, and psychological aspects, such as interaction between teachers and students, and interaction among the pupils. The way in which the physical aspects is organized can limit or encourage interaction that takes place in the classroom and display the expected behaviour. Akintunde and Bamimore (2015) maintained that the classroom context, school and surrounding also influence pupils achievement. The nature of the classroom environment has a powerful influence on how well pupils achieve a wild range of educational outcomes. Classroom environment such as physical, emotional and aesthetic characteristics of the classroom tend to enhance students' attitude towards learning.

Moreover, Mary (2018) in her research, said that even if a standard and best design is selected, the result may be optimal for a pleasant learning environment. The study highlighted that the relative position of schoolyards and recreation spaces is often ill-conceived concerning the rest of the school. Besides the architectural design and material choices allow for voice and noise to be carried between two adjoined classroom and hallways. In another

study carried out by Johnson (2015) on academic proficiency test results on primary school pupils, indicated a positive relationship between building condition and pupils' achievement. Results were generally higher in school building with better structure and aesthetic qualities. Combined results on test scores were 5% higher for students in better designed schools.

The indoor quality plays a crucial role in the health of building occupants (Alana, 2016). After food and water, light is the most significant environmental factor that affects different bodily functions such as pulse, blood pressure and brain activity. Therefore, the quality of the physical aspects should be improved so that students are able to undergo learning process with comfort. Folaranmi (2019) stated that a good learning environment has the advantage of fostering desirable behaviour and attitude, developing problem solving skills and creative thought; encouraging students' interrelationship. School environment reflects the physical and psychological aspect of the school that are more susceptible to change and provide the pre-conditions necessary for teaching and learning to take place (Damole, 2012). Design characteristics such as poor acoustics, poor ventilation, insufficient lighting, and chronic noise exposure undermine learning. Therefore, school planners should create learning environments that motivate students and support learning and teaching. Jude and King (2014) stressed that learning creates in a special space in order foster educational level and delineate a sound architecture. Effective educational spaces allow students to work collaboratively with each other and to improve their cognitive functioning.

The falling standards of academic performance of students in Nigeria constitutes 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 school. Most school environments in Nigeria are not conducive to learning; students are overcrowded in classes; there are inadequate water and sanitation facilities, bad structures, and host of others. Therefore, the poor quality of education depicts the students' performance which is traceable to the school physical learning environments. Lyons (2013) was of the opinion that the physical environment of school presents an educative atmosphere. The modern school site, buildings and equipment must be adequate and attractive. Research has proven that school buildings and designs can boost students' morale and performance.

Schools need to offer effective indoor and outdoor qualities to motivate their students. Treasure (2016) stated that learning in appropriate physical spaces and proper educational spaces instill a sense of pride and progress. Learning environment should incorporate new technologies and connect learning process to the outside world. Hence, design characteristics of learning environment are really important and schools that adhere well to effective environmental and educational spaces can expect impressive benefits in student performance. Bamisile (2018) noted that when a student first steps into a classroom they will make a judgment about the type of class they are going to be taking. They will look to see how desks are arranged and the structure of the building. They will notice what is hanging on the walls. The way in which a teacher sets up their class allows them to communicate with their students non-verbally. It also conveys that they will not just sit and attend class, but they will act out what ever subject they are learning.

There is a general believe that condition of school's learning environment including infrastructure has an important impact on teachers' effectiveness and pupils' academic performance. The facilities that are needed to facilitate effective teaching and learning in an educational institution are many. Comfortable classroom temperature enhance teachers' effectiveness and provide opportunities for students to receive more individual attention. Therefore, for academic performance of pupils, it can be regarded as the observable and measurable behaviour of a pupil in a particular situation. The academic performance consists of individual scores at any particular time obtained from either a teacher-made test or a standardized test. Thus, this study closely looked at the physical learning environment and primary school pupils' academic performance of primary school pupils in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.

Statement of the Problem

In creating effective learning, student concentration and focus during the learning process in the classroom is an important element which needs to be given due attention. Student concentration during learning process will increase if the learning environment is conducive and comfortable. Hence, the alarming poor academic performance of pupils in schools is definitely of great concern to the researchers who see the study as inevitable. These problems are multifaceted. A lot of problems seem to be bedeviling the primary school system ranging from inadequate facilities, old and dilapidated structures, inadequate instructional materials and host of others. School effectiveness transcends beyond students passing examinations. It also encompasses students' attainment in other domains of learning. Therefore, conducive learning environment can have effect on both the attitudes and achievements of pupils. A positive physical learning environment is found to be a very important factor of school effectiveness. It is against this background information that the researchers examined the physical learning environment and primary school pupils' academic performance in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.

Purpose of the Study

The main purpose of this work was to examine the physical learning environment and primary school pupils' academic performance in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.

The study specifically sought to:

1. determine how classroom building relate to pupils academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.
2. find out how the class furniture relate to pupils academic performance in primary schools in

Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.

3. ascertain the influence classroom population has on pupils academic performance in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.

Research Questions

The following research questions guided the study:

1. In what ways does classroom building relate to pupils academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.
2. How does classroom furniture relate to pupils academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.
3. In what ways does classroom population relate to pupils academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.

Hypothesis

The following hypothesis guided the study and will be tested at 0.5 level of significance.

1. There is no significant relationship between the classroom building and pupils' academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.
2. There is no significant relationship between the classroom furniture and pupils academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.
3. There is no significant relationship between the classroom population and pupils' academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.

Methodology

The study adopted correlational research design because the study involves the determination of relationship between two variables (physical learning environment and pupils' academic performance in Rivers State). The population of the study was ten thousand, two hundred and thirteen (10,213) primary school pupils from twenty seven primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State. Simple random sampling technique was used to select sample size of 890 primary school pupils in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State. Data for the study were collected with a self-designed questionnaire titled "Physical Learning Environment and Primary School Pupils Academic Performance (PLEPSPAP)" which was designed using Likert 4 point rating scale. The instrument was validated by two experts. A reliability of 0.81 was obtained through Pearson Product Moment Correlation (PPMC). For the analysis of the data, research questions were analyzed with mean while Pearson Product Moment Correlation statistic were used to test the null hypothesis at 0.05 level of significance.

Results

Table 1: Mean Responses on Classroom Building

S/N	Item	SA	A	D	SD	Total	$\overline{X}$	Decision
1	Good Classroom structure improves pupils level of assimilation	300 (1200)	298 (894)	200 (400)	92 (92)	890	2.91	Agree
2	Good classroom building makes learning more interesting to pupils	388 (1552)	279 (837)	123 (246)	100 (100)	890	3.07	Agree
3	Good classroom building improves the academic performance of pupils	356 (1424)	240 (720)	196 (362)	98 (98)	890	2.93	Agree
Grand Mean							**2.97**	**Agree**

The data in item 1 of Table 1 revealed that with a mean score of 2.91, majority of the respondents agreed that good classroom structure improves pupils' level of assimilation. Item 2 also showed that with a mean score of 3.07, most of the respondents agreed that a good classroom building makes learning more interesting to pupils. Item 3 revealed that with a mean score of 2.93, majority of the respondents agreed that good classroom building improves the academic performance of pupils.

Research Question 2

How does classroom furniture relate to pupils academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.

Table 2: Mean Responses on Classroom Furniture

S/N	Item	SA	A	D	SD	Total	$\overline{X}$	Decision
4	Well arranged classroom furniture makes pupils to listen well in the classroom	319 (1276)	223 (669)	148 (296)	100 (100)	890	2.63	Agree
5	Adequate furniture makes pupils write well and it creates conducive condition for pupils	400 (1600)	289 (567)	121 (242)	80 (80)	890	2.66	Agree
6	Adequate furniture in a well ventilated classroom helps in retention of learning by pupils and can positively influence their performance	356 (1424)	290 (870)	145 (290)	99 (99)	890	3.01	Agree
Grand Mean							**2.67**	**Agree**

Items 4, 5 and 6 with mean responses of 2.63, 2.66 and 3.01 respectively revealed that majority of the respondents agreed that classroom furniture relate to the academic performance of pupils.

Research Question 3

In what ways does classroom population relate to pupils academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.

Table 3: Mean Responses on Classroom Population

S/N	Item	SA	A	D	SD	Total	$\overline{X}$	Decision
7	Classroom with small population creates undistracted environment	288 (1152)	208 (624)	296 (592)	100 (100)	890	2.77	Agree
8	Noise-free environment allows effective learning for pupils	319 (1276)	223 (699)	250 (500)	98 (98)	890	2.89	Agree
9	Small classroom population improves pupils academic performance	321 (1284)	300 (900)	170 (340)	99 (99)	890	2.61	Agree
10	Pupils social relationships and interaction in a small classroom population improves pupils academic performance	356 (1424)	340 (1020)	100 (200)	94 (94)	890	3.08	Agree
Grand Mean							**2.83**	**Agree**

Data in table 3 revealed that with mean scores of 2.77, 2.89, 2.61 and 3.08 respectively and a grand mean of 2.83, majority of the respondents agreed to all question items in the table. The answer to research question 3 is that classroom population affects pupils' academic performance.

Test of Hypothesis

HO_1: There is no significant relationship between the classroom building and pupils' academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.

Table 4: Pearson Product Moment Correlation Analysis on Hypothesis one

Variables	Statistics Item	r-cal	r-crit	sig. level	Decision
Classroom building	PPMC$(r)^2$	27.18	16.92	0.05	Significant
Pupils' academic performance	Degree of Freedom	889			

Data on the table 4 showed that the recalculated was 27.18, while the r-critical was 16.72 at 0.05 significance level. Since the calculated r value (27.18) was greater than the value (16.72) at 0.05 significant level and 899 degree of freedom, the null hypothesis was rejected and the alternative hypothesis accepted indicating that there was a significant relationship between classroom building and pupils' academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.

HO_2: There is no significant relationship between the classroom furniture and pupils' academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.

Table 5: Pearson Product Moment Correlation Analysis on Hypothesis two

Variables	Statistics Item	r-cal	r-crit	sig. level	Decision
Classroom Furniture	PPMC(r)	96.58	16.92	0.05	Significant
Pupils' academic performance	Degree of Freedom(df)	889			

Data on table 5 revealed that the r calculated value was 96.58 while r critical was 16.92 at 0.05 significant level. Since the r calculated (96.58) was greater than the r critical (16.92) at 0.05 significant level and 889 degree of freedom, the null hypothesis was rejected and the alternative hypothesis was accepted in directing a significant relationship between classroom furniture and pupils' academic performance in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.

Ho_3: There is no significant relationship between classroom population and pupils' academic performance in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.

Table 6: Pearson Product Moment Correlation Analysis on Hypothesis three

Variables	Statistics Item	r-cal	r-crit	sig. level	Decision
Classroom Furniture	PPMC(r)	28.58	12.90	0.05	Significant
Pupils' academic performance	Degree of Freedom(df)	889			

From table 6, it was revealed that the r calculated value was 28.58 while the r critical was 12.90 at 0.05 significant level, since the r calculated (28.58) was greater than the r critical (12.90) at 0.05 significant level and 889 degree of freedom, the null hypothesis was rejected and the alternative hypothesis was accepted indicating a significant relationship between the classroom population and pupils' academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State.

Discussion of Findings

Data analyzed in research question one revealed that classroom building enhances pupils' academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State. The finding of this study is in agreement with the finding of Mark (2014) who noted that, classroom building, interior architecture and internal features of classroom can help pupils focus their attention on studying and makes them to put full attention to learning which will therefore improve their academic performance in school. Also, the finding of this study was supported by Temiloluwa (2016) who observed that school building designs can have influence on student performance and motivation. Therefore, designing effective learning environment with good structures is really an important case to support constructive learning and performance. A flaw in the aspects of the physical environment may contribute to student and teacher discomfort, which can reduce the effectiveness of learning in the classroom. Hence, it is obvious that there is need to improve the physical aspect of the classroom.

Moreover, the finding in research question two revealed that classroom furniture promote pupils academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State. The finding is supported by Johnson and Damole (2018 when the observed that student concentration during the learning process will increase if the classroom furniture are good and well arranged. They stressed further that the physical as which are furniture, space and air quality contribute to the comfort level of teaching and learning in the classroom. Therefore, the classroom furniture needs to be given due attention and planned to be in line with learning goals and needs.

Finally, the finding in research question three revealed that classroom population enhance pupils' academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State. This is supported by Adeyera (2015) when he asserted that small classroom population can have effect on both attitudes and achievement of students. High population of students in the class usually causes high temperature and temperature plays a vital role in how comfortable we are likely to feel when executing a task. Collins (2013) observed that there is an association between classroom population and acoustics. High classroom population may produce considerably uncomfortable noise. Noise has harmful effect on mental and physical wellbeing as part of their study. Temiloluwa (2016) also noted that the classroom population has a wide range of educational outcomes. The classroom must be such that allows each student to increase his/her feelings of satisfaction, sense of belonging, identification and achievement in present and future situation.

Conclusion

This study has shown a positive and significant relationship between the physical learning environment such as classroom building, furniture, classroom population and pupils' academic performance in primary schools in Ahoada East and Ogba/Egbema/Ndoni Local Government Areas, Rivers State. This is an indication that these facilities in primary schools should be a prime concern of the education stakeholders in the state. Hence, it has been established that facilities are potent to greater academic performance of pupils.

Recommendations

Based on the conclusion drawn, the following recommendations were made:

1. Government and other education stakeholders should make concerted efforts to provide adequate classroom building and renovate the existing dilapidated structures in public primary schools.
2. Education stakeholders should endeavour to provide adequate class furniture (chairs and lockers or desks) in public primary schools and students should be oriented on how to maintain these facilities because sometimes pupils destroy these facilities by themselves.
3. Small class population should be maintained in public primary schools and the population of pupils admitted into public schools should depend on the available space and facilities.

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