

Impacts Of Dilapidated Buildings On Secondary School Students' Academic Performance In Ogun State, Nigeria

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Abstract: Education is the process of knowledge impartation either through formal or informal methods. School is generally an environment for learning and is of different types, these include crèche, nursery, primary, secondary, vocational, and tertiary learning environments. Secondary school is the stage following primary school and precedes vocational or tertiary education. Learning environment building maintenance considers adequate repairs attention to buildings to avoid falling into a state of disrepair. Lack of good maintenance process and activity of school buildings often results in building deterioration and dilapidation. The paper assesses the effects of dilapidated buildings on the student's academic performance in selected secondary schools in Ado-Odo Ota Local Government Area. A survey design research strategy was adopted and the target population is students of public secondary schools in Ado-Odo/Ota Local Government Area, Ogun State. A total of one hundred and twenty junior and senior secondary school students were selected for the study. The paper revealed that most of the classroom buildings in the selected secondary school have varied levels of classroom building obsolescence; schools' classrooms are in poor condition and noticeable across the selected school. The paper recommends the adequate provision of well-equipped and functional classrooms to promote effective teaching and learning experience among the teachers and students of secondary schools in Ado-Odo/Ota Local Government Area, Ogun State, this is expected to boost student academic performance and increase the productivity of the teaching staff among others.

Keywords: Education, Educational Facilities, School, School Building, Academic Performance

1.0 INTRODUCTION

Education is an important aspect of every society in developing and developed countries (Malik, 2018). Education serves the purpose of developing human beings 'physical, social, emotional, and intellectual aptitudes. Studies in the past have defined education as a process by which any society through schools, colleges, universities, and other institutions deliberately transmits knowledge, values, and skills from one person to another (Manolescu, Florea, & Arustei, 2018). Education could be formal or informal education and could further be broadly categorized into the public education system and private educational system. One of the education settings is the formal school environment.

Schools are generally environments for learning and are of different types, these include crèche, nursery, primary, secondary, vocational and tertiary school and learning environments (Olowonefa & Ogunode, 2021). Secondary school is the level of education following primary school and precedes vocational or tertiary education. A school environment is a place where the learner learns and interacts with other learners and learning facilities to improve themselves and impart positively to society. The school environment comprises two different segments, the spaces for learning and the space spaces dedicated for complimentary

activities such as recreation, cafeteria, and convenience among others. The school learning environment includes buildings for the classroom, library, technical workshop, laboratory, and studio.

School learning environment characteristics include building type, building size; the arrangement of spaces; available internal facilities such as chairs, and desks. Also the cooling system; ventilation level; temperature level; the form of lighting; condition of the building such as the wall, floor, and ceiling; nature of acoustic, and availability of instructional materials. The learning environment is important in schools, it is the area where core academic activities occur (Louis & Kruse, 2021). The nature and condition of these school environment features impact the quality of learning obtainable in the environment and could impact the nature of learner's performance. The condition of the school learning environment could be improved through maintenance activities.

Maintenance is an act to keep an item in good working condition or to main the item's initial state while building maintenance is the process of engaging in giving adequate building care, engaging in prompt repairs of defective sections, and also engaging in proper building usage (Ifeoluwa, Edikan, Oke, & Atirolaoluwa, 2021). School building facilities maintenances activities that involve the repairs and replacement of school buildings and equipment to keep them in near their original conditions as possible (Momoh & Ofoegbu, 2020). Lack of good maintenance process and activity of school buildings often results in building deterioration and dilapidation. The poor state of the school environment and building dilapidation has implications on the learning activities within the school environment including academic exercise, extra-curricular activities, and the performance of both teachers and students (Eric & Ezeugo, 2019). Student academic performance is the assessment of a student's ability to pass and accomplish a given academic task, it could be based on specific subject areas or overall academic performance which combines both curricular and extra-curricular activities.

Recently, there has been a continuous lamentation of parents about the poor academic performance of their wards in secondary schools within Ogun State with specific reference to Ado-Odo/Ota Local Government Area. The poor academic performance has agitated education stakeholders with increased concern to address the decline in academic performance in secondary schools. One of the major indicators of this poor academic performance is the low pass rate at both junior and senior secondary school terminal examinations. This paper examines the implications of dilapidated buildings in an educational learning environment on secondary school student's academic performance.

2.0 RESEARCH METHODOLOGY

Ado-Odo/Ota Local Government Area is one of the 20 Local Government Areas of Ogun State, Nigeria. Ogun State. Ado-Odo/Ota Local Government Area covers an area extend of 1,460 square kilometres and is located 6°41'00"N 3°41'00"E to the North with a total land area of 878 km². It shares a boundary with metropolitan Lagos State in the East and South, Yewa South and Ifo Local Governments in the North, and Ipokia Local Government in the West. The Local Government Area is the second largest in Ogun State (Izobo-Martins, 2020). The Local Government Area is divided into Ota 1, Ota 2, Ota 3, Ilogbo, Atan, Alapoti, Ado-Odo (I), Ado-Odo/Ota (II), Ere, Igbesa, Ketu, Adie Owe, Agbara 1, Agbara 2, and Iju. Ado-Odo\Ota Local Government Area has a total of forty-seven (47) public secondary schools, a total of eighteen schools are junior secondary schools, eighteen senior secondary schools, and eleven are both junior and secondary schools combined.

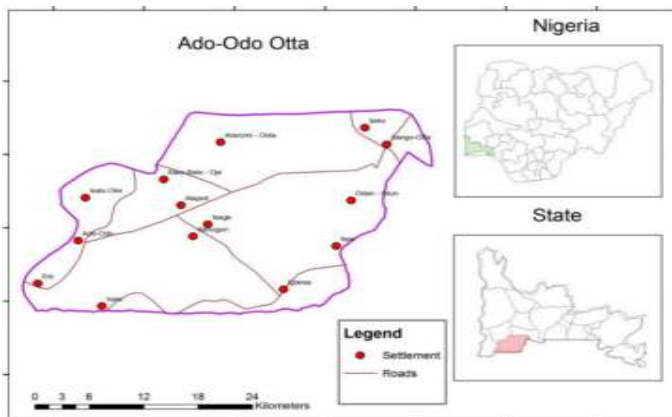


Figure 1: Ado-Odo/Ota Local Government Area
 Source: Ogunyemi, Ajileye, Samson, Muibi, Alaga, Eguaroje, Ogunjobi, Adewoyin, Popoola, Omisore and Oloko-Oba, 2017

Research design provides a process by which the research is conducted. This paper adopts an inductive research approach which seeks to interpret study data to address the research problem. Furthermore, the study adopts a survey research design. The adoption of a survey research design strategy is due to the quantitative nature of the study. Data were derived from primary and secondary sources. Primary sources are survey questionnaires and checklists while secondary data sources are journals, published and unpublished thesis, official statistics, working papers, and research reports. and internet sources.

The data required for this study include variables on available school facilities including classroom, nature of school facilities, condition of school facilities, the ratio of students to a classroom, student academic performance, and the effects of school building conditions on the academic performance of students population. The study population is students of public secondary schools in Ado-Odo/Ota Local Government Area, Ogun State. The study sample frame consists of all the student population of the selected junior, senior, and combined public secondary schools in Ota central area in Ado-Odo/Ota Local Government Area. Seven secondary schools in Ota were selected for the study, and a sample of five students was selected for each arm of the junior and senior class, thus a total of fifteen students were selected for the junior class and also fifteen students for the senior secondary school class. Together, a total of one hundred twenty junior and senior secondary school students were selected for the study. The selection of respondents was conducted using a systematic random sampling method. Data were analyzed and presented using descriptive statistical methods.

Table 1: Research Objectives, Data Collection and Analysis Methods

Research Objectives	Data Collection Method	Data Analysis Method
To document the extent of classroom dilapidation in selected secondary schools	Checklist	Descriptive analysis
To highlight the variation in dilapidated classroom buildings to good classroom buildings in the selected secondary schools	Questionnaire	Descriptive analysis
To evaluate the indicators of a conducive learning environment	Literature review	Descriptive analysis
To determine the impacts of dilapidated classrooms on students' academic performance in selected secondary schools;	Questionnaire	Descriptive and inferential analysis
To suggest viable strategies for building maintenance in Ado-Odo/Ota Local Government Area secondary schools.	Content analysis	Design

Source: Author's Design, 2022

3.0 RESULTS

An assessment of the extent of classroom building's state of disrepair level across the selected secondary schools in Ado-Odo/Ota Local Government Area was conducted using a checklist. It was revealed that most of the classroom buildings in the selected secondary school for the study have varied levels of structural defect and obsolescence with moderate and low classroom dilapidation (See Table 2 and Plates 1-6).

Table 2: Extent of Classroom Building Dilapidation

Classroom Buildings Elements	High Dilapidation				Moderate Dilapidation				Low Dilapidation				No Dilapidation			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Wall (partly broken down, non-structural cracks., no defect)						✓	✓	✓	✓							
Floor (structural cracks, Non-structural cracks., No defect)						✓	✓	✓	✓							
Window (no louvres, partly broken down, completely broken down, no defect)				✓		✓	✓			✓						
Door (No door, partly broken down, completely broken down, no defect)							✓	✓		✓					✓	
Roofing (No roof, partly broken down, completely broken down, no defect)							✓	✓		✓					✓	
Electrical Wiring (Poor Electrical Wiring, Loose electrical cables, Damaged electrical plugs/sockets, Functional)				✓			✓			✓	✓					

Source: Authors Field Survey, 2022

1. AUD Comprehensive College; 2. Anglican Grammar School, 3. Iganmode Grammar School; 4. St. Michael's High School, Ota



Plate 1 & 2: Anglican Grammar School, Ota Classroom, Buildings and General Learning Environment Condition

Plate 3 & 4: AUD Comprehensive College, Classroom, Buildings and General Learning Environment Condition



Plate 5 & 6: St. Michael's High School, Ota Classroom, Buildings and General Learning Environment Condition

An academic performance rating scale (APRS) was prepared and used to assess student academic performance; this was completed by teachers for the respective class. Six major segments were identified to assess the student's academic performance, these are arithmetic skills, language arts, general subjects, quality of reading, and quality of speaking. The mean score shows a value of 2.56, 2.85, 2.56, 2.45, and 3.6 for arithmetic skills, language arts, general subjects, quality of reading, and quality of speaking respectively (Table 3). A total of 38 (33.33%) of sample students believe the classrooms are in good condition, 44 (38.60) of total sampled students believed that the classrooms are in fair condition while a total of 32 (28.07%) think otherwise. This set of people believed the school's classrooms are in poor condition. Sampled students highlighted the level of deterioration of specific buildings within the school and the most declined school facilities, school classroom (51.75%) was identified as the deteriorated building within the school environment. Other buildings identified as most deteriorated include technical workshops (19.29%) and libraries (15.79%).

The extent school physical environment and school buildings affect the academic performance of students was determined using elements such as offices for staff; general convenience (toilet, etc.); cafeteria; recreational area/sport; facilities; fencing of the school/security and school health facilities, the assessment indicates mean score value of 4.12, 4.09, 4.34, 4.38, 4.53 and 4.14 respectively with an overall mean score value of 4.27 (Table 4). The assessment of classroom condition impact on the learning process and academic performance of the student environment indicates a mean score value of 4.22, 4.26, 4.5, 3.94, 3.71, and 3.80 with an overall mean score value of 4.07 (Table 5).

Table 3: Student Academic Performance Assessment

Academic Item	Academic Performance Rating					Mean Score
	Very High (5)	High (4)	Moderate (3)	Low (2)	Very Low (1)	
Arithmetic skills	12 (10.5%)	18 (15.8%)	9 (7.9%)	58 (50.9%)	17 (14.9%)	2.56
Language arts	24 (21.1%)	13 (11.4%)	17 (14.9%)	43 (37.7%)	17 (14.9%)	2.85
General subjects	14 (12.3%)	21 (18.4%)	4 (3.5%)	51 (44.7%)	24 (21.1%)	2.56
Quality of reading	8 (7.0%)	28 (24.6%)	13 (11.4%)	24 (21.1%)	41 (35.9%)	2.45
Quality of speaking	42 (36.8%)	29 (25.4%)	10 (8.8%)	26 (22.8%)	7 (6.1%)	3.6

Source: Authors Field Survey, 2022

Table 4: School Physical Environment/School Buildings Effects

School Physical Environment/School Buildings	VGE (5)	GE (4)	ME (3)	LE (2)	VLE (1)	Mean Score
Offices for staff	54 (47.37%)	42 (36.84%)	2 (1.75%)	10 (8.77%)	6 (5.26%)	4.12
General convenience (toilet etc)	43 (37.72%)	51 (44.73%)	7 (6.14%)	13 (11.40%)	0 (0%)	4.09
Cafeteria	68 (59.65%)	23 (20.18%)	17 (14.91%)	6 (5.26)	0 (0%)	4.34
Recreational area/sport facilities	55 (48.25%)	47 (41.23%)	12 (10.53%)	0 (0%)	0 (0%)	4.38
Fencing of the school/security	71 (62.28%)	32 (28.07%)	11 (9.64%)	0 (0%)	0 (0%)	4.53
School health facilities	41 (35.96%)	55 (48.25%)	11 (9.65%)	7 (6.14%)	0 (0%)	4.14
Grand mean weighted value						4.27

Very Great Extent (VGE), Great Extent (GE), Moderate Extent (ME),

Low Extent (LE), Very Low Extent (VLE)

Table 5: School Facilities (Classroom) Effects

School Facilities (Classroom)	VGE	GE	ME	LE	VLE	Mean Score
Well-furnished classroom for students' comfortability	59 (51.75%)	38 (33.33%)	0 (0%)	17 (14.91%)	0 (0%)	4.22
Classroom teaching aids	64 (56.14%)	28 (24.56%)	10 (8.77%)	12 (10.53%)	0 (0%)	4.26
Alternative power supply for classroom	71 (62.28%)	29 (25.44%)	14 (12.28)	0 (0%)	0 (0%)	4.5
Functional blackboard for classroom	37 (32.46%)	53 (46.49%)	4 (3.51%)	20 (17.54%)	0 (%)	3.94
Well-equipped laboratory for science subjects	50 (43.86%)	31 (27.19%)	10 (8.77%)	23 (20.18%)	10 (8.77%)	3.71
Lecture hall spaces for teaching & learning process	32 (28.07%)	49 (42.98%)	15 (13.16%)	14 (12.28%)	4 (3.51%)	3.80
Grand mean weighted value						4.07

Very Great Extent (VGE), Great Extent (GE), Moderate Extent (ME),
 Low Extent (LE), Very Low Extent (VLE)

4.0 DISCUSSION AND CONCLUSION

Based on the review literature where it was established that there is a relationship between the condition of school facilities and buildings and student academic performance (Mishra, 2020). It has become obvious that the dilapidating condition of the schools under study would impact negatively on the learning experiences and students' academic performance both at the junior and senior class levels. Assessment of student academic performance confirms that there is low academic performance among the selected public secondary schools in the study area. The condition of the classroom was confirmed to be in a poor condition as stated by sampled secondary schools considering both internal and external fixtures of the classroom.

Assessment of the level of deterioration of specific buildings within the schools shows a high level of deterioration of facilities across the school and this calls for concerted efforts to address the challenges of school facilities and the learning environment. The assessment of the extent of school physical environment and school buildings 'implications on students' academic performance indicates that student academic achievement of students is affected by school physical environment and school buildings. It could therefore be strongly inferred that school physical environment and school buildings of the selected secondary schools in the study area impact negatively on the student academic performance.

Based on the outcome of the assessment across the selected secondary schools it could be concluded that school buildings (classrooms), school environment, and school facilities had impacts on academic learning and student academic performance. This paper has shown a clear linkage between the selected school's physical environment, facilities, and student performance. Therefore, it has become imperative that these issues be looked into by stakeholders to enhance students' academic performance and improve academic learning environment conditions. The paper recommends that there should be adequate provision of well-equipped and functional classrooms to promote effective teaching and learning experience among the teachers and the students of secondary schools in Ado-Odo/Ota Local Government Area; provision of a conducive office facility for teaching staff to enable a relaxed academic atmosphere; classrooms should be fitted with the necessary equipment, made more spacious as this would promote a conducive learning environment, development and inculcation of good facilities maintenance culture across secondary schools in the local government area and the state.

REFERENCES

- Eric, A., & Ezeugo, C. R. (2019). Physical resources availability and the academic performance of students in the universal basic education scheme, Rivers State. *International Journal of Innovative Development and Policy Studies*, 7(1), 13-23.
- Ifeoluwa, A., Edikan, M. O., Oke, T., & Atirololuwa, D. O. (2021). Evaluation of Building Maintenance Strategies in Public Buildings: A Case of Onikan Area of Lagos State Nigeria. *International Journal of Research Publication and Reviews*, 20-29.
- Izobo-Martins, O. (2020). *Assessing Users' Perceptions of the Current Maintenance Disorder of Public Secondary School in Ogun, Nigeria*. Ota.
- Louis, K. S., & Kruse, S. D. (2021). Creating Community in Reform: Images of Organizational Learning in Inner-City Schools 1. *Taylor & Francis*, 17-45.
- Malik, R. S. (2018). Educational challenges in 21st century and sustainable development . *Journal of Sustainable Development Education and Research* , 2(1), 9-20.
- Manolescu, I. T., Florea, N., & Arustei, C. C. (2018). Forms of learning within higher education. blending formal, informal and non-formal. *Cross-Cultural Management Journal*, 20(1), 7.
- Mishra, S. (2020). Social networks, social capital, social support and academic success in higher education: A systematic review with a special focus on 'underrepresented' students . *Educational Research Review*, 29, 100307.
- Momoh, U., & Ofoegbu, F. I. (2020). Assessment of School Plant Maintenance Practices in Renovated Public Secondary Schools in Edo State . *KIU Journal of Social Sciences*, 6(1), 345-350.
- Olowonefa, G. S., & Ogunode, N. J. (2021). Quality Assurance Programme in Public Secondary Schools in Nigeria: Problems and Way Forward. *Middle European Scientific Bulletin*, 19, 46-57.