



Research Paper

# Perceived Impact of School Plant on Students' Academic Performance in Secondary Schools in Onitsha North Local Government Area of Anambra State

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## ABSTRACT

The study investigated the impact of school plant on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State. Three research questions guided the study. The research design adopted for the study was the descriptive research design. The population of the study comprised 238 teachers in public secondary schools in Onitsha North Local Government Area of Anambra State. Through simple random sampling technique, 119 teachers in public secondary schools in Onitsha North Local Government Area of Anambra State were sampled. The instrument for data collection was a structured questionnaire which was validated by three experts in the Faculty of Education, Nnamdi Azikiwe University, Awka. The reliability test on the instrument using Cronbach Alpha yielded reliability co-efficient values of 0.86, 0.82 and 0.84 for the three clusters in the study respectively with an overall reliability coefficient of 0.84. The instrument collected was analyzed using mean. Findings of the study revealed that school site, instructional material and school laboratories, have impacts on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State. Based on these findings the researcher recommends the following among others, that the Federal and State Government through its ministry of education should ensure that secondary schools are sited in areas that are easily accessible and safe. It was also recommended that the Federal and State government should ensure that every secondary school has fully equipped science and computer laboratories so as to enhance practical learning and high knowledge retention among students.

**Keywords:** Impact, School Plant, Academic Performance, Secondary School, Students

Received 28 Mar, 2022; Revised 06 Apr, 2022; Accepted 08 Apr, 2022 © The author(s) 2022.  
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## I. Introduction

Education is regarded as machinery for development process for bringing positive change in that society. The primary aim of the teaching and learning process is to bring about desirable change in behavior through critical thinking in the learner. Secondary education plays a crucial role of preparing students for higher education and useful living in Nigeria. It is considered by many Nigerians as education that would enable them prepare for living a balanced socio-economic life. In realizing the goal of secondary education, teachers and administrators need to be availed with needed physical and material resources that will facilitate the task of teaching and learning. These resources are known as school plant.

School plant is described as the space interpretation of a school curriculum. School plant is defined as the controlled environment that facilitates the teaching and learning in secondary schools (Marcus, 2016). The school plant is also known as the controlled environment which facilitates teaching and learning process as well as the wellbeing of the occupants, Asiabaka (2015) opined that school plant comprises the site, buildings, play grounds, health clinics and all forms of school equipment and all other facilities. School plant availability is to

satisfy educational goals which have been predetermined by educational planners. A good school plant enhances better school programmers and the community needs by providing a place for psychological and physical safety for students and teachers and enhance the quality and quantity of instructions (Marcus. 2016).

Selection of school site or location is one aspect of the school plant planning that is very important and should be taken seriously by the educational administrators (Iheonunekwu & Anyatonwu , 2014). The school site/location should be such that is accessible for students and teachers for effective teaching and learning. The school site/location is an essential part of school plant planning as well as educational planning because of its significant influence on effective and efficient teaching and learning process, the adequacy of school site/location is established by determining the accessibility of the site or location to students and teachers. The location of the school affects the students and teachers performance. Schools that are located in urban areas perform better than their counter parts in the rural areas (Asiegbu, 2014). Similarly, the laboratory is an important aspect of school plant.

Effective teaching and learning can only take place in a school that has a well-equipped and maintained laboratory. According to Morohunfolo (2015), school laboratory is an inseparable part of teaching and learning in both secondary and tertiary institutions and should be properly planned to serve the purpose of its existence in the school. The contribution of the school laboratory is enormous if the laboratory is properly planned, maintained and managed; it encourages students' interest in learning of science while it helps the science teachers in teaching, carrying out experiment, research and professional development.

Asiegbu (2014)opined that most safe health measures to be taken in schools should be proper care of buildings, number of lightings, effective ventilation suitable and attractive furniture. Other important considerations include ample-supply of safe drinking water, accident free and clean play fields, adequate storage facilities especially first aid box and other health facilities, insect free and control measures and food hygienic. This is because the performance of an individual in an educational organization depends on the level of health care that is given to such a person. Lack of school plant is a major factor that seem to impact on academic performance of secondary school students in Nigeria. According to Ezeh (2014), academic performance can be defined as what students have learned or what skills the students has learned and is usually measured through assessments like standardized tests, performance assessment and portfolio assessments. In this context, academic performance refers to the rate in which students perform in their examinations and other extra-curricular activities in the school system. Philiias and Wanjobi inJimoh, Akinlosotu and Ojo-Maliki (2017) revealed that lack of facilities for teaching and learning are negatively affecting the academic achievement of schools. In support Jimoh, et al (2017) found that the availability of school plants influences students' academic performance. However, this has not been empirically proven to be the case in secondary schools in Onitsha North Local Government Area of Anambra State. It is against this background that the researcher sought to empirically ascertain the impact of school plant on students' academic performance in secondary schools in-Onitsha North Local Government Area of Anambra State.

### **Statement of the Problem**

The place of school plant in teaching and learning process cannot be over emphasized. Conducive classrooms, for instance, constitute common grounds for sharing experiences and testing research findings for the purpose of implementing them if found workable. However, where school plants are inadequate, not maintained and safe-guarded, teaching-learning process will be hampered.

The researcher's interaction with principals and teachers as well as literature evidence revealed that the conditions under which the students learn in many schools are unhealthy and deplorable. Some schools in Onitsha North Local Government Area seem to have insufficient school plants. This is evident in some schools where teaching and learning resources are not available. This makes the researcher to ask, the availability of school plant impacts on students academic performance in secondary schools? This present the problem of study.

### **Purpose of the Study**

The main purpose of the study is to determine the perceived impact of school plant on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State. Specifically, the study determined the impact of:

1. School site on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State.
2. Instructional materials on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State.
3. School laboratory on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State.

### **Research Questions**

The following research questions guided the study:

1. What is the impact of school site on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State?
2. What is the impact of instructional materials on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State?
3. What is the impact of school laboratory on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State?

## **II. Method**

### **Research Design**

The research design adopted in this study is the descriptive survey research design. By using this design, the researcher collected information from teachers in public secondary schools in Onitsha North Local Government Area of Anambra State through questionnaire on their opinion on the impact of schools plant on students academic performance in secondary schools in Onitsha North Local Government Area of Anambra State.

### **Area of the Study**

The study was carried out in Onitsha North L.G.A of Anambra State. The local government has 16 public secondary schools.

### **Population of the Study**

The population of the study comprised 238 teachers in public secondary schools in South Local Government Area of Anambra State based on information from Post-Primary Secondary Schools Services Commission (PPSSC), Awka, Anambra State in November, 2021.

### **Sample and Sampling Technique**

The sample comprised 119 teachers in public secondary schools in Onitsha North Local Government Area of Anambra State. The sampling technique used to draw the sample was simple random sampling. The sample was drawn by collecting 50 percent of the population of study from the 16 secondary schools in the local government area.

### **Instrument for Data Collection**

The instrument used for data collection was a questionnaire developed by the researcher from the reviewed literature. The instrument was titled "Questionnaire on Impact of School Plant on Students' Academic Performance in Secondary Schools in Onitsha North Local Government Area (QISPSAPSSONGA)". The instrument contains 26 items in three clusters of B1, B2 and B3 according to the three research questions guiding the study. The three clusters contain 10, 6 and 6 items respectively. All the items are structured on a 4-point rating scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) weighted 4, 3, 2 and 1 respectively.

### **Validation of the Instrument**

The face validation of the instrument was determined. To do this, the research questions, purpose of the study, hypotheses and the questionnaire were given to three experts; who are lecturers; two in the Department of Educational Management and Policy and one in Measurement and Evaluation Unit of the Department of Educational Foundations, all in the Faculty of Education, Nnamdi Azikwe University, Awka. These experts were requested to validate the instrument relative to the appropriateness and coverage of the items, wordings and the instructions. The experts corrected some items in the questionnaire to make them more meaningful. The corrections were incorporated in producing the final version of the instrument.

### **Reliability of the Instrument**

A pilot test was conducted to establish the instrument's reliability whereby the questionnaire was administered on 10 teachers in secondary schools in Enugu State who were not included in the population of the study. As a result of the fact that the instrument is in three clusters, the researcher had to ascertain the reliability of each cluster using Cronbach Alpha reliability method, which yielded coefficient values of 0.86, 0.82 and 0.84 for clusters B1 to B3 respectively. The Cronbach Alpha reliability analysis on the obtained data yielded a score of 0.84 for internal consistency, which was deemed high for the study. These coefficient values indicate that the instrument is reliable because they are in line with Nworgu (2015) who suggested that reliability co-efficient of 0.70 is adequate for a research instrument.

### **Method of Data Collection**

Data will be collected by the researcher with the help of three research assistants. The questionnaires will be administered by the researcher or the research assistants on the spot to the teachers' in their staff rooms or classrooms in their schools. Yet those teachers who were not disposed to fill the instrument for immediate retrieval, an appointment of revisit will be made with the researcher or research assistants. This exercise lasted for three weeks. The reason was to ensure and facilitate high return rate of the item for analysis. Out of the 119 copies of questionnaire administered, 102 copies were returned. These 102 copies representing 85 percent return rate of the questionnaire distributed were used for data analysis.

### **Method of Data Analysis**

The data collected will be analyzed using mean. The mean value will be used to answer the research questions. Any item with mean rating between 2.50 and above was regarded as agreed while any item with mean rating below 2.50 was regarded as disagree.

### **Results Research Question 1**

What is the impact of school site on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State?

**Table 1: Respondents Mean Rating on the Impact of School Site on Students' Performance in Secondary School Academic**

S/NO	Item Statements	SA	A	D	SD	Mean	Remark
1.	Provides a serene environ for academic pursuance	44	58	0	0	3.43	Agree
2.	Offers better physical protection to students	40	62	0	0	3.39	Agree
3.	Makes students feel safe in school	43	59	0	0	3.42	Agree
4.	influences school attendance rate	32	70	0	0	3.31	Agree
5.	Decreases the possibility of a direct attack by kidnappers	55	47	0	0	3.53	Agree
6.	Determines students access to facilities like internet for learning	31	70	1		3.29	Agree
7.	Facilitates swift distribution of educational resources	40	60	2	0	3.37	Agree
8.	Impacts on the quality of teachers in the school	35	67	0	0	3.43	Agree
9.	Impacts on access to amenities like health care for students	28	74	0	0	3.27	Agree
<b>Cluster Mean</b>						<b>3.82</b>	<b>Agree</b>

Data in Table 1 reveal that the respondents agree that items 1 to 9 are the impact of school site on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State with mean ratings ranging between 3.31 to 3.53. The cluster mean of 3.44 indicate that school site impacts on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State as it provides a serene environ for academic pursuance, offers better physical protection to students, decreases the possibility of a direct attack by kidnappers and influences school attendance rate among others.

### **Research Question 2**

What is the impact of instructional materials on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State?

**Table 2: Respondents Mean Rating on the Impact of Instructional Materials on Students' Academic Performance in Secondary School**

S/NO	Item Statements	SA	A	D	SD	Mean	Remark
10.	Enables students to participate more actively in lessons	46	56	0	0	3.45	Agree
11.	Makes learning more practical	58	44	0	0	3.56	Agree
12.	Makes learning more realistic	32	70	0	0	3.31	Agree
13.	Makes learning interesting	49	53	0	0	3.48	Agree
14.	Helps to provide flexibility in learning	42	60	0	0	3.41	Agree
15.	Motivates students to learn	44	58			3.43	Agree
16.	Gives room for the development of self- confidence	44	58	0	0	3.43	Agree
17.	Gives room for acquisition of knowledge	43	59	0	0	3.42	Agree
18.	Gives room for acquisition of skills	32	70	0	0	3.31	Agree
	<b>Cluster Mean</b>					<b>3.42</b>	<b>Agree</b>

Data in Table 2 reveal that the respondents agree that items 10 to 18 are the impact of instructional materials on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State with mean ratings ranging between 3.31 to 3.56. The cluster mean of 3.44 indicate that instructional materials impacts on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State as it makes learning more practical, makes learning interesting, enables students to participate more actively in lessons, motivates students to learn and gives room for the development of self-confidence among others.

### Research Question 3

What is the impact of school laboratory on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State?

**Table 3: Respondents Mean Rating on the Impact of School Laboratory on Students' Academic Performance in Secondary School**

S/NO	Item Statements	SA	A	D	SD	Mean	Remark
19.	Helps students to retain knowledge by conducting their own experiments	44	58	0	0	3.43	Agree
20.	Gives students first-hand experience	32	70	0	0	3.31	Agree
21.	Helps students in achieving good academic results	42	60	0	0	3.41	Agree
22.	Ensures that their students grasp each concept thoroughly.	31	70	1		3.29	Agree
23.	Prepares students for high-technology careers by fostering skills sought by potential employers	40	62	0	0	3.39	Agree
24.	Develops students problem-solving skills	49	53	0	0	3.48	Agree
25.	Develops students critical thinking skills	35	67	0	0	3.43	Agree
	<b>Cluster Mean</b>					<b>3.39</b>	<b>Agree</b>

Data in Table 3 reveal that the respondents agree that items 19 to 25 are the impact of school laboratory on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra

State with mean ratings ranging between 3.31 to 3.48. The cluster mean of 3.44 indicate that school laboratory impacts on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State as it develops students problem-solving skills, helps students to retain knowledge by conducting their own experiments, develops students critical thinking skills, gives students first-hand experience and prepares students for high-technology careers by fostering skills sought by potential employers among others.

### **III. Discussion**

Findings of the study revealed that school site impacts on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State. The findings further revealed that the impact of school site on students' academic performance is that it provides a serene environ for academic pursuance, offer better physical protection to students, decreases the possibility of a direct attack by kidnappers and influences school attendance rate among others. This is in disagreement with Essien (2017) school location has no significant influence on students' academic achievement in Social Studies. Essien noted that the area in which a school is located do not directly affect students ability to learn concepts and acquire subject knowledge. However, the findings of the study clearly seem to indicate that secondary school teachers are of the opinion that the site of a school could affect the ability of students to access educational services that could aid learning. To the same vein, Briggs, Ubulom and LongJohn (2018) found that a significant relationship exist between school plant and academic performance of secondary school students'. Briggs et al (2018) called for school administrator to ensure that all aspects of school plants like location should adequately be considered before sitting a school.

Findings of the study revealed that instructional materials impacts on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State. The findings further revealed that the impact of school site on students' academic performance is that it makes learning more practical, makes learning interesting, enables students to participate more actively in lessons, motivates students to learn and gives room for the development of self-confidence among others. This finding is in consonance with Adalikwu and Lorkpilgh (2013) who revealed that students taught with instructional materials performed significantly better than those taught without instructional materials and also that the use of instructional materials generally improved students' understanding of concepts and led to high academic achievements. Similarly, Wordu and Nleremchi (2018) stated that the availability and use of instructional materials I secondary schools offer teachers the opportunity to vary instructional techniques to meet students learning need. According to Briggs et al (2018) the use of instructional material would improve students' likelihood of understanding concepts that would have been difficult to understand without instructional materials.

Findings of the study revealed that school laboratory impacts on students' academic performance in secondary schools in Onitsha North Local Government Area of Anambra State. The findings further revealed that the impact of school laboratory on students' academic performance are that it develops students problem-solving skills, helps students to retain knowledge by conducting their own experiments, develops students critical thinking skills, gives students first-hand experience and prepares students for high-technology careers by fostering skills sought by potential employers among others. This finding is in agreement with Jimoh, Akinlosotu and Ojo-Maliki (2017) who found that school laboratories have significant influence on students' academic performance. In the same vein, Adedapo (2019) reported that school laboratory has significant influence on students' academic performance in that it offer students opportunities to practicalise what has been learnt in class.

### **IV. Conclusion**

Based on the findings of the study, the researcher concludes that school plant has significant impact on the academic performance of secondary school students in Onitsha North Local Government Area of Anambra State. School site, instructional materials and school laboratory have significant impact on the academic success of secondary school students.

### **V. Recommendations**

Based on the findings of this study, the researcher proffers the following recommendations:

1. Federal and State Government through its ministry of education should ensure that secondary schools are sited in areas that are easily accessible and safe.
2. Principals and teachers of secondary school should ensure that instructional materials are readily available for teachers to use in the classrooms teaching and learning.
3. The Federal and State government should ensure that every secondary school has fully equipped science and computer laboratories so as to enhance practical learning and high knowledge retention among students.

## REFERENCES

- [1]. Adedapo, A.A. (2019). School plant organization, instructional efficiency and students academic performance in Osun State Secondary Schools. *Anatolian Journal of Education*, 4(1), 13-22.
- [2]. Adalikwu, S.A. & Lorkpilgh, I.T. (2013).The influence of instructional materials on academic performance of senior secondary school students in chemistry in Cross River State. *Global Journal of Educational Research*, 12, 39-45.
- [3]. Asiegbu, E. C. (2014). School plant maintenance. In G. O. Unachukwu & P. N. Okorji (Eds.), *Educational management. A skill building approach* (pp. 213-338). Onitsha: Rex Charles and Practice.
- [4]. Asiabaka. I. P. (2015). *The need for effective facility management in schools in Nigeria*. New York Science.<http://www.sciencepub.orgretrieved26/2/2010>.
- [5]. Briggs, D.P, Ubulom, W.J. & LongJohn, D.A. (2018).School plant and academic performance of secondary schools students in Tai/Elemo Local Government Area of Rivers State. *International Journal of Innovative Psychology & Social Development*, (5(3), 23-31.
- [6]. Ezeh G. A (2010). Urban and rural differences in creativity talents among primary school pupils in Lagos *Journal of Mathematics Education*, 2(2), 147- 164.
- [7]. Iheonunekwu, S. & AnyatonwuN. (2014).Resource utilization as correlate of students' academic performance in Ohafia Education Zone of Abia State, Nigeria. *Knowledge Review*, 31(2), 1-10.
- [8]. Jimoh, B.O., Akinlosotu, N.T. & Ojo-Maliki, V.A. (2017). Influence of school plant on secondary school students' academic performance in economics in Ile-OlujiOkeigbo Local Government Area of Ondo State, Nigeria. *Asia Pacific Journal of Multidisciplinary Research*, 5(2), 30-35.
- [9]. Marcus, O. A. (2016), Availability of basic technical learning materials in Biology in selected secondary schools in Lagos State. *Proceedings of the Annual Conference of Science Teachers Association of Nigeria*, 41, 263-266.
- [10]. Morohunfolo, O.M. (2015). Instructional materials and study Science subject: some policy implications. *European Journal of Humanities and Social Sciences*, 2(1), 34-90.
- [11]. Nworgu, B. G. (2015). *Educational research: Basic issues and methodology* (3<sup>rd</sup> edition). Enugu: University Trust Publishers.
- [12]. Wordu, H. & Nleremchi, W.W. (2018).School plant management for effective instructional delivery in public senior secondary schools in Port Harcourt Metropolis, *International Journal of Education and Evaluation*, 4(8), 67-76.