



INFLUENCE OF SCHOOL PLANT ON TEACHERS' PRODUCTIVITY AND STUDENTS' ACADEMIC PERFORMANCE IN PUBLIC SENIOR SECONDARY SCHOOLS IN NIGER STATE, NIGERIA

ABSTRACT

This study titled "Influence of School Plant on Teachers' Productivity and Students' Academic Performance in Public Senior Secondary Schools in Niger State, Nigeria. Two research questions were raised which were what is the influence of school plant on teachers' productivity and what influence does school plant have students' academic performance in

***AWWAL IBRAHIM; & **MUNIR MUSTAPHA**

Department of Educational Foundations and Curriculum, Faculty of Education, Ahmadu Bello University, Zaria. Department of Educational Foundations, Faculty of Education, University of Jos, Plateau State, Nigeria

Introduction

Senior secondary school is a crucial level of schooling in Nigeria educational industry. It is a determinant for one to gain admission into any tertiary institution within and other part of the world. This is why many parents and other stakeholders in education are kin about wellbeing of the secondary school. According to Jimoh, Akinlosotu and Ojo-Maliki (2017) secondary education plays a crucial role of preparing students for higher education and useful living in Nigeria. They stated further that it is considered by many Nigerians as education that would enable them prepare for living a balanced socio-economic life. For the secondary schools to ascertain the purpose for their establishment, there is need adequate and effective provision of school plant since it influence teachers' productivity and learning outcome of the students at all level. It is



believed that a well-planned school plant will gear up expected outcomes of education that will facilitate good social, political and economic emancipation, effective teaching and learning process and academic performance of the students (Odufowokan, 2011). School plant consists of all material resources needed for quality teaching and learning process to take place in the school. This school plant is an important aspect of school as a system. Yusuf and Adigun (2012) refers to school plant as all non-consumable and durable physical and infrastructural facilities available in the school for teachers and students use in order to make

public senior secondary schools in Niger State? Survey design was used. The population was 2875 with 362 sample size. Multistage sampling technique was used. Twenty-four structured-items questionnaire was used to collect data. Context validity of the instrument was ascertained. Reliability of the instrument was ascertained through a test re-test method and the results were correlated using Pearson Product Moment Correlation Coefficient (PPMC), the result r value was 0.83 which implies the instrument was reliable. Mean was used for data analysis. The findings indicated that adequate provision and effective utilization of school plant enhance teachers' productivity and students' academic performance in the secondary school. Also, facilities such laboratories, classrooms, sport equipment, utilities and the likes were not adequately provided. It was recommended that school management should provide adequate offices, recreational centres, convenience, sport equipment and other aspect of school plant should be provided to enhance teachers' productivity in the school. Also, management of secondary schools school collaborate with the community through officials of School-Based Management Committee (SBMC) to provide adequate classrooms, utilities, laboratories and other aspect of school plant to enhance quality teaching towards maximizing students' academic performance in Niger State.

Key Words: School Plant, Teachers' Productivity and Students' Academic Performance



teaching and learning effective and thus ensure the achievement of pre-determined aims and objectives of education hence, the school plant includes the space within the school premises which houses the basic systems and structures.

To Mgbodile (2004), school plant is the totality of resources that define the learning environment of a school institution. School plant is defined as the physical expression of the school programmes and activities. It is a factor that assists to determine the successful achievement of the school/educational goals as stated in the National Policy on Education. Jimoh, Akinlosotu and Ojo-Maliki (2017) opined that it is the consciously designed and controlled environment that helps to promote teaching and learning activities within the school and that they are made up of the indispensable systems and structures required by any educational institution to function effectively and achieve the objectives for which it was established (Afolabi, & Loto, 2017 cited in Adetule, & Ayodele, 2019). According to Yusuf (2008) in Adetule and Ayodele (2019), the concept of school plant was defined as space interpretation of the school curriculum. It will be impossible for the curriculum to be implemented if the physical facilities required for teaching and learning are not available. Absence of school plant makes teaching ineffective and desired learning will not take place. It becomes necessary to ensure that such plant is properly planned and maintained to facilitate the effectiveness of school system. Ajayi (2007) maintained that school plants comprise the machinery which in turn includes machines and tools used in the workshop, in addition to duplicating machines. Adegoke (2005) agrees that school plants include the school site, the building, equipment which also includes the permanent structures like workshop, libraries, classrooms, laboratories, hostels assembly hall and semi-permanent structures.

According to Yusuf (2008) in Adetule and Ayodele (2019), school plant can be categorized into various sub-groups namely:

- i. the school landscape comprising of trees, grasses, lawns, hedges and accompanying paths,



- ii. security facilities such as walls, gates, alarm system, phones, visitors' books,
- iii. utilities such as electricity, pipe-borne water/borehole and transport facilities,
- iv. educational equipment such as computers, chalkboard, chalk, chart flannel graph, beakers, burette, pipettes test tubes, thermometers, weighing balances, map, glass jars, globes,
- v. office equipment such as cupboards, generator, typewriter, photocopying machines,
- vi. sports facilities like football, table tennis, basketball,
- vii. classroom/educational equipment such as chairs, desks, tables, chalkboards, dusters, wash-hand basin, napkins, chalk,
- viii. buildings like classrooms, administrative blocks, library, laboratories, health blocks, kitchen, examination hall, dining hall, assembly hall, clinics, rest rooms, toilets, hostels, store, staff rooms, workshops, and
- ix. play grounds including football, volley ball, basketball and badminton, tennis court, swing slide ground.

Certainly, teachers' productivity in school is influenced and determined by the adequacy and efficacy of school plant. This is because the school plant are manipulated by the teachers to enhance effective teaching and learning process aimed at maximizing students' academic performance. Suleiman and Gbolahan (2017) opined that school plant helps to build good structure that enhances effective administrative functions which positively influence teaches' productivity in the school. Ijaduola (2008) maintained that school plants needs to be adequately managed in order to ensure both effectiveness and efficiency of teachers and the educational sector in general. The attainment of an effective teaching and learning is closely related to the school plants (Adepoju, & Akinwumi, 2001 in Musibau, Isaac, & Abayomi, 2013). To Musibau, Isaac and Abayomi (2013), spacious classrooms, well located at convenient place for users, properly ventilated and have adequate lighting which may in turn improve the teaching and learning situation in the school system.



According to Ajayi and Yusuf (2010), school plant planning is a process in which a suitable site is selected and instructional space, administrative space, circulation space, and spaces of convenience are designed to facilitate the teaching and learning process in the school system. Mark (2002) and Oyesola (2007) in Musibau, Isaac and Abayomi (2013) asserted that school plants will enhance better school programmes and the community needs by providing a place for psychological and physical safety for both students and teachers and also enhance better quality control of instructions. Oyesola (2007) in Adetule and Ayodele (2016) stated school plants could enhance better school programmes and the community needs by providing a place for psychological and physical safety for students and teachers and enhancing the good, quality and quantity of instruction.

In relation to school plant and students' academic performance, Jimoh, Akinlosotu and Ojo-Maliki (2017) school plant (educational equipment, buildings and play grounds) has significant individual and interaction influence on students' academic performance. It therefore behoves that school plant is appropriately facilitate the effectiveness of school system so as to bring about the achievement of educational goals (Adetule, & Ayodele, 2016). Torupere (2016) states that the extent to which aesthetic beauty of the school, infrastructural facilities, school equipment and instructional materials and school location influences students' academic performance in secondary schools. Educational equipment, buildings, playgrounds and aesthetic beauty of the school have positive significant impact on secondary students' academic performance (Jimoh, Akinlosotu, & Ojo-Maliki, 2017). They further stated that the relevance of school plants cannot be put aside in the promotion of students' academic performance.

Also, a significant relationship between availability of farming facilities and academic performance of students was found. To Suleiman and Gbolahan (2017), school plant planning is inevitable when a school system desires high level of academic performance from the students. Equally important, is the establishment of the positive correlation between school plant and students' academic performance



(Odufowokan, 2011). Furlong, Morrison, Chung, Bates and Morrison (1997) in Odufowokan (2011) confirmed that unsafe and inadequate school facilities hinder student academic performance.

Therefore, school plant facilitates effectiveness of school system so as to bring about the achievement of educational goals as stated in the National Policy on Education. According to Jimoh, Akinlosotu and Ojo-Maliki (2017), this implies that the school plant has significant interaction effect on students' academic performance. Generally speaking, school plant helps to build good structure that enhances effective administrative functions aimed at enhancing quality teaching thereby experiencing high academic performance among students at any level. It is based on this background that this study was set to ascertain the Influence of School Plant on Teachers' Productivity and Students' Academic Performance in Public Senior Secondary Schools in Niger State.

STATEMENT OF THE PROBLEM

Availability and quality school plant is a determinant to teachers' productivity and students' academic performance at all level of education. Schools that are poorly equipped with facilities and equipment are likely to experience poor teaching, low productivity and poor students' academic performance. However, it appears that the school plant in some of the public senior secondary schools is inadequate. In some cases, classrooms are not spacious enough; there are no adequate ventilation and proper lighting in the classrooms, which make them not to be conducive for effective teaching and learning. There are instances where the instructional space, circulation space administrative space; school site and space of conveniences are poorly provided or not available at all.

Some schools have no a no administrative space while teachers stayed under the shade of threes as offices. In some situations, the teaching and learning process take place under trees which negatively affect teachers' productivity and students' academic performance. It is against this background that this study examined the influence of school plant on



teachers' productivity and students' academic performance in public senior secondary schools in Niger State.

Objectives of the Study

The following objectives guided this study:

1. Investigate the Influence of School Plant on Teachers' Productivity in Public Senior Secondary Schools in Niger State.
2. Assess the Influence of School Plant on Students' Academic Performance in Public Senior Secondary Schools in Niger State.

Research Questions

For the purpose of this study, the following questions raised:

1. What is the Influence of School Plant on Teachers' Productivity in Public Senior Secondary Schools in Niger State?
2. What Influence does School Plant have Students' Academic Performance in Public Senior Secondary Schools in Niger State?

METHODOLOGY

Descriptive survey research design was used for this study. This design was used because it permits the researcher to study small sample and later generalized the findings to the whole population. The population of this study comprises all the senior secondary schools' principals and teachers in Niger State. According to statistical data from Planning, Research and Statistics Department (PRSD), Niger State Ministry of Education, Minna (2016), the public senior secondary schools has the total population of 2875 stakeholders (that is, 268 principals and 2607 teachers). Sample size for this study was 362 (that is, 29 principals and 333 teachers). A multistage sampling technique was used to select sample for this study by the researchers. Niger State was grouped into seven Minna Educational Zones to ease randomly selection. With this, three Educational Zones were selected for the study which. However, the sample size was determined using Research Advisors Sample Size Table (2006).



The instrument that was used by the researcher to collect data for this study was structured questionnaire. The instrument titled “Perception of School Personnel on the Type, Causes and Effect of Indiscipline on Senior Secondary School Students in Niger State” comprises of 24 structured items. Section one of the questionnaire was demographic data of the respondents while the remaining sections were made up of item statements to answer the research questions. More so, the items structured on a five point likert scale, ranges from Strongly Agreed, Agreed, Undecided, Strongly Disagreed and Disagreed.

Context validity of the instrument was ascertained. In order to ascertain the reliability the instrument, a pilot study was conducted on 40 members of the population from four (4) senior secondary schools in Niger State. The instrument was administered on 4 principals 36 teachers at an interval of two weeks and the data/results was correlated using Pearson Product Moment Correlation Coefficient (PPMC) at 0.05 level of significance. The two results were correlated using Pearson Product Moment Correlation Coefficient (PPMC) and the result r value 0.83 was obtained which implies the instrument was reliable. The data collected for this study were analyzed using frequency counts and simple percentage to analyze demographic data of the respondents while mean was used to answer the research questions.

RESULTS

In this study, 2.5 was used as decision mean since the instrument were four structured point likert scale to take decision on whether to accept or reject the research question after comparing it with the cumulative mean. Therefore, a mean score of 2.5 and above indicate positive response to the research question and accepted while a mean score below 2.5 indicate negative answer to the research question and rejected.

Research Question One: What is the Influence of School Plant on Teachers’ Productivity in Public Senior Secondary Schools in Niger State?



Table 1: Opinions of Respondents on the Influence of School Plant on Teachers' Productivity in Public Senior Secondary Schools in Niger State

S/N	Indiscipline Acts Prevalent among Students	SSS	N	Mean	Decision
1	School plant positively influences teachers' productivity in the school	353	3.5	Accepted	
2	There are adequate offices for teachers to enhance productivity in the school	353	1.2	Rejected	
3	There are adequate facilities to bring about effective productivity of teachers in the classroom	353	1.0	Accepted	
4	Convenience as a facility in the school promote teachers' productivity	353	3.6	Accepted	
5	Inadequate facilities negatively affect productivity of teachers in the classroom	353	3.7	Accepted	
6	Sport facilities promote socialization among teachers and students in the school	353	3.4	Accepted	
7	Recreational centres in the school enhance teachers' productivity in the classroom	353	3.6	Accepted	
8	There are adequate but not effective school plant in this school	353	3.3	Accepted	
9	Ineffective school plant tends to frustrate effective realization of educational goals	353	3.7	Accepted	
10	Inadequate school plant tends to frustrate effective realization of educational goals	353	3.5	Accepted	

Research question 1 of table 1 seeks opinions of respondents on the influence of school plant on teachers' productivity in public senior secondary schools in Niger State. However, the respond to the items were all positive as the mean scores were above 3.00 except that of the item 2 and 3 which indicted negative respond since the mean score was 1.2 and 1.0.



Research Question One: What Influence School Plant does Students' Academic Performance in Public Senior Secondary Schools in Niger State?

Table 1: Opinions of Respondents on the Influence of School Plant on Students' Academic Performance in Public Senior Secondary Schools in Niger State

S/N	Indiscipline Acts Prevalent among SSS Students	N	Mean	Decision
1	Utilities such as electricity and water influences students' academic performance positively	349	3.8	Accepted
2	There is adequate power supply to enhance students' academic performance in the school	349	1.0	Rejected
3	Adequate and effective transport facility influences students' attendance positively and reduces truancy among students	349	3.3	Accepted
4	Effective laboratory promote students' academic performance positively in the school	349	3.8	Accepted
5	Inadequate and ineffective toilet facilities contribute to security challenges in the school	349	3.6	Accepted
6	Sport facilities promote effective development of students' three domains (psychomotor, cognitive and affective) in the school	349	3.8	Accepted
7	Effective recreational centres in the school enhance students' cognitive development in the classroom	349	3.8	Accepted
8	Library influence students' academic performance	349	3.7	Accepted



9	The library in this school is adequately equipped	349	1.1	Rejected
10	There are adequate and functional furniture to enhance quality teaching and learning process in the school	349	1.0	Rejected

Research question 2 of table 2 seeks opinions of respondents on the influence school plant does students' academic performance in public senior secondary schools in Niger State. However, the respond to the items were all positive as the mean scores were above 3.00 except item 1, 9 and 10 which was indicted negative respond since the mean score was 1.0, 1.1 and 1.0 respectively.

Discussion of Findings

The findings indicated that school plant positively influences teachers' productivity in the school and that there are inadequate offices for teachers to enhance their productivity in the school. Supporting this finding, Adetule and Ayodele (2019) opined that school plant facilitate teaching and learning processes in the school. To Nweneka (2016) in Adetule and Ayodele (2019), School plant refers to education facilities both human and materials resources which help to facilitate education programme. While reporting the finding, Afolabi (2002) in Adetule and Ayodele (2019) discovered in a study that the classrooms in most of the schools were inadequate in terms of decency, space, ventilation and insulation from heat; the incinerators and urinal were not conveniently placed, and the school plant was poorly maintained. More so, Odunfowokan (2011) in Suleiman and Gbolahan (2017) stated that goals of Nigerian education and that of schools in particular will not be achieved if there is faulty school plant in place.

The finding also revealed that facilities (school plant) such as classrooms, laboratories, sport equipment, electricity and water influences students' academic performance positively. Again, inadequate and ineffective toilet facilities contribute to security challenges in the school. In agreement with this finding, Yusuf (2008) in Adetule and Ayodele (2019)



noted that the fundamental purpose of teaching and learning practice is to bring about in the learner desirable transformation in behaviour through critical thinking which cannot effectively take place unless there are adequate school plants in the schools. A study by Adetule and Ayodele (2019) indicated that utilization and maintenance of school plant in secondary schools usually goes a long way to determine students' academics performances and teachers' productivity. According to Jimoh, Akinlosotu and Ojo-Maliki (2017), school plant (educational equipment, buildings and play grounds) has significant individual and interaction influence on students' academic performance.

Also, Ajayi (2007), the submission that high levels of students' academic performance may not be guaranteed where instructional space such as classrooms, libraries, technical workshops and laboratories are structurally defective. Still, Odufowokan (2011) maintained that school facilities (accessories) were significantly related to students' academic performance in elementary schools in a more realistic situation. Suleiman and Gbolahan (2017) concluded that the realisation of educational goals is attainable through appropriate school plant.

Conclusion and Recommendations

Based on the finding of this study, it was concluded that adequate provision and effective utilization of school plant enhance teachers' productivity and students' academic performance in the secondary school. The reality in our secondary schools was that most of the facilities such laboratories, classrooms, sport equipment, utilities and the likes were not adequately provided. In the same vein, the limited available in the schools were not in good shape coupled by missed used among staff and students. It was therefore recommended that:

1. School management should provide adequate offices, recreational centres, convenience, sport equipment and other aspect of school plant should be provided to enhance teachers' productivity in the school.
2. Management of secondary schools school collaborate with the community through officials of School-Based Management



Committee (SBMC) to provide adequate classrooms, utilities, laboratories and other aspect of school plant to enhance quality teaching towards maximizing students' academic performance in Niger State.

References

- Adegoke, N. O. (2005). An appraisal of vocational and technical education programme at the secondary school level in Nigeria. *Journal of Research in Science Teaching*, 12(3), 63-75.
- Adetule, O. & Ayodele, O. V. (2019). School plant planning as a determinant of teachers' productivity in secondary schools in Ondo State, Nigeria. *Social Science Education Journal (SOSCED-J)*, 3(1). <http://soscedj.eksu.edu.ng/wp-content/uploads/2019/04/32-Adetule-Oluwakemi-and-Ayodele-Omowumi-Victoria.pdf>
- Ajayi, J. A. (2007). *Issues in School Management*. Bolabay Publisher.
- Ijaduola, K. O. (2008). A case study of management related factors affecting Nigerian secondary school teachers' professional commitment. *FCT Education Secretariat Journal of Curriculum Studies and Instruction*, 1(1), 130-137.
- Jimoh, O. B., Akinlosotu, T. N. & Ojo-Maliki, A. V. (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; 2350-8442. www.apjmr.com
- Mgbodile, T. O. (2004). *Fundamentals in educational administration and planning*. Magnet Business Enterprises.
- Odufowokan, B. A. (2011). School Plant Planning as a Correlate of Student's Academic Performance in South West Nigeria Secondary Schools. *International Journal of Business Administration*. (2), 41-47.
- Musibau, A. Y., Isaac, A. A. & Abayomi, O. S. (2013). Influence of school type and location on school plant planning in South West Nigerian secondary schools. *Academic Research International*. 4(4), 2223-9553. www.journals.savap.org.pk
- Niger State Ministry of Education Minna (2018). *Planning, Research and Statistics Department (PRSD)*
- Suleman, Y. & Gbolahan, S. (2017). School plant planning: A prerequisite for the attainment of educational goals and objectives. *Journal of Education and Practice*, 8(18), 222-288. www.iiste.org
- The Research Advisors (2006). *Sample size table*. www.researchadvisers.com
- Torupere, K. (2016). The influence of school physical environment on secondary school students' academic performance in Bayelsa State. *Asian Journal of Educational Research*, 4(2), 1-15.



Yusuf, M. A. & Adigun, J. T. (2012). The Role of Head Teacher in Improvisation and Maintenance of School Plants. *An International Multidisciplinary Journal, Ethiopia*, 6(3), 2070-0083. <http://dx.doi.org/10.4314/afrrrev.v6i3.17>