

Influence of School Facilities and School Types on Senior Secondary School Science Students' Academic Performance in Nasarawa State, Nigeria

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Abstract

This study examined the influence of school facilities and types on Senior Secondary School Science Students' academic performance in Nasarawa State, Nigeria. Two research hypothesis were tested at 0.05 level of significance. The population of the study comprised all public senior secondary schools in urban and rural areas of Nasarawa State, Nigeria. Stratified and simple random sampling techniques were used to select the sample. Thirty schools were randomly selected (ten from each of the 3 Senatorial Zones in the State). A total of 300 students formed the sample of the study. A researcher-designed questionnaire titled, "School Facilities and Types Questionnaire (SFTQ)" was used as an instrument for the study. The reliability of the instrument was determined using Cronbach's Coefficient Alpha. The alpha coefficient of internal consistency for the instrument was 0.84, suggesting that the items had relatively high internal consistency levels and considered acceptable. The data were analysed using t-test statistics to test the two hypotheses at alpha=0.05. The findings of this study revealed that there was a significant influence of school facilities on science students' academic performance in urban and rural schools and also, there was a significant influence of school facilities on science students' academic performance in private and public schools. Based on the findings of this study, it was recommended among others that; Government should not relent in its effort of proving succor urban and rural schools. It should also encourage Parent-Teacher Association (PTA), philanthropists, Non-Governmental Organizations (NGOs) and the society at large to join its efforts in the form of Private-Public Partnership (PPP) for salvaging the schools from total collapse.

Keywords: Academic Performance, School Facilities, School Types, Secondary School, Science Students.

INTRODUCTION

Science education has become one of the best avenues to meet the global challenges facing the Nigerian nation. Despite the importance of Basic Science and Technology in the country's quest for technological advancement, there has been seeming ineffectiveness in the teaching and learning of the subject which in turn is strongly affecting the attainment of the country's laudable objectives and goals of developing a scientific and technologically literate citizenry. Researchers such as Osokoya (2013), Alabi (2014), Oni (2014) and Eriba (2013) attested that students' behaviours contribute to their underachievement in Science subjects.

Qualitative Science education entails the provision of school facilities, teachers and relevant teaching materials that would garner its processes for effective service delivery Osokoya (2013). Since formal education, in this case, requires a conducive atmosphere for its delivery, schools are established for this purpose in order to harness the teaching and learning of citizens for national development. In Nigeria, the National Policy on Education has spelt out the goals and philosophy of its education when it states, "at all levels of the education system, modern education techniques shall be increasingly used and would also be improved upon" (FGN, 2014). The successful implementation of these goals and objectives requires the provision of adequate school facilities, among several others.

School facilities are instructional materials which give support or comfort to the staff and students. They include buildings, equipment, sporting fields and environment within the school. They are, therefore, the physical and human resources that are used in the school in order to forestall effective teaching and learning. A school without facilities, may not be able to achieve the stated goals and objectives of the educational system. This leads to a negative effect on students' academic performance. It is observed that students have low performance when they are not having access to standard facilities such as library equipment and adequate seats in the classrooms (Rufai, Umar & Idris, 2013). When facilities are available and skillfully utilized, they

influence learning and make it more meaningful. Gede and Tari (2011) noted that availability of resources in a school boosts the morale of both teachers and learners toward effective delivery of lesson and is a major factor contributing to academic performance in the schools' system. In Nasarawa State, senior secondary schools, irrespective of ownership are expected to function in compliance with the goals and objectives of the national education policy. To this end, students are expected to perform brilliantly in examinations, which determine the quality of the output of schools (Osuji, 2016).

It is a general opinion that private schools are better in terms of the availability of human and physical facilities and consequently students' performance than public schools (Telu, 2016). This situation has made many parents to enroll their children in private secondary schools to the detriment of the public schools. It is also possible to realize that most students who have higher scores and eventually secure admission into tertiary institutions are from private secondary schools. Ezike (2018) and Ekundayo (2015) mentioned that the design of classrooms is another important criterion that could improve students' performance. Classroom layout or the arrangement of furniture will influence the performance of the student (Sunday, 2015).

Students' academic performance is the result or outcome of students after being subjected to teaching and learning processes. Tanko (2013) and Duze (2011) acknowledged this situation when they asserted that with the expansion of secondary schools in Nigeria, there had been a general cry about the falling standard of education in the country as a whole. Over the years, the performance of students has fallen in the examination. This is to say that the academic performance of most students was very poor. To reverse these trends, a lot needs to be done. To students, academic performance appears to have been affected by a myriad of factors. These factors include school facilities (Tanko (2013).

Causes of the poor academic performance could include ownership of the school and inadequate facilities. Different studies conducted by Olakumbi (2012) and Vandiver (2011), showed that a positive relationship exists between the availability of facilities and student academic performances. Research findings on the influences of facilities in private and public secondary schools on students' academic performance are controversial. Sabitu, Babatunde and Oluwole (2012) found out that school types, whether public or private did not make any difference in students' academic performance. However, Rong'uno (2017) and Okon and Archibong (2015) found out that school type makes a difference in student academic performance. In addition, Philius & Wanjobi (2011) reiterated that the type of schools, (single sex or mixed, private or public) has an effect on the academic performance of students in Science. Therefore, this study wants to find out whether a relationship exists between school facilities, school types and science students' academic performance.

PURPOSE OF THE STUDY

The purpose of this study was to examine the influence of school facilities and type on senior secondary school science students' academic performance in Nasarawa State, Nigeria.

HYPOTHESES

The following null hypotheses were tested at 0.05 level of significance;

H₀₁: There is no significant influence of school facilities on science students' academic performance in urban and rural schools.

H₀₂: There is no significant influence of school facilities on science students' academic performance in private and public schools.

METHODOLOGY

The study was a descriptive research survey design. The population of the study comprised all public senior secondary schools in urban and rural areas of Nasarawa State, Nigeria. Stratified and simple random sampling

techniques were used to select the sample. Thirty schools were randomly selected (ten from each of the 3 Senatorial Zones in the State). A total of 300 students formed the sample of the study. A researcher-designed questionnaire titled, “School Facilities and Types Questionnaire (SFTQ)” was used as an instrument for the study. SFTQ had three sections: Section A elicited background information of the respondents; Section B contained 15 items designed for information on school facilities, and Section C had 13 items for information on students’ performance. The instrument was validated by three experts from the faculty of Education, Nasarawa State University, Keffi, Nigeria, where a Validation Index obtained for the instrument was 0.75. The reliability of the instrument was determined using Cronbach’s Coefficient Alpha. The alpha coefficient of internal consistency for the instrument was 0.84, suggesting that the items had relatively high internal consistency levels and considered acceptable. The data were analysed using t-test statistics to test the two hypotheses at $\alpha=0.05$.

RESULTS

H₀₁: There is no significant influence of school facilities on science students’ academic performance in urban and rural schools.

Table 1: t-test Analysis of Influence of School Facilities on Science Students’ Academic Performance in Urban and Rural Schools

School	No	Mean	SD	Df	t-cal	t-crit
Urban	145	171.77	30.78	298	2.56	1.65
Rural	155	71.14	16.61			

Results from Table 1 reveal that the value of t-calculated (2.56) is greater than the t-critical (1.65) at 0.05 level of significance. Hence, the hypothesis is rejected. This means that there is a significant influence of school facilities on science students’ academic performance in urban and rural schools.

H₀₂: There is no significant influence of school facilities on science students’ academic performance in private and public schools.

Table 2: t-test Analysis of Influence of School Facilities on Science Students’ Academic Performance in Private and Public Schools

School type	No	Mean	SD	Df	t-cal	t-crit
Public	87	23.63	8.45	108	0.64	1.65
Private	23	19.54	6.91			

From Table 2, the t-calculated (0.64) is less than the t-critical (1.65) at 0.05 level of significance. Therefore, the null hypothesis is accepted. This means there is no significant influence of school facilities on private and public schools.

DISCUSSION

The study reveals that facilities in schools are not adequate for effective learning delivery in senior secondary schools, which tallies with the findings of Usman (2016); Gede and Tari (2011). This might be as a result of the respondents’ assessment of realities in their schools which call for concern from the Ministry of Education. The study also reveals that there is a significant influence of school facilities on urban and rural schools. The reason for this might not be unconnected with the policy of uniform standards for all schools regards facilities in Nasarawa State. This further gives impetus to the fact that whether a school is sited in a rural or urban area, it does not make any difference in its provision of facilities. This agrees with the findings of Nworgu and Nworgu (2013). It is further found that there is no significant influence of school facilities between private and public schools. This finding implies that whether a school is public or private owned, it does not make a difference in its facilities. This might also not be unconnected with the existence of a uniform standard for all schools in Nasarawa State (whether it is private or public owned).

CONCLUSION

Findings from this study have depicted variable results. For instance, while facilities in the schools are not adequate for effective learning delivery, there is a significant influence of school facilities on urban and rural

schools. Another finding is that there is no significant influence of school facilities between public and private schools.

RECOMMENDATIONS

Based on the findings, it is recommended that:

- i. Stakeholders in the education should provide more facilities in schools so as to foster effective teaching-learning processes to the advantages of the learners;
- ii. The government should not relent in its effort of proving succor urban and rural schools. It should also encourage Parent-Teacher Association (PTA), philanthropists, Non-Governmental Organizations (NGOs) and the society at large to join its efforts in the form of Private-Public Partnership (PPP) for salvaging the schools from total collapse; and
- iii. Public and private school managers should seek other facets of ameliorating hardships faced in running the educational industry.

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